

SAFETY DATA SHEET

Klean Strip Denatured Alcohol

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Printed: 04/13/2015

Revision: 04/13/2015

Supersedes Revision: 09/10/2014

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Klean Strip Denatured Alcohol

Company Name: W. M. Barr
2105 Channel Avenue
Memphis, TN 38113

Phone Number: (901)775-0100

Web site address: www.wmbarr.com

Emergency Contact: 3E 24 Hour Emergency Contact (800)451-8346

Information: W.M. Barr Customer Service (800)398-3892

Intended Use: Cleans glass and is used as a fuel for marine stoves

Synonyms: CSL26, GSL26, QSL26, QSL26W

Additional Information This product is regulated by the United States Consumer Product Safety Commission and is subject to certain labeling requirements under the Federal Hazardous Substances Act. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS). The product label also includes other important information, including directions for use, and should always be read in its entirety prior to using the product.

2. HAZARDS IDENTIFICATION

Flammable Liquids, Category 2
Acute Toxicity: Oral, Category 3
Acute Toxicity: Skin, Category 3
Acute Toxicity: Inhalation, Category 3
Specific Target Organ Toxicity (single exposure), Category 1



GHS Signal Word: **Danger**

GHS Hazard Phrases: H225: Highly flammable liquid and vapor.
H301: Toxic if swallowed.
H311: Toxic in contact with skin.
H331: Toxic if inhaled.
H370: Causes damage to organs.

GHS Precaution Phrases: P210: Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233: Keep container tightly closed.
P240: Ground/bond container and receiving equipment.
P241: Use explosion-proof electrical/ventilating/lighting equipment.
P242: Use only non-sparking tools.
P243: Take precautionary measures against static discharge.
P260: Do not breathe gas/mist/vapors/spray.
P264: Wash hands thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P271: Use only outdoors or in a well-ventilated area.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P235: Keep cool.

GHS Response Phrases: P301+310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P302+352: IF ON SKIN: Wash with plenty of soap and water.
P303+361+353: IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

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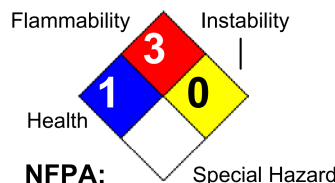
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GHS Storage and Disposal Phrases:

P307+311: IF exposed: Call a POISON CENTER or doctor/physician.
P311: Call a POISON CENTER or doctor/physician.
P330: Rinse mouth.
P361: Remove/Take off immediately all contaminated clothing.
P363: Wash contaminated clothing before reuse.
P370+378: In case of fire, use dry chemical powder to extinguish.
P403+233: Store container tightly closed in well-ventilated place.
P405: Store locked up.
P501: Dispose of contents/container to local, state and federal regulations.

Hazard Rating System:

HEALTH	*	2
FLAMMABILITY		3
PHYSICAL		0
PPE		X



HMIS:

OSHA Regulatory Status:

This material is classified as hazardous under OSHA regulations.

Potential Health Effects (Acute and Chronic):

Inhalation Acute Exposure Effects:

Vapor harmful. May cause dizziness, headache, watering of eyes, irritation of respiratory tract, irritation to the eyes, drowsiness, nausea, other central nervous system effects, spotted or blurry vision, dilation of pupils, and convulsions.

Skin Contact Acute Exposure Effects:

May cause irritation, drying of skin, redness, and dermatitis. May cause symptoms listed under inhalation. May be absorbed through damaged skin.

Eye Contact Acute Exposure Effects:

May cause irritation.

Ingestion Acute Exposure Effects:

Poison. Cannot be made non-poisonous. May be fatal or cause blindness. May produce fluid in the lungs and pulmonary edema. May cause dizziness, headache, nausea, drowsiness, loss of coordination, stupor, reddening of face and or neck, liver, kidney and heart damage, coma, and death. May produce symptoms listed under inhalation.

Chronic Exposure Effects:

May cause symptoms listed under inhalation, dizziness, fatigue, tremors, permanent central nervous system changes, blindness, pancreatic damage, and death.

Target Organs:

Liver, kidneys, pancreas, heart, lungs, brain, central nervous system, eyes

Medical Conditions Generally Aggravated By Exposure:

Diseases of the liver, skin, lung, kidney, central nervous system, pancreas, and heart; asthma; inflammatory or fibrotic pulmonary disease; any preexisting condition sensitive to a decrease in available oxygen, such as chronic lung disease, coronary artery disease, or anemias

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3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS #	Hazardous Components (Chemical Name)	Concentration	RTECS #
64-17-5	Ethyl alcohol {Ethanol}	30.0 -50.0 %	KQ6300000
67-56-1	Methanol {Methyl alcohol; Carbinol; Wood alcohol}	40.0 -60.0 %	PC1400000

Additional Chemical Information Specific percentage of composition is being withheld as a trade secret.

4. FIRST AID MEASURES

Emergency and First Aid Procedures:	<p>Skin: Immediately begin washing the skin thoroughly with large amounts of water and mild soap, if available, while removing contaminated clothing. Seek medical attention if irritation persists.</p> <p>Eyes: Immediately begin to flush eyes with water, remove any contact lens. Continue to flush the eyes for at least 15 minutes, then seek immediate medical attention.</p> <p>Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention.</p> <p>Ingestion: If swallowed, do NOT induce vomiting. Seek immediate medical attention. Call a physician, hospital emergency room, or poison control center immediately. Never give anything by mouth to an unconscious person.</p>
Signs and Symptoms Of Exposure:	See Potential Health Affects
Note to Physician:	Poison. This product contains methanol. Methanol is metabolized to formaldehyde and formic acid. These metabolites may cause metabolic acidosis, visual disturbances and blindness. Since metabolism is required for these toxic symptoms, their onset may be delayed from 6 to 30 hours following ingestion. Ethanol competes for the same metabolic pathway and has been used as an antidote. Methanol is effectively removed by hemodialysis. Call your local poison control center for further instructions.

5. FIRE FIGHTING MEASURES

Flash Pt:	OSHA Class IB 45.00 F Method Used: Setaflash Closed Cup (Rapid Setaflash)
Explosive Limits:	LEL: No data. UEL: No data.
Autoignition Pt:	No data.
Suitable Extinguishing Media:	Use carbon dioxide, dry powder, or alcohol resistant foam.
Unsuitable Extinguishing Media:	Water may be ineffective. Solid streams of water will likely spread the fire.
Fire Fighting Instructions:	Self-contained respiratory protection should be provided for fire fighters fighting fires in buildings or confined area. Storage containers exposed to fire should be kept cool with water spray to prevent pressure build-up. Stay away from heads of containers that have been exposed to intense heat or flame.
Flammable Properties and Hazards:	Vapors are heavier than air. Vapor may travel considerable distance to source of ignition and flash back.

Flammability Classification:

6. ACCIDENTAL RELEASE MEASURES

Steps To Be Taken In Case Material Is Released Or Spilled:	<p>Vapors are heavier than air. Vapors may cause flash fire or ignite explosively.</p> <p>Clean up: Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind, out of low areas, and ventilate closed spaces before entering. Shut off ignition sources; keep flares, smoking or flames out of hazard area. Use non-sparking tools. Use proper bonding and grounding methods for all equipment and processes. Keep out of waterways and bodies of water. Be cautious of vapors collecting in small enclosed spaces, sewers, low lying areas, confined spaces, etc.</p> <p>Small spills: Take up with sand, earth or other noncombustible absorbent material and place in a plastic container where applicable.</p> <p>Large spills: Dike far ahead of spill for later disposal.</p> <p>Waste Disposal: Dispose in accordance with applicable local, state and federal regulations.</p>
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7. HANDLING AND STORAGE

Precautions To Be Taken in Handling:	<p>Read carefully all cautions and directions on product label before use. Since empty container retains residue, follow all label warnings even after container is empty. Dispose of empty container according to all regulations. Do not reuse this container.</p> <p>Do not use this product near any source of heat or open flame, furnace areas, pilot lights, stoves, etc.</p> <p>Do not use in small enclosed spaces, such as basements and bathrooms where vapors can accumulate. Vapors can accumulate and explode if ignited.</p> <p>Do not use this product if the work area is not well ventilated. Use only with adequate ventilation to prevent build up of vapors.</p> <p>Do not spread this product over large surface areas because fire and health safety risks will increase dramatically.</p> <p>Use proper bonding and grounding when transferring material. Be aware of static electricity generation when handling material.</p>
Precautions To Be Taken in Storing:	<p>Keep container tightly closed when not in use. Store in a cool, dry place. Do not store near any source of heat or open flame, furnace areas, pilot lights, stoves, etc.</p>

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
64-17-5	Ethyl alcohol {Ethanol}	PEL: 1000 ppm	TLV: 1000 ppm	No data.
67-56-1	Methanol {Methyl alcohol; Carbinol; Wood alcohol}	PEL: 200 ppm	TLV: 200 ppm STEL: 250 ppm	No data.

Respiratory Equipment (Specify Type): For use in areas with inadequate ventilation or fresh air, wear a properly maintained and properly fitted NIOSH approved respirator for organic solvent vapors.

For OSHA controlled work places and other regular users - Use only with adequate ventilation under engineered air control systems designed to prevent exceeding the appropriate TLV.

A dust mask does not provide protection against vapors.

Eye Protection: Chemical splash goggles should be worn to prevent eye contact.

Protective Gloves: Wear gloves with as much resistance to the chemical ingredients as possible. Glove materials such as nitrile, natural rubber, and neoprene will provide protection. Glove selection should be based on chemicals being used and conditions of use. Consult your glove supplier for additional information. Gloves contaminated with product should be discarded and not reused.

Other Protective Clothing: Various application methods can dictate the use of additional protective safety equipment, such as impermeable aprons, etc., to minimize exposure.

Engineering Controls (Ventilation etc.): Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Use only with adequate ventilation to prevent buildup of vapors. Do not use in areas where vapors can accumulate and concentrate, such as basements, bathrooms or small enclosed areas. Whenever possible, use outdoors in an open air area. If using indoors open all windows and doors and maintain a cross ventilation of moving fresh air across the work area. If strong odor is noticed or you experience slight dizziness, headache, nausea or eye-watering -- STOP -- ventilation is inadequate. Leave area immediately and move to fresh air.

Work/Hygienic/Maintenance Practices: Wash hands thoroughly after use and before eating, drinking, smoking, or using the restroom.

Do not eat, drink, or smoke in the work area.

Discard any clothing or other protective equipment that cannot be decontaminated.

Facilities storing or handling this material should be equipped with an emergency eyewash and safety shower.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Physical States: [] Gas [X] Liquid [] Solid
Appearance and Odor: Water white, alcohol odor
Melting Point: No data.
Boiling Point: 147.00 F
Autoignition Pt: No data.
Flash Pt: 45.00 F Method Used: Setaflash Closed Cup (Rapid Setaflash)
Explosive Limits: LEL: No data. UEL: No data.
Specific Gravity (Water = 1): 0.7934 - 0.8108
Density: 6.646 LB/GL
Vapor Pressure (vs. Air or mm Hg): 76 MM HG at 68.0 F
Vapor Density (vs. Air = 1): > 1
Evaporation Rate: > 1
Solubility in Water: No data.
Percent Volatile: 100.0 % by weight.
VOC / Volume: 793.0000 G/L

10. STABILITY AND REACTIVITY

Stability: Unstable [] Stable [X]
Conditions To Avoid - Instability: No data available.
Incompatibility - Materials To Avoid: Incompatible with strong oxidizing agents, strong acids, reactive metals, halogens, strong inorganic acids, and aldehydes.
Hazardous Decomposition Or Byproducts: Decomposition may produce carbon monoxide and carbon dioxide.
Possibility of Hazardous Reactions: Will occur [] Will not occur [X]
Conditions To Avoid - Hazardous Reactions: No data available.

11. TOXICOLOGICAL INFORMATION

Toxicological Information: This product has not been tested as a whole. Refer to section 2 for acute and chronic effects.

Carcinogenicity/Other Information: IARC 1 - Carcinogenic to Humans
IARC 2B - Possibly Carcinogenic to Humans
ACGIH A4 - Not Classifiable as a Human Carcinogen.

IARC has determined that the consumption of alcoholic beverages is casually related to the occurrence of malignant tumors of the oral cavity, pharynx, larynx, esophagus, and liver in humans. The carcinogenic response attributed to drinking alcoholic beverages has not be verified in studies with laboratory animals. Established uses of denatured ethanol and non-beverage use of pure ethanol are not considered to pose any significant cancer hazard.

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CAS #	Hazardous Components (Chemical Name)	NTP	IARC	ACGIH	OSHA
64-17-5	Ethyl alcohol {Ethanol}	n.a.	1	A4	n.a.
67-56-1	Methanol {Methyl alcohol; Carbinol; Wood alcohol}	n.a.	n.a.	n.a.	n.a.

12. ECOLOGICAL INFORMATION

General Ecological Information: This product has not been tested as a whole.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method: Dispose in accordance with applicable local, state, and federal regulations.

14. TRANSPORT INFORMATION

LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Alcohols, n.o.s. (Ethyl Alcohol, Methanol)

DOT Hazard Class: 3 FLAMMABLE LIQUID

UN/NA Number: UN1987

Packing Group: II



Additional Transport Information: The shipper / supplier may apply one of the following exceptions: Combustible Liquid, Consumer Commodity, Limited Quantity, Viscous Liquid, Does Not Sustain Combustion, or others, as allowed under 49CFR Hazmat Regulations. Please consult 49CFR Subchapter C to ensure that subsequent shipments comply with these exceptions.

15. REGULATORY INFORMATION

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

CAS #	Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
64-17-5	Ethyl alcohol {Ethanol}	No	No	No
67-56-1	Methanol {Methyl alcohol; Carbinol; Wood alcohol}	No	Yes 5000 LB	Yes

This material meets the EPA ☒ Yes ☐ No Acute (immediate) Health Hazard
'Hazard Categories' defined ☒ Yes ☐ No Chronic (delayed) Health Hazard
for SARA Title III Sections ☒ Yes ☐ No Fire Hazard
311/312 as indicated: ☐ Yes ☒ No Sudden Release of Pressure Hazard
☐ Yes ☒ No Reactive Hazard

CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
64-17-5	Ethyl alcohol {Ethanol}	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No
67-56-1	Methanol {Methyl alcohol; Carbinol; Wood alcohol}	CAA HAP,ODC: HAP; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: Yes

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Regulatory Information Statement: All components of this material are listed on the TSCA Inventory or are exempt.

16. OTHER INFORMATION

Revision Date: 04/13/2015

Preparer Name: W.M. Barr EHS Dept (901)775-0100

Additional Information About This Product: No data available.

Company Policy or Disclaimer: The information contained herein is presented in good faith and believed to be accurate as of the effective date shown above. This information is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. Any use of this data and information must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.



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Diesel Fuel

1. IDENTIFICATION

Product Identifier Diesel Fuel

Synonyms: Diesel Fuel, Motor Vehicle Diesel Fuel, Dyed Diesel, * DieselOne®, * DieselOne® w/Platinum Plus DFX, Low Sulfur Diesel (LSD), Ultra Low Sulfur Diesel (ULSD)

Intended use of the product: Fuel

Contact: Global Companies LLC
Water Mill Center
800 South St.
Waltham, MA 02454-9161
www.globalp.com

Contact Information: EMERGENCY TELEPHONE NUMBER (24 hrs): CHEMTREC (800) 424-9300
COMPANY CONTACT (business hours): 800-542-0778

2. HAZARD IDENTIFICATION

According to OSHA 29 CFR 1910.1200 HCS

Classification of the Substance or Mixture

Classification (GHS-US):

Flam. Liquid	Category 3	H226
Skin Corrosion/Irritation	Category 2	H315
Aspiration Hazard	Category 1	H304
STOT SE	Category 3	H336
Carcinogenicity	Category 2	H350
Aquatic Chronic	Category 2	H411
Serious Eye Damage/ Irritation	Category 2B	H319

Labeling Elements



Signal Word (GHS-US):

Hazard Statements (GHS-US):

Danger

H226 – Flammable liquid and vapor.

H315 – Causes Skin irritation.

H304 – May be fatal if swallowed and enters airways.

H336 – May cause drowsiness or dizziness.

H350 – May cause cancer.

H411 – Toxic to aquatic life with long lasting effects.

H319 – May cause eye damage/irritation.

Precautionary Statements (GHS-US):

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P233 - Keep container tightly closed.

P240 – Ground/bond container and receiving equipment.



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P241 – Use explosion-proof electrical/ventilating/lighting equipment pursuant to applicable electrical code.
P242 – Use only non-sparking tools.
P243 – Take precautionary measures against static discharge.
P261 – Avoid breathing dust/fume/gas/mist/vapors/spray.
P264 – Wash skin thoroughly after handling.
P271 – Use only outdoors or in a well-ventilated area.
P273 – Avoid release to the environment.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P303+361+353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse with water/shower.
P308+311 - If exposed or concerned: Get medical advice/attention.
P301+310 - If swallowed: Immediately call a poison center/doctor/...
P331 - Do NOT induce vomiting.
P370+P378 – In case of fire use firefighting foam or other appropriate media for Class B fires to extinguish.
P403+235 - Store in a well-ventilated place. Keep cool.
P405 - Store locked up.
P501 – Dispose of contents/container in accordance with local/regional/national/international regulation.

Other information:

NFPA 704
Health: 1
Fire: 2
Reactivity: 0



3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Composition Information

Mixture

Name	Product Identifier (CAS#)	% (w/w)	Classification
Diesel Fuel	68476-34-6	100	Flam Liq. 3, H226; Skin Irrit. 2, H315; Aspiration 1, H304; STOT SE 3, H336; Carc.2. H350; Aquatic chronic 2, H411
Naphthalene	91-20-3	<0.1	Carc. 2, H351; Acute Tox. 4, H302; Aquatic Acute 1, H400; Aquatic Chronic 1, H410

Additional Formulation Information:

Diesel Fuel consists of C9+ hydrocarbons resulting from distillation of crude oil.

Low Sulfur Diesel Fuel typically contains less than 500 ppm of sulfur

Ultra Low Sulfur Diesel Fuel typically contains less than 15 ppm of sulfur



4. FIRST AID MEASURES

Route	Measures
Inhalation	Remove person to fresh air. If person is not breathing, ensure an open airway and provide artificial respiration. If necessary, provide additional oxygen once breathing is restored if trained to do so. Seek medical attention immediately.
Ingestion	Aspiration Hazard: DO NOT INDUCE VOMITING. Do not give liquids. Obtain immediate medical attention. If spontaneous vomiting occurs, lean victim forward to reduce the risk of aspiration. Ingestion may cause gastrointestinal disturbances including irritation, nausea, vomiting, and diarrhea, and central nervous system (brain) effects similar to alcohol intoxication. In severe cases, tremors, convulsions, loss of consciousness, coma, respiratory failure, and death.
Eye Contact	In case of contact with eyes, immediately flush with clean, low-pressure water for at least 15 min. Hold eyelids open to ensure adequate flushing. Seek medical attention. In case of contact lenses, remove immediately.
Skin Contact	Remove contaminated clothing and shoes. Wash contaminated areas thoroughly with soap and water or waterless hand cleanser. Obtain medical attention if irritation or redness develops. Thermal burns require immediate medical attention depending on the severity and of the area of the body burned.

Most Important Symptoms

Contact with eyes and face may cause irritation. Long-term exposure may cause dermatitis (itching, irritation, pain and swelling).

Inhalation may cause irritation and significant or long term exposure could cause respiratory insufficiency and pulmonary edema.

Ingestion may cause aspiration, gastrointestinal disturbance, and CNS effects.

Immediate Medical Attention and Special Treatment

For contact with skin or eyes, immediately wash or flush contaminated eyes with gently flowing water. If possible, irrigate each eye continuously with 0.9% saline (NS). If ingested, rinse mouth. Do NOT induce vomiting, as this may cause chemical pneumonia (fluid in the lungs).

If inhaled, administer oxygen or establish a patent airway if breathing is labored. Suction if necessary. Monitor closely, anticipate seizures. Consider orotracheal or nostracheal intubation of airway control if patient is unconscious or is in severe respiratory distress.

Discard any clothing or shoes contaminated as they may be flammable.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Foam, carbon dioxide, dry chemical are most suitable

SMALL FIRES: Any extinguisher suitable for Class B fires, dry chemical, CO₂, water spray, firefighting foam, or Halon. Small fires in the incipient (beginning) stage may typically be extinguished using handheld portable fire extinguishers and other firefighting equipment.

LARGE FIRES: Foam, carbon dioxide, dry chemical. Water may be ineffective for fighting the fire, but may be used to cool fire-exposed containers.

Specific Hazards / Products of Combustion

Moderate fire hazard when exposed to heat or flame with a very low flash point. Product is flammable and easily ignited when exposed to heat, spark, open flame or other source of ignition. Flowing product may be ignited by self-generated static electricity. When mixed with air and exposed to an ignition source, flammable vapors can burn in the open or explode in confined spaces. Being heavier than air, vapors may travel long distances to an ignition source and flash back. Runoff to sewer may cause fire or explosion hazard.

Combustion may produce smoke, carbon monoxide and other products of incomplete combustion.

Special Precautions and Protective Equipment for Firefighters

Isolate area around container involved in fire. Cool tanks, shells, and containers exposed to fire and excessive heat with water.



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For massive fires the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied firefighting foam.

Fighting Equipment/Instructions

Firefighting activities that may result in potential exposure to high heat, smoke or toxic by-products of combustion should require NIOSH- approved pressure-demand self-contained breathing apparatus with full face piece and protective clothing.

Refer to Section 9 for fire properties of this chemical including flash point, auto ignition temperature, and explosive limits.

6. ACCIDENTAL RELEASE MEASURES

ACTIVATE FACILITY SPCC, SPILL CONTINGENCY or EMERGENCY PLAN.

Personal Precautions

Due to high vapor density, flammable / toxic vapors may be present in low lying areas, dikes, pits, drains, or trenches. Vapors may accumulate in low lying areas and reach ignitable concentrations. Ventilate the area. Use of non-sparking tools and intrinsically safe equipment is recommended. Potential for flammable atmosphere should be monitored using a combustible gas indicator positioned downwind of the spill area. Refer to Sections 2 and 7 for further hazard warnings and handling instructions.

Use appropriate personal protective equipment to prevent eye/skin contact and absorption. Use NIOSH approved respiratory protection, if warranted, to prevent exposures above permissible limits. Refer to Section 8. Contaminated clothing should not be near sources of ignition.

Emergency Measures

As an immediate precautionary measure, isolate spill or leak area for at least 50 meters (150 feet) in all directions. Consider wind direction. Secure all ignition sources (flame, spark, hot work, hot metal, etc.) from area. Evaluate the direction of product travel, diking sewers, etc. to confirm spill areas. Do not touch or walk-through spilled material. For large spills, isolate initial action distance downwind 1,000 ft. (300 m).

Environmental Precautions

Stop the spill to prevent environmental release if it can be done safely. Product is toxic to aquatic life. Take action to isolate environmental receptors including drains, storm sewers and natural water bodies. Keep on impervious surface if at all possible. Use water sparingly to prevent product from spreading. Foam and absorbents may be used to reduce / prevent airborne release.

Spills may infiltrate subsurface soil and groundwater; professional assistance may be necessary to determine the extent of subsurface impact.

Follow federal, state or local requirements for reporting environmental release where necessary. Refer to Section 15 for further information.

Containment and Clean-Up Methods

Carefully contain and stop the source of the spill, if safe to do so. Protect bodies of water by diking absorbents, or absorbent boom, if possible. Do not flush down sewer or drainage systems, unless system is designed and permitted to handle such material. The use of firefighting foam may be useful in certain situations to reduce vapors. The proper use of water spray may effectively disperse product vapors or the liquid itself, preventing contact with ignition sources or areas/equipment that require protection.

Take up with dry earth, sand or other non-combustible, inert oil absorbing materials. Carefully shovel, scoop or sweep up into a waste container with clean, non-sparking tools for reclamation or disposal. Response and cleanup crews must be properly trained and must utilize proper protective equipment. Refer to Section 8 for appropriate protective equipment.

7. HANDLING AND STORAGE

USE ONLY AS A FUEL.

DO NOT SIPHON BY MOUTH.

Handling Precautions

Handle as a flammable liquid. Keep away from heat, sparks, and open flame. No smoking. Electrical equipment should be approved for classified area. Bond and ground containers during product transfer pursuant to NFPA 70 and API RP 2003 to



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reduce the possibility of static-initiated fire or explosion. Follow precautions to prevent static initiated fire.

Use good personal hygiene practices. Use only with protective equipment specified in Section 8. Avoid repeated and/or prolonged skin exposure. Use only outdoors or in well ventilated areas. Wash hands before eating, drinking, smoking, or using toilet facilities. Do not use as a cleaning solvent on the skin. Do not use solvents or harsh abrasive skin cleaners for washing this product from exposed skin areas. Waterless hand cleaners are effective. Promptly remove contaminated clothing and launder before reuse. Use care when laundering to prevent the formation of flammable vapors which could ignite via washer or dryer. Consider the need to discard contaminated leather shoes and gloves. Emergency eye wash capability should be available in the near proximity to operations presenting a potential splash exposure.

Special slow load procedures for "switch loading" must be followed to avoid the static ignition hazard that can exist when higher flash point material (such as fuel oil) is loaded into tanks previously containing low flash point products (such as this product) - see API RP 2003, "Protection Against Ignitions Arising Out Of Static, Lightning and Stray Currents."

Storage

Large quantities of diesel fuel are stored in tanks or portable containers at an ambient storage temperature. Separate from incompatible chemicals (Refer to Section 10) by distance or secondary containment. Keep away from flame, sparks, excessive temperatures and open flame. Use approved vented containers that are clearly labeled. Label all secondary containers that this material is transferred into with the chemical name and associated hazard(s). Empty product containers or vessels may contain flammable vapors. Do not pressurize, cut, heat, weld or expose such containers to sources of ignition.

Storage tanks should have a venting system. If stored in small containers, the area should be well ventilated, away from ignition sources and protected from potential damage or vehicular traffic. Post "No Smoking" signs in product storage areas. This storage area should comply with NFPA 30 "Flammable and Combustible Liquid Code" or applicable building code. The cleaning of tanks previously containing this product should follow API Recommended Practice (RP) 2013 "Cleaning Mobile Tanks in Flammable and Combustible Liquid Service" and API RP 2015 "Safe Entry and Cleaning of Petroleum Storage Tanks".

Incompatibles

Keep away from strong oxidizers, ignition sources and heat.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Limits

Component	CAS #	List	Value
Diesel Fuel	68476-34-6	ACGIH TLV-TWA	100 mg/m ³ *
Naphthalene	91-20-3	ACGIH TLV-TWA OSHA PEL ACGIH STEL	10 ppm 10 ppm 15 ppm

*Critical effects; Skin; A3; CNS impairment.

Engineering Controls

Use adequate ventilation to keep vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces. Intrinsically safe equipment and non-sparking tools shall be used in circumstances where concentrations may exceed lower flammable limits. Grounding and bonding shall be used to prevent accumulation and discharge of static electricity. Emergency shower and eyewash should be provided in proximity to handling areas in the event of exposure to decontaminate.

Personal Protective Equipment

Exposure	Equipment
Eye / Face	Wear appropriate chemical protective glasses or goggles or face shields to prevent skin and eye contact especially caused from splashing.
Skin	Wear appropriate personal protective clothing to prevent skin contact. Gloves constructed of nitrile, neoprene or PVC are recommended when handling this material. Chemical protective clothing such as of E.I. DuPont TyChem®, Saranex® or equivalent recommended based on degree of exposure. Note: The resistance of specific material may vary from product to product as well as with degree of exposure.



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Diesel Fuel

Exposure	Equipment
Respiratory	<p>A NIOSH/MSHA-approved air-purifying respirator with organic vapor cartridges or canister may be permissible under certain circumstances where airborne concentrations are or may be expected to exceed exposure limits or for odor or irritation. Protection provided by air-purifying respirators is limited. Refer to OSHA 29 CFR 1910.134, ANSI Z88.2-1992, NIOSH Respirator Decision Logic, and the manufacturer for additional guidance on respiratory protection selection and limitations.</p> <p>Use a positive pressure, air-supplied respirator if there is a potential for uncontrolled release, exposure levels are not known, in oxygen-deficient atmospheres, or any other circumstance where an air-purifying respirator may not provide adequate protection.</p>
Thermal	<p>Product is stored at ambient temperature. No thermal protection is required except for emergency operations involving actual or potential for fire. Use adequate ventilation to keep vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces.</p>

9. PHYSICAL AND CHEMICAL PROPERTIES

Property	Value
Appearance	Clear or straw-colored liquid. May be dyed red for distribution.
Odor	Mild characteristic petroleum distillate odor.
Odor Threshold	<1 ppm
pH	Not available
Melting Point	-22 to -0.4 °F (-30 to -18 °C)
Boiling Point Range	320 to 690 °F (160 to 366 °C)
Flash Point	> 125.6 °F (52 °C) PMCC
Evaporation Rate	Slow, varies with conditions
Flammability	Flammable liquid
Flammable Limits	0.6 % - 6.5%
Vapor Pressure	0.009 psia @ 70 °F
Vapor Density	> 1 (air=1)
Specific Gravity	0.83-0.86 @ 60 °F (16 °C) (water=1)
Solubility	Insoluble in water; miscible with other petroleum solvents.
Partition Coefficient (N-octanol/water)	Log Kow range of 3.3 to >6.0
Autoignition Temperature	494 °F (257 °C)
Decomposition Temperature	When heated it emits acrid smoke and irritating vapors.
Viscosity	>3 cSt
Percent Volatiles	100

10. STABILITY AND REACTIVITY

Stability

This is a stable material that is flammable liquid (OSHA/GHS hazard category 3). Stable during transport.

Reactivity

Material is not self-reacting. Flammable concentrations may be present in air. Compound can react with oxidizing materials.



Possibility of Hazardous Reactions

Hazardous polymerization will not occur.

Incompatibility

Keep away from strong oxidizers such as nitric and sulfuric acids.

Conditions to Avoid

Avoid high temperatures, open flames, sparks, static electricity, welding, smoking and other ignition sources.

Hazardous Decomposition Products

Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke).

11. TOXICOLOGICAL INFORMATION

Acute Toxicity:

Acute Toxicity (Inhalation LC50)

Diesel Fuel (68476-34-6)

LC50 Inhalation Rat >6 mg/l/4h

Acute Toxicity (Dermal LD50)

Diesel Fuel (68476-34-6)

LD50 Dermal Rabbit >5000 mg/kg

Acute Toxicity (Oral LD50)

Diesel Fuel (68476-34-6)

LD50 Oral Rabbit >5000 mg/kg

Skin Corrosion/Irritation: Prolonged and repeated contact may cause skin irritation leading to dermatitis. Liquid may be absorbed through the skin in toxic amounts if large areas of skin are exposed repeatedly.

Serious Eye Damage/Irritation: Causes serious eye irritation.

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Teratogenicity: Not available

Carcinogenicity: OSHA: NO, IARC: Group 3, NTP: NO, ACGIH: NOIC:A3, NIOSH: NO

IARC: Group 3 – Not classifiable as to their carcinogenicity to humans

ACGIH: A3 – Confirmed animal carcinogen with unknown relevance to humans.

Studies have shown that similar products produce skin tumors in laboratory animals following repeated applications without washing or removal. The significance of this finding to human exposure has not been determined. Other studies with active skin carcinogens have shown that washing the animal's skin with soap and water between applications reduced tumor formation.

IARC classifies whole diesel fuel exhaust particulates (byproduct of combustion of this material) carcinogenic to humans (Group 1) and NIOSH regards diesel fuel exhaust particulate as a potential occupational carcinogen.

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Specific Target Organ Toxicity (Single Exposure): Inhalation exposure may cause drowsiness or dizziness by inhalation exposure.

Aspiration Hazard: The major health threat of ingestion occurs from the danger of aspiration (breathing) of liquid drops into the lungs, particularly from vomiting. Aspiration may result in chemical pneumonia (fluid in the lungs), severe lung damage, respiratory failure and even death.

Potential Health Effects: Vapor irritating to skin, eyes, nose, and throat. Ingestion may cause gastrointestinal disturbances, including irritation, nausea, vomiting and diarrhea, and central nervous system (brain) effects similar to alcohol intoxication. In severe cases, tremors, convulsions, loss of consciousness, coma, respiratory arrest, and death may occur.

WARNING: The burning of any hydrocarbon as a fuel in an area without adequate ventilation may result in hazardous levels of



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Diesel Fuel

combustion products, including carbon monoxide, and inadequate oxygen levels, which may cause unconsciousness, suffocation, and death.

12. ECOLOGICAL INFORMATION

Toxicity:

This material is expected to be toxic to aquatic organisms and may cause long-term adverse effects in the aquatic environment.

Data for Component: Diesel Fuel (68476-34-6)

Material is toxic to aquatic organisms based on an acute basis (LC50/EC50 >1 but \leq 10 mg/L in the most sensitive species tested).

Material is a long-term aquatic hazard based on a chronic basis (LC50/EC50 >1 but \leq 10 mg/L in the most sensitive species tested).

Persistence and Degradation: This material is not expected to be readily biodegradable.

Bioaccumulative Potential: Not available

Mobility in Soil: Not available

Other Adverse Effects: None known

Other Information: Avoid release to the environment.

13. DISPOSAL CONSIDERATIONS

Consult federal, state and local waste regulations to determine appropriate disposal options. May be considered a hazardous waste if disposed. Direct solid waste (landfill) or incineration at a solid waste facility is not permissible. Do not discharge to sanitary or storm sewer. Personnel handling waste containers should follow precautions provided in this document.

Shipping containers must be DOT authorized packages. Follow licensure and regulations for transport of hazardous material and hazardous waste as applicable.

14. TRANSPORT INFORMATION

US DOT

UN Identification Number	NA 1993 / UN 1202
Proper Shipping Name	Diesel Fuel
Hazard Class and Packing Group	3, PGIII
Shipping Label	Combustible liquid
Placard / Bulk Package	Combustible liquid, 1993
Emergency Response Guidebook Guide Number	128

IATA Information

UN Identification Number	UN 1202
Proper Shipping Name	Combustible-Liquid, N.O.S. (Fuel, Diesel)
Hazard Class and Packing Group	3, PGIII
ICAO Label	3
Packing Instructions Cargo	310
Max Quantity Per Package Cargo	220L
Packing Instructions Passenger	309Y
Max Quantity per Package	60L

ICAO

UN Identification Number	UN 1202
Shipping Name / Description	Combustible-Liquid, N.O.S. (Fuel, Diesel)
Hazard Class and Packing Group	3, PG III
IMDG Label	3



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Diesel Fuel

IMDG

UN Identification Number	UN 1202
Shipping Name / Description	Combustible-Liquid, N.O.S. (Fuel, Diesel)
Hazard Class and Packing Group	3, PGIII
IMDG Label	3
EmS Number	F-E-S-E
Marine Pollutant	Yes

15. REGULATORY INFORMATION

U.S. Federal, State, and Local Regulatory Information

Any spill or uncontrolled release of this product, including any substantial threat of release, may be subject to federal, state and/or local reporting requirements. This product and/or its constituents may also be subject to other federal, state, or local regulations; consult those regulations applicable to your facility/operation.

OSHA Hazard Communication Standard

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning And Community Right-to-Know Act of 1986) Sections 311 and 312

Immediate (Acute) Health Hazard	Yes
Delayed (Chronic) Health Hazard	Yes
Fire Hazard	Yes
Reactive Hazard	No
Sudden Release of Pressure Hazard	No

Clean Water Act (Oil Spills)

Any spill or release of this product to "navigable waters" (Essentially any surface water, including certain wetlands) or adjoining shorelines sufficient to cause a visible sheen or deposit of a sludge or emulsion must be reported immediately to the National Response Center (1-800-424-8802) or, if not practical, the U.S. Coast Guard with follow up to the National Response Center, as required by U.S. Federal Law. Also contact appropriate state and local regulatory agencies as required.

CERCLA Section 103 and SARA Section 304 (Release to the Environment)

The CERCLA definition of hazardous substances contains a "petroleum exclusion" clause which exempts this material. This product does not contain any chemicals subject to the reporting requirements of CERCLA Section 103 or SARA 304.

SARA Section 313- Supplier Notification

This product does not contain any chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and of 40 CFR 372.

EPA Notification (Oil Spills)

If there is a discharge of more than 1,000-gallons of oil into or upon navigable waters of the United States, or if it is the second spill event of 42 gallons or more of oil into water within a twelve (12) month period, a written report must be submitted to the Regional Administrator of the EPA within sixty days of the event.

Pennsylvania Right to Know Hazardous Substance list:

The following product components are cited in the Pennsylvania Special Hazardous Substance List, and are present at levels which require reporting.

Component	CAS	Amount
Diesel Fuel	68476-34-6	100%

New Jersey Right to Know Hazardous Substance list:

The following product components are cited in the New Jersey Right to Know Hazardous Substance List, and are present at levels which require reporting.

Component	CAS	Amount
Diesel Fuel	68476-34-6	100%



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Diesel Fuel

California Proposition 65 WARNING: This product contains chemicals known to the State of California to cause Cancer or Reproductive Toxicity.

Component	CAS	Amount
Naphthalene	91-20-3	<0.1%

U.S. Toxic Substances Control Act

All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30.

CEPA - Domestic Substances List (DSL)

All substances contained in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.

Canadian Regulatory Information (WHMIS)

Class B3 – Combustible Liquid

Class D2A – Materials causing other toxic effects. (Very Toxic)

16. OTHER INFORMATION

Version	4
Issue Date	May 20, 2016
Prior Issue Date	May 3, 2015

Description of Revisions

Revised to meet Globally Harmonized System for chemical hazard communication requirements pursuant to OSHA regulatory revisions 77 FR 17884, March 26, 2012.

Abbreviations

°F	Degrees Fahrenheit (temperature)	mL	Milliliter
<	Less than	mm ²	Square millimeters
=	Equal to	mmHg	Millimeters of mercury (pressure)
>	Greater than	N/A	Not applicable
AP	Approximately	N/D	Not determined
C	Centigrade (temperature)	ppm	Parts per million
kg	Kilogram	sec	Second
L	Liter	ug	Micrograms
mg	Milligrams		

Acronyms

ACGIH	American Conference of Governmental Industrial Hygienists	GHS	Global Harmonized System
AIHA	American Industrial Hygiene Association	HMIS	Hazardous Materials Information System
AL	Action Level	IARC	International Agency for Research On Cancer
ANSI	American National Standards Institute	IATA	International Air Transport Association
API	American Petroleum Institute	IMDG	International Maritime Dangerous Goods
CAS	Chemical Abstract Service	Koc	Soil Organic Carbon
CERCLA	Comprehensive Emergency Response, Compensation, and Liability Act	LC50	Lethal concentration 50%
DOT	U.S. Department of Transportation	LD50	Lethal dose 50%
EC50	Ecological concentration 50%	MSHA	Mine Safety and Health Administration
EPA	U.S. Environmental Protection Agency	NFPA	National Fire Protection Association
ERPG	Emergency Response Planning Guideline	NIOSH	National Institute of Occupational Safety and Health
		NOIC	Notice of Intended Change



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Diesel Fuel

NTP	National Toxicology Program	STEL	Short Term Exposure Limit (generally 15 minutes)
OPA	Oil Pollution Act of 1990	TLV	Threshold Limit Value (ACGIH)
OSHA	U.S. Occupational Safety & Health Administration	TSCA	Toxic Substances Control Act
PEL	Permissible Exposure Limit (OSHA)	TWA	Time Weighted Average (8 hr.)
RCRA	Resource Conservation and Recovery Act Reauthorization Act of 1986 Title III	UN	United Nations
REL	Recommended Exposure Limit (NIOSH)	UNECE	United Nations Economic Commission for Europe
RVP	Reid Vapor Pressure	WEEL	Workplace Environmental Exposure Level (AIHA)
SARA	Superfund Amendments and	WHMIS	Canadian Workplace Hazardous Materials Information System
SCBA	Self Contained Breathing Apparatus		
SPCC	Spill Prevention, Control, and Countermeasures		

Disclaimer of Expressed and Implied Warranties

Information presented herein has been compiled from sources considered to be dependable, and is accurate and reliable to the best of our knowledge and belief, but is not guaranteed to be so. Since conditions of use are beyond our control, we make no warranties, expressed or implied, except those that may be contained in our written contract of sale or acknowledgment.

Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material, even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in their use of the material.

**** End of Safety Data Sheet ****

Duct Tape

LA-CO Industries, Inc.

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
according to Canadian Hazardous Products Regulations (HPR)
Date of issue: 03/05/2015
Version: 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Article
Trade name : Duct Tape

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Tape

1.3. Details of the supplier of the safety data sheet

LA-CO Industries, Inc.
1201 Pratt Boulevard
Elk Grove Village, IL. 60007-5746
Phone: (847) 956-7600
Fax: (847) 956-9885
E-mail: customer_service@laco.com



1.4. Emergency telephone number

Emergency number : 24-hour emergency: CHEMTREC- U.S. : 1-800-424-9300 International: +1-703-527-3887

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification in accordance with the Globally Harmonized Standard

This product meets the definition of an "Article".

2.2. Label elements

GHS-US labelling

No labelling applicable

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

No hazardous components.

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Not expected to require first aid measures.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries : No significant signs or symptoms indicative of any health hazard are expected to occur.

4.3. Indication of any immediate medical attention and special treatment needed

No special procedures required.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.
Unsuitable extinguishing media : None known.

Duct Tape

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
according to Canadian Hazardous Products Regulations (HPR)

5.2. Special hazards arising from the substance or mixture

Fire hazard : No particular fire or explosion hazard.
Reactivity : No dangerous reactions known.

5.3. Advice for firefighters

Firefighting instructions : Do not allow run-off from fire fighting to enter drains or water courses. Exercise caution when fighting any chemical fire.
Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Wear fire/flame resistant/retardant clothing. Wear a self contained breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : This product is not hazardous.

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Contains no substances known to be hazardous to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Contain and collect as any solid.

6.4. Reference to other sections

Section 13: disposal information, Section 7: safe handling, Section 8: personal protective equipment.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Handling temperature : Not applicable

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Protect from moisture.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Duct Tape	
ACGIH	Not applicable
OSHA	Not applicable

8.2. Exposure controls

Appropriate engineering controls : No special work practices are needed beyond the above recommendations under anticipated conditions of normal use.
Hand protection : None under normal use.
Eye protection : No special eye protection equipment recommended under normal conditions of use.
Respiratory protection : No special respiratory protection equipment is recommended under normal conditions of use with adequate ventilation.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid
Colour : Silver.
Odour : No data available
Odour threshold : No data available

Duct Tape

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
according to Canadian Hazardous Products Regulations (HPR)

pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Solubility	: No data available
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

VOC content : 0 %

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

No dangerous decomposition products known.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

Potential adverse human health effects and symptoms

Likely routes of exposure : Dermal

Duct Tape

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
according to Canadian Hazardous Products Regulations (HPR)

SECTION 12: Ecological information

12.1 Toxicity

No additional information available

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste disposal recommendations : Place contaminated materials in disposable containers.

SECTION 14: Transport information

In accordance with DOT and TDG

Not considered a dangerous good for transport regulations

Proper Shipping Name (ADR) : Not applicable

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

No additional information available

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. US State regulations

No additional information available

SECTION 16: Other information

Indication of changes : Original Document.

Data sources : OSHA 29CFR 1910.1200 Hazard Communication Standard.
REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

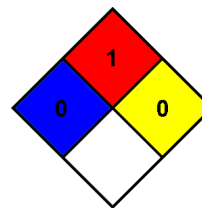
Other information : None.

Duct Tape

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
according to Canadian Hazardous Products Regulations (HPR)

NFPA health hazard	: 0 - Exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials.
NFPA fire hazard	: 1 - Must be preheated before ignition can occur.
NFPA reactivity	: 0 - Normally stable, even under fire exposure conditions, and not reactive with water.



SDS Prepared by: The Redstone Group, LLC
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LACO NA GHS SDS

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product

Aluminum Extrusions, Anodized Aluminum Products

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations
Revision Date: 10/07/2014 Date of issue: 09/17/2014

Version: 1.0

SECTION 1: IDENTIFICATION

1.1. Product Identifier

Product Form: Mixture

Product Name: Aluminum Extrusions, Anodized Aluminum Products

Other means of identification: Aluminum Alloys 6xxx series

1.2. Intended Use of the Product

Use of the substance/mixture: Various extruded aluminum parts and products.

1.3. Name, Address, and Telephone of the Responsible Party

Company

Sapa Extrusions Americas
9600 West Bryn Mawr Ave, Suite 250
Rosemont, IL 60018
Phone: 800-233-3165

1.4. Emergency Telephone Number

Emergency Number : USA: Chemtrec: 1-800-424-9300 or 1-703-527-3887

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

Classification (GHS-US)

Not classified

2.2. Label Elements

GHS-US Labeling

No labeling applicable

2.3. Other Hazards

This product is physiologically inert in its massive form. However, user-generated dust and/or fumes may pose a physiological hazard if inhaled or ingested. Avoid inhalation of metal dusts and fumes. May cause an influenza-like illness. Avoid skin and eye contact with dusts to prevent mechanical irritation. User-generated dust is easily ignited and difficult to extinguish. This product contains components that are environmentally hazardous and small chips, fine turnings, and dust from processing may be toxic to aquatic life.

2.4. Unknown Acute Toxicity (GHS-US)

No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance

Not applicable

3.2. Mixture

Name	Product Identifier	%	Classification (GHS-US)
Aluminum	(CAS No) 7429-90-5	96 - 99	Comb. Dust Flam. Sol. 1, H228 Water-react. 2, H261
Zinc	(CAS No) 7440-66-6	< 6.5	Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Manganese	(CAS No) 7439-96-5	< 1.5	Comb. Dust
Magnesium	(CAS No) 7439-95-4	< 1.2	Comb. Dust Flam. Sol. 1, H228 Self-heat. 2, H252 Water-react. 2, H261 Acute Tox. 3 (Oral), H301
Chromium	(CAS No) 7440-47-3	< 0.35	Not classified

Full text of H-phrases: see section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of First Aid Measures

First-aid Measures General: Never give anything by mouth to an unconscious person. If medical advice is needed, have product container or label at hand.

Aluminum Extrusions, Anodized Aluminum Products

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

First-aid Measures After Inhalation: Remove to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

First-aid Measures After Skin Contact: Cool skin rapidly with cold water after contact with molten product. Removal of solidified molten material from skin requires medical assistance.

First-aid Measures After Eye Contact: Removal of solidified molten material from the eyes requires medical assistance. Immediately rinse with water for a prolonged period (at least 15 minutes) while holding the eyelids wide open. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if irritation develops or persists.

First-aid Measures After Ingestion: Do not induce vomiting. Rinse mouth. Immediately call a POISON CENTER or doctor/physician.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/Injuries: Under normal conditions of use not expected to present a significant hazard. During processing or physical alteration, flakes or powder cause irritation of the respiratory tract, eyes, skin, and are harmful. Molten material may release toxic, and irritating fumes.

Symptoms/Injuries After Inhalation: During processing, the most significant route of exposure is by the inhalation (breathing) of fumes. If fumes are inhaled, they can cause a condition commonly known as metal fume fever with symptoms which resemble influenza; Symptoms may be delayed 4-12 hours and begin with a sudden onset of thirst, and a sweet, metallic or foul taste in the mouth. Other symptoms may include upper respiratory tract irritation accompanied by coughing and a dryness of the mucous membranes, lassitude and a generalized feeling of malaise. Fever, chills, muscular pain, mild to severe headache, nausea, occasional vomiting, exaggerated mental activity, profuse sweating, excessive urination, diarrhea and prostration may also occur.

Symptoms/Injuries After Skin Contact: Causes severe skin burns. Contact with fumes or metal powder will irritate skin. Contact with hot, molten metal will cause thermal burns. Dust may cause irritation in skin folds or by contact in combination with tight clothing. Mechanical damage via flying particles and chipped slag is possible.

Symptoms/Injuries After Eye Contact: During metal processing, dusts caused from milling and physical alteration will likely cause eye irritation. Fumes from thermal decomposition or molten material will likely be irritating to the eyes. Mechanical damage via flying particles and chipped slag is possible.

Symptoms/Injuries After Ingestion: Ingestion is not considered a potential route of exposure.

Chronic Symptoms: Aluminum: Inhalation of finely divided aluminum powder may cause pulmonary fibrosis. Zinc: Prolonged exposure to high concentrations of zinc fumes may cause "zinc shakes", an involuntary twitching of the muscles. Otherwise, zinc is non-toxic. Manganese: Chronic exposure can cause inflammation of the lung tissue, scarring the lungs (pulmonary fibrosis). Chromium: Certain hexavalent chromium compounds have been demonstrated to be carcinogenic on the basis of epidemiological investigations on workers and experimental studies in animals. Increased incidences of respiratory cancer have been found in chromium (VI) workers. There is an increased incidence of lung cancer in industrial workers exposed to chromium (VI) compounds. Please refer to IARC volume 23 for a more detailed discussion.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If you feel unwell, seek medical advice (show the label where possible).

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media: Do not use water when molten material is involved, may react violently or explosively on contact with water.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Dust, chips, or ribbons can be ignited more easily, by an ignition source, by improper machining, or by spontaneous combustion if finely divided and damp.

Explosion Hazard: Product is not explosive.

Reactivity: Stable at ambient temperature and under normal conditions of use.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire. Under fire conditions, hazardous fumes will be present.

Firefighting Instructions: Do not breathe fumes from fires or vapors from decomposition.

Protection During Firefighting: Firefighters must use full bunker gear including NIOSH-approved positive-pressure self-contained breathing apparatus to protect against potential hazardous combustion and decomposition products.

Other Information: Refer to Section 9 for flammability properties.

Aluminum Extrusions, Anodized Aluminum Products

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According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Do not handle until all safety precautions have been read and understood. Avoid breathing (vapors, dust, fumes).

6.1.1. For Non-emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Avoid creating or spreading dust.

6.1.2. For Emergency Responders

Protective Equipment: Equip cleanup crew with proper protection. Wear suitable protective clothing, gloves and eye/face protection.

Emergency Procedures: Eliminate ignition sources. Evacuate unnecessary personnel, isolate, and ventilate area.

6.2. Environmental Precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and Material for Containment and Cleaning Up

For Containment: Contain and collect as any solid. Avoid generation of dust during clean-up of spills.

Methods for Cleaning Up: Use clean non-sparking tools to collect material and place it into loosely covered plastic containers for later disposal.

6.4. Reference to Other Sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Additional Hazards When Processed: Do not allow water (or moist air) contact with this material. Product dust is combustible. Use care during processing to minimize generation of dust.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not eat, drink or smoke when using this product. Wash hands and forearms thoroughly after handling. Always wash your hands immediately after handling this product, and once again before leaving the workplace.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations.

Storage Conditions: Store in original container. Store in dry protected location to prevent any moisture contact. Keep away from heat and flame.

Incompatible Products: Strong acids. Strong bases. Strong oxidizers. Water, humidity. Alkalis. Corrosive substances in contact with metals may produce flammable hydrogen gas.

Incompatible Materials: Keep away from any possible contact with water, because of violent reaction and possible flash fire.

Special Rules on Packaging: Store in a closed container.

7.3. Specific End Use(s)

Various extruded aluminum parts and products.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

Aluminum (7429-90-5)		
USA ACGIH	ACGIH TWA (mg/m³)	1 mg/m³ (respirable fraction)
USA NIOSH	NIOSH REL (TWA) (mg/m³)	10 mg/m³ (total dust)
		5 mg/m³ (respirable dust)
USA OSHA	OSHA PEL (TWA) (mg/m³)	15 mg/m³ (total dust)
		5 mg/m³ (respirable fraction)
Manganese (7439-96-5)		
USA ACGIH	ACGIH TWA (mg/m³)	0.02 mg/m³ (respirable fraction)
		0.1 mg/m³ (inhalable fraction)
USA NIOSH	NIOSH REL (TWA) (mg/m³)	1 mg/m³ (fume)
USA NIOSH	NIOSH REL (STEL) (mg/m³)	3 mg/m³
USA IDLH	US IDLH (mg/m³)	500 mg/m³
USA OSHA	OSHA PEL (Ceiling) (mg/m³)	5 mg/m³ (fume)
Chromium (7440-47-3)		
USA ACGIH	ACGIH TWA (mg/m³)	0.5 mg/m³

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USA NIOSH	NIOSH REL (TWA) (mg/m ³)	0.5 mg/m ³
USA IDLH	US IDLH (mg/m ³)	250 mg/m ³
USA OSHA	OSHA PEL (TWA) (mg/m ³)	1 mg/m ³

8.2. Exposure Controls

Appropriate Engineering Controls

: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Avoid dust production. Avoid creating or spreading dust. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment).

Personal Protective Equipment

: Safety glasses. Gloves. Insufficient ventilation: wear respiratory protection. Protective clothing.



Materials for Protective Clothing

: With molten material wear thermally protective clothing.

Hand Protection

: Wear chemically resistant protective gloves. If material is hot, wear thermally resistant protective gloves.

Eye Protection

: Chemical goggles or face shield. Face shield.

Skin and Body Protection

: Wear suitable protective clothing.

Respiratory Protection

: Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits. Wear approved mask.

Environmental Exposure Controls

: Do not allow the product to be released into the environment.

Consumer Exposure Controls

: Do not eat, drink or smoke during use.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State	: Solid
Appearance	: Silvery: plate, rod, bar, extrusion, log, forgings, etc.
Odor	: None
Odor Threshold	: Not applicable
pH	: Not applicable
Evaporation Rate	: No data available
Melting Point	: 1025 - 1210 °F (552-654 °C)
Freezing Point	: No data available
Boiling Point	: Not applicable
Flash Point	: No data available
Auto-ignition Temperature	: No data available
Decomposition Temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor Pressure	: Not applicable
Relative Vapor Density at 20 °C	: No data available
Relative Density	: No data available
Density	: 2.69-2.70 g/cm ³ (0.097-0.098 lb/ft ³)
Solubility	: Water: None
Partition Coefficient: N-octanol/water	: Not applicable
Viscosity	: No data available

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9.2. Other Information

No additional information available

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity: Stable at ambient temperature and under normal conditions of use.

10.2. Chemical Stability: Stable under recommended handling and storage conditions (see section 7).

10.3. Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

10.4. Conditions to Avoid: Protect from moisture. Incompatible materials.

10.5. Incompatible Materials: Strong acids. Strong bases. Strong oxidizers. Water, humidity. Alkalis. Corrosive substances in contact with metals may produce flammable hydrogen gas.

10.6. Hazardous Decomposition Products: Under conditions of fire this material may produce: Oxides of aluminum.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information On Toxicological Effects

Acute Toxicity: Not classified

Magnesium (7439-95-4)	
LD50 Oral Rat	230 mg/kg

Skin Corrosion/Irritation: Not classified

pH: Not applicable

Serious Eye Damage/Irritation: Not classified

pH: Not applicable

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Carcinogenicity: Not classified

Chromium (7440-47-3)	
IARC group	3

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: During processing, the most significant route of exposure is by the inhalation (breathing) of fumes. If fumes are inhaled, they can cause a condition commonly known as metal fume fever with symptoms which resemble influenza; Symptoms may be delayed 4-12 hours and begin with a sudden onset of thirst, and a sweet, metallic or foul taste in the mouth. Other symptoms may include upper respiratory tract irritation accompanied by coughing and a dryness of the mucous membranes, lassitude and a generalized feeling of malaise. Fever, chills, muscular pain, mild to severe headache, nausea, occasional vomiting, exaggerated mental activity, profuse sweating, excessive urination, diarrhea and prostration may also occur.

Symptoms/Injuries After Skin Contact: Causes severe skin burns. Contact with fumes or metal powder will irritate skin. Contact with hot, molten metal will cause thermal burns. Dust may cause irritation in skin folds or by contact in combination with tight clothing. Mechanical damage via flying particles and chipped slag is possible.

Symptoms/Injuries After Eye Contact: During metal processing, dusts caused from milling and physical alteration will likely cause eye irritation. Fumes from thermal decomposition or molten material will likely be irritating to the eyes. Mechanical damage via flying particles and chipped slag is possible.

Symptoms/Injuries After Ingestion: Ingestion is not considered a potential route of exposure.

Chronic Symptoms: Aluminum: Inhalation of finely divided aluminum powder may cause pulmonary fibrosis. Zinc: Prolonged exposure to high concentrations of zinc fumes may cause "zinc shakes", an involuntary twitching of the muscles. Otherwise, zinc is non-toxic. Manganese: Chronic exposure can cause inflammation of the lung tissue, scarring the lungs (pulmonary fibrosis). Chromium: Certain hexavalent chromium compounds have been demonstrated to be carcinogenic on the basis of epidemiological investigations on workers and experimental studies in animals. Increased incidences of respiratory cancer have been found in chromium (VI) workers. There is an increased incidence of lung cancer in industrial workers exposed to chromium (VI) compounds. Please refer to IARC volume 23 for a more detailed discussion.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Zinc (7440-66-6)	
LC50 Fish 1	2.16 - 3.05 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	0.139 - 0.908 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])

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LC 50 Fish 2	0.211 - 0.269 mg/l (Exposure time: 96 h - Species: Pimephales promelas [semi-static])
Manganese (7439-96-5)	
NOEC chronic fish	3.6 mg/l (Exposure time: 96h; Species: Oncorhynchus mykiss)

12.2. Persistence and Degradability

No additional information available

12.3. Bioaccumulative Potential

No additional information available

12.4. Mobility in Soil

No additional information available

12.5. Other Adverse Effects

Other Information : Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Sewage Disposal Recommendations: Do not empty into drains; dispose of this material and its container in a safe way.

Additional Information: Recycle the material as far as possible.

Ecology – Waste Materials: Avoid release to the environment.

SECTION 14: TRANSPORT INFORMATION

14.1. In Accordance with DOT Not regulated for transport

14.2. In Accordance with IMDG Not regulated for transport

14.3. In Accordance with IATA Not regulated for transport

SECTION 15: REGULATORY INFORMATION

15.1 US Federal Regulations

Aluminum (7429-90-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Listed on United States SARA Section 313	
SARA Section 313 - Emission Reporting	1.0 % (dust or fume only)
Zinc (7440-66-6)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Listed on United States SARA Section 313	
SARA Section 313 - Emission Reporting	1.0 % (dust or fume only)
Manganese (7439-96-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Listed on United States SARA Section 313	
SARA Section 313 - Emission Reporting	1.0 %
Magnesium (7439-95-4)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Chromium (7440-47-3)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Listed on United States SARA Section 313	
SARA Section 313 - Emission Reporting	1.0 %

15.2 US State Regulations

Aluminum (7429-90-5)	
U.S. - Massachusetts - Right To Know List	
U.S. - New Jersey - Right to Know Hazardous Substance List	
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List	
U.S. - Pennsylvania - RTK (Right to Know) List	
Zinc (7440-66-6)	
U.S. - Massachusetts - Right To Know List	
U.S. - New Jersey - Right to Know Hazardous Substance List	
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List	
U.S. - Pennsylvania - RTK (Right to Know) List	

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Manganese (7439-96-5)

U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
U.S. - Pennsylvania - RTK (Right to Know) List

Magnesium (7439-95-4)

U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

Chromium (7440-47-3)

U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances
U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision Date : 10/07/2014

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

Acute Tox. 3 (Oral)	Acute toxicity (oral) Category 3
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Comb. Dust	Combustible Dust
Flam. Sol. 1	Flammable solids Category 1
Self-heat. 2	Self-heating substances and mixtures Category 2
Water-react. 2	Substances and mixtures which in contact with water emit flammable gases Category 2
H228	Flammable solid
	May form combustible dust concentrations in air
H252	Self-heating in large quantities; may catch fire
H261	In contact with water releases flammable gases
H301	Toxic if swallowed
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

SDS US (GHS HazCom)

1. Identification

Product identifier	Eyesaline Eyewash or Sterile Eyesaline
Other means of identification	
Product code	32-ST1050, 32-ST2050, 32-000440, 32-000445, 32-000451, 32-000452, 32-000454, 32-000455, 32-000456, 32-000457, 32-000460, 32-000461, 32-000462, 32-000465, 32-000494, 32-000497, 32-000498
Recommended use	Emergency eyewash.
Recommended restrictions	None known.
Manufacturer/Importer/Supplier/Distributor information	
Company name:	Honeywell Safety Products USA, Inc
Address:	825 East Highway 151 Platteville, WI 53818 USA
Telephone:	1-800-873-5242
Contact Person	hsptechsupport@honeywell.com
E-mail:	msds@chemtrec.com
Emergency phone number:	+1-703-741-5500 for USA/Canada

2. Hazard(s) identification

Physical hazards	Not classified.
Health hazards	Not classified.
OSHA defined hazards	Not classified.
Label elements	
Hazard symbol	None.
Signal word	None.
Hazard statement	The mixture does not meet the criteria for classification.
Precautionary statement	
Prevention	Observe good industrial hygiene practices.
Response	Wash hands after handling.
Storage	Store away from incompatible materials.
Disposal	Dispose of waste and residues in accordance with local authority requirements.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

3. Composition/information on ingredients

Mixtures
The manufacturer lists no ingredients as hazardous according to OSHA 29 CFR 1910.1200.

4. First-aid measures

Inhalation	If symptomatic, move to fresh air. Get medical attention if symptoms persist.
Skin contact	Wash skin with soap and water. Get medical attention promptly if symptoms occur after washing.
Eye contact	Remove contact lenses. Get medical attention promptly if symptoms occur after flushing.
Ingestion	Seek medical advice.
Most important symptoms/effects, acute and delayed	No specific symptoms noted.

Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
5. Fire-fighting measures	
Suitable extinguishing media	Water. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	No restrictions known.
Specific hazards arising from the chemical	None.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	None.
General fire hazards	No unusual fire or explosion hazards noted.
6. Accidental release measures	
Personal precautions, protective equipment and emergency procedures	For industrial use, wear appropriate personal protective equipment (See Section 8).
Methods and materials for containment and cleaning up	Stop leak if you can do so safely. Absorb spill with appropriate sand, clay or other inert sorbent material, then place in appropriate waste container. Large Spills: Flush area with water. Treat runoff per applicable environmental regulations pertaining to drains, water courses and ground water, diking if required.
Environmental precautions	Treat discharge into drains, water courses or onto the ground according to applicable regulations.
7. Handling and storage	
Precautions for safe handling	Observe good industrial hygiene practices. Avoid inhalation of vapors and contact with skin and eyes.
Conditions for safe storage, including any incompatibilities	Keep container closed. Store away from incompatible materials. Do not allow material to freeze. Keep at temperature not exceeding 43°C / 110°F.
8. Exposure controls/personal protection	
Occupational exposure limits	No exposure limits noted for ingredient(s).
Biological limit values	No biological exposure limits noted for the ingredient(s).
Exposure guidelines	No exposure standards allocated.
Appropriate engineering controls	Not required.
Individual protection measures, such as personal protective equipment	
Eye/face protection	None under normal conditions.
Skin protection	
Hand protection	Chemical resistant gloves are recommended.
Other	None under normal working conditions.
Respiratory protection	Not normally needed.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking.
9. Physical and chemical properties	
Appearance	Colorless liquid.
Physical state	Liquid.
Form	Liquid.
Color	Colorless.
Odor	No discernable odor.
Odor threshold	Not available.

pH	6.9 - 7.4
Melting point/freezing point	Not available.
Initial boiling point and boiling range	200 °F (93.33 °C)
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	760 mm Hg
Vapor density	Not available.
Relative density	1
Solubility(ies)	
Solubility (water)	Completely soluble in water.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.

10. Stability and reactivity

Reactivity	Stable at normal conditions.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Contact with incompatible materials. Freezing. Elevated temperatures.
Incompatible materials	None.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
Skin contact	Prolonged or repeated contact may dry skin and cause irritation.
Eye contact	May cause temporary eye irritation.
Ingestion	No harmful effects expected in amounts likely to be ingested by accident.

Symptoms related to the physical, chemical and toxicological characteristics	May cause discomfort if swallowed.
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Information on toxicological effects

Acute toxicity	No adverse effects due to eye or skin contact are expected.
Skin corrosion/irritation	Not classified.
Serious eye damage/eye irritation	Not classified.
Respiratory or skin sensitization	
Respiratory sensitization	Not classified.
Skin sensitization	Not a skin sensitizer.
Germ cell mutagenicity	Not classified.

Carcinogenicity Not classified.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity Not classified.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not classified.

Chronic effects Not classified.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Persistence and degradability No data available.

Bioaccumulative potential The product is not expected to bioaccumulate.

Mobility in soil The product is completely soluble in water.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Dispose in accordance with all applicable regulations. Do not allow runoff to sewer, waterway or ground.

Hazardous waste code Waste codes should be assigned by the user based on the application for which the product was used.

Waste from residues / unused products Dispose of in accordance with local regulations.

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

15. Regulatory information

US federal regulations This product is not hazardous according to OSHA 29CFR 1910.1200. One or more components are not listed on TSCA.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No**SARA 313 (TRI reporting)**

Not regulated.

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.**US state regulations** This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.**US. Massachusetts RTK - Substance List**

Not regulated.

US. New Jersey Worker and Community Right-to-Know Act

Not listed.

US. Pennsylvania Worker and Community Right-to-Know Law

Not listed.

US. Rhode Island RTK

Not regulated.

US. California Proposition 65

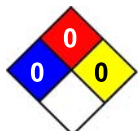
Not Listed.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	Yes
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision**Issue date** 02-July-2015**Revision date** -**Version #** 01**Further information** The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.**NFPA ratings**

List of abbreviations

References

ACGIH
EPA: Acquire database
NLM: Hazardous Substances Data Base
US. IARC Monographs on Occupational Exposures to Chemical Agents
National Toxicology Program (NTP) Report on Carcinogens
ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices
ESIS (European chemical Substances Information System)
HSDB® - Hazardous Substances Data Bank
IARC Monographs. Overall Evaluation of Carcinogenicity

Disclaimer

This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.

SAFETY DATA SHEET

Float and Rolled Flat Glass

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

USA: PILKINGTON North America, Inc.
811 Madison Ave.
Toledo, OH 43697-0799
Emergency Telephone: 419-247-3731

Europe: PILKINGTON Ltd.
European Technical Centre.
Hall Lane, Lathom,
Ormskirk, Lancashire L40 5UF
Emergency Telephone: 01695 50000

Product: Sheets of flat glass

Common Names: Float glass, rolled plate glass, or flat glass; under the following trade names:

Architectural

Pilkington **Activ™** (Clear, Blue, Neutral)
Pilkington **Activ Optitherm™**
Pilkington **Activ Suncool™**
Pilkington **Arctic Blue™**
Pilkington **Dark Bronze C™**
Pilkington **Dark Grey™**
Pilkington Design Glass
Pilkington **Eclipse Advantage™**
(Clear, Blue-Green, Arctic Blue, Grey, Bronze, Evergreen)
Pilkington **Emerald Green™**
Pilkington **Energy Advantage™**
Pilkington **EverGreen™**
Pilkington **Galleria™**
Pilkington Horticultural Glass
Pilkington **JadeGreen™**

Pilkington **K Glass™**
Pilkington **Karatachi™** Dark Grey
Pilkington **Microfloat™**
Pilkington **Mirropane™**
Pilkington **Mistlite™** Clear
Pilkington **Nashiji™** Clear
Pilkington **Optar™**
Pilkington **Optifloat™**
(Clear, Bronze, Grey, Blue, Green, Blue-Green)
Pilkington **Optifloat™** Opal
Pilkington **Optitherm™**
Pilkington **OptiView™**
Pilkington **Optiwhite™**
Pilkington Oriel Collection

Pilkington **Planar™**
Pilkington **Planar Activ™**
Pilkington **Planarclad™**
Pilkington **Plateau™**
Pilkington **Profilite™**
Pilkington **Reflite™**
Pilkington **Solar-E™**
Pilkington **Suncool™**

Pilkington **SunShade™** Silver
Pilkington **SuperGrey™**
Pilkington **TEC Glass™**
Pilkington Texture Glass

Automotive

Pilkington **Light Green**
Pilkington **Green**
Pilkington **Dark Green**
Pilkington **Clear**

Pilkington **Solar Green**
Pilkington **EZ Kool**
Pilkington **EZ eye**
Pilkington **Bronze**

Pilkington **Sundym**
Pilkington **Galaxsee**
Pilkington **Optikool**
Pilkington **Arctic Lite**

Intended Use: Glass, glazing systems and products manufactured from sheets of flat glass.

Date Prepared: May 2015

MATERIAL SAFETY DATA SHEET

Float and Rolled Flat Glass

This safety datasheet has been prepared in accordance with the EC Regulations 1907/2006 and 453/2010 (REACH and annex II) in accordance with the Global Harmonised System (GHS) and EC Regulation 1272/2008 (CLP). Although Pilkington and the NSG Group provide this information in this format, **this document does not constitute a Safety Data Sheet with regard to the European REACH regulation**. The substance “*glass*” and manufactured “*articles*” referred to in section 1 are exempt from registration and thus do not require a Safety Data Sheet.

SECTION 2 TOXICOLOGICAL INFORMATION

2.1 Classification of the substance or mixture.

Further information on the risks to health and /or the environment is given in sections 3, 11, 12 and 16.

2.1.1 Classification according to regulation (EC) 1272/2008

The product does not contain a substance that is classified as hazardous according to the provisions of Regulation (EC) 1272/2008 (CLP).

2.2.1 Labeling according to Regulation 1272/2008 (CLP)

Hazard Statements

None

Classification 1272/2008 (CLP) warning pictograms

None

2.3 Classification according to Directive 67/548/EC

Not classified

2.3.1 Labeling according to Directive 67/548/EEC

None

Indication

None

Risk Phrases

None

Safety Phrases

None

2.3 Other

The mixture does not meet the criteria for PBT or vPvB substances according to Annex III of REACH regulation EC 1907/2006.

No hazards identified.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

3.1. Composition.

Substance.	CAS	Conc. %.	Class. 67/548/CEE.	Class 1272/2008 (CLP).
Glass	CAS. 65997-17-3	100	none	none

MATERIAL SAFETY DATA SHEET

Float and Rolled Flat Glass

The products listed in section 1 are based on typical soda-lime-silicate flat glass. In Europe, EINECS identifies glass in the following terms: Glass, oxide, chemicals (EC:266-046-0). CAS: 65997-17-3. Trace amounts of the metals Fe, Se, Ni, Cr and Co are purposely added to some compositions to color the glass and a trace amount of Pb is sometimes present as a contaminant.

3.2. Coatings

Some products may be coated. Coatings are deposited onto the glass to form hard durable coatings on the surface. These coatings comprise of single or multiple layer coatings and are between 15 and 350 nm in thickness. Depending on the deposition process, the coatings are either amorphous or polycrystalline. They adhere strongly to the glass surface. Depending on the desired product characteristics, the coatings may contain the following elements: Si, Sn, Ni, Cr, Ti, Fe and Sb. Very small quantities (a few atom percent) of other “dopant” elements are added to modify the products optical and physical characteristics.

SECTION 4 FIRST AID MEASURES

This product is not considered to be or to contain hazardous chemicals based on evaluations made by our company under the US Hazard Communication Standard, 29 CFR 1910.1200, or appropriate EU regulations. Any dust generated during breakage or fabrication of this product is an amorphous silicate substance and should be considered as a “nuisance particulate”.

4.1. Description of first aid measures.

4.1.1 Glass dust

EYES: Remove any contact lenses. Rinse eyes with of water and consult a doctor.

SKIN: Wash with soap and water. Do not rub.

INGESTION: Seek medical attention.

INHALATION: Remove from exposure and contact physician.

4.1.2 Flat glass

EYES: Remove any contact lenses. Rinse eyes with of water and consult a doctor.

SKIN: If laceration occurs seek appropriate first aid or medical attention for cuts and bleeding.

INGESTION: Not applicable

INHALATION: Not applicable

4.2. Other

For toxicological information see section 11.

MATERIAL SAFETY DATA SHEET

Float and Rolled Flat Glass

SECTION 5 FIRE FIGHTING MEASURES

5.1. Fire-fighting measures

The product is not classified as flammable or combustible under Directives 67/548 / EEC and Regulation EC No. 1272/2008.

SUITABLE EXTINGUISHERS

Not applicable

EXTINGUISHING MEDIA NOT SUITABLE

Not applicable

5.2. Special hazards arising from the substance or mixture in a fire

None.

SECTION 6 ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and procedures in case of emergency.

Safety glasses/goggles are recommended to protect eyes in the event of glass breakage. Appropriate personal protective equipment is recommended to protect hands, arms and body.

6.2. Methods and materials for containment and cleaning

Not considered a hazardous waste. Consult Federal, State and Local Regulations.

Recycle broken glass wherever appropriate facilities exist.

SECTION 7 HANDLING AND STORAGE

7.1. Precautions for safe handling

Use proper material handling equipment to avoid accidental breakage. Ensure product is handled with proper personal protective equipment to avoid lacerations.

Stand out of the danger zone when moving glass.

7.2. Conditions for safe storage, including any incompatibilities

Secure glass against breaking, falling, impact and vibrations

SECTION 8 EXPOSURE CONTROLS & PERSONAL PROTECTION

8.1. Exposure controls

The greatest risk in the handling and storage of glass is through laceration. Appropriate precautions to prevent the risk of this should be taken e.g. eye protection, cuffs, gloves, foot protection, head protection if handling above head height, etc. The use of adequate technical equipment must always take priority over personal protection equipment. In Europe, the personal protective equipment must bear the CE mark certifying its compliance with applicable regulations.

RESPIRATORY PROTECTION

Respiratory protection is not required under normal use of this product where there are no cutting or grinding operations that may generate dust. Respiratory protection may be necessary if engineering controls are not used to reduce dust generation during cutting or grinding operations. If respiratory protection is deemed necessary from

MATERIAL SAFETY DATA SHEET

Float and Rolled Flat Glass

exposure monitoring data, follow OSHA regulation 29 CFR 1910.134 or other local regulations. Always use a NIOSH or other approved respirator when necessary.

HAND PROTECTION

Anti-lacerative gloves recommended.

SKIN PROTECTION

Glass handlers' cuffs, chaps, and apron should be worn as required.

EYE PROTECTION

Goggles or face shield is recommended.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical.

Appearance:	Solid
Color:	Clear or tinted
Odor:	None
Odour threshold:	None
pH:	Not applicable
Melting point:	> 1100°C, >2000°F
Boiling point:	Not applicable
Boiling range:	Not applicable
Flash point:	Not applicable
Evaporation rate:	Not applicable.
Flammability:	Not applicable
Lower explosive limit:	Not applicable
Upper explosive limit:	Not applicable
Vapor pressure:	Not applicable.
Vapor density:	Not applicable.
Relative density:	2.45 g/cc
Solubility:	Insoluble
Ignition temperature:	Not applicable.
Decomposition temp:	Not applicable

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Float and Rolled Flat Glass

Viscosity: Not applicable

Explosive properties: Not applicable

Oxidising properties: Not applicable

9.2. Other information.

No other relevant information.

SECTION 10 STABILITY AND REACTIVITY DATA

10.1. Reactivity.

There are no risks of reaction with other substances during normal conditions of use.

10.2. Chemical stability.

The product is stable under normal conditions of use and storage.

10.3. Possibility of hazardous reactions.

In normal conditions of use and storage there are no dangerous reactions.

10.4. Conditions to avoid.

There are no particular conditions to avoid in normal use and storage.

10.5. Incompatible materials.

There are no incompatible materials to avoid in normal use and storage.

10.6. Hazardous decomposition products.

None.

10.7 Coatings.

The coatings on the coated products listed in section 1 are all designed to pass European Standard (EN1096) which tests the coatings' durability to high temperatures, humidity, corrosive atmospheres and abrasion to ensure the coatings are not damaged or release materials in service. The coatings are stable during post-production processing (e.g. toughening). The coatings' surface is stable and inert. The only exception to this is Pilkington Activ™ self cleaning glass, where the surface purposely acts as a photo-catalyst accelerating the decomposition of organic dirt, but it is not used up or changed during the catalytic process.

SECTION 11 TOXICOLOGY INFORMATION

11.1. General information on effects.

Flat glass products in their normal state do not present an inhalation or ingestion hazard. Fabrication operations such as cutting, grinding, seeming, edging or breaking may result in the release of airborne dust which may present a health hazard. Dust generated during breakage or fabrication of this product should be considered a "nuisance particulate".

US regulation

Component	CAS No.	PEL	TLV
Particulate – not otherwise regulated	65997-17-3	15 mg/m ³ (total)	10 mg/m ³ (inhalable)
		5 mg/m ³ (Respirable)	3 mg/m ³ (Respirable)

UK regulation

UK occupational exposure standards are 10 mg/m³ total inhalable nuisance dust (8 hour time weighted average) and 4 mg/m³ for respirable nuisance dust (8 hour time weighted average).

MATERIAL SAFETY DATA SHEET

Float and Rolled Flat Glass

Other countries' exposure standards may vary and local guidance should be followed wherever appropriate.

IOELVs are health-based limits set under the European Chemical Agents Directive (98/24/EC). Pilkington Glass is not assigned an IOELV

11.2 Specific information in effects.

a) Acute toxicity;

The product is not classified as acutely toxic.

b) Skin corrosion / irritation;

The product is not classified as a skin irritant.

c) Eye damage / irritation;

CLP Regulation: the product may cause serious eye damage.

d) Respiratory or skin sensitization;

The product does not cause skin sensitization.

e) Germ cell mutagenicity;

The product is not classified as a mutagen.

f) Carcinogenicity;

The product is not classified as a carcinogen.

g) Reproductive toxicity;

The product is not classified as reprotoxic.

SECTION 12 ECOLOGICAL INFORMATION

12.1. General toxicity.

The product is not classified as toxic.

12.2. Persistence and degradability.

Not applicable.

12.3. Bioaccumulation potential.

Not applicable.

12.4. Mobility in soil.

Not applicable.

12.5. Results of PBT and vPvB.

The product does not contain PBT or vPvB substances according to Annex XIII of REACH regulation.

12.6. Other adverse effects.

None known.

MATERIAL SAFETY DATA SHEET

Float and Rolled Flat Glass

SECTION 13 DISPOSAL CONSIDERATIONS

13.1. Methods of waste treatment.

No specific disposal considerations.

Reuse or recycle the material when possible.

Dispose as an industrial waste per local requirements.

Broken glass ("cullet") and glass dust can be recycled into some new glass products and should be recycled wherever appropriate and possible.

Glass and glass dust is not considered a hazardous waste under USEPA RCRA, or European Hazardous Waste Directive definitions.

In Europe, waste from manufacture of glass and glass products have the following Consolidated European Waste Catalogue references -

10 11 12 Waste glass (other than those mentioned in 10 11 11)

10 11 14 Glass polishing and grinding sludge (other than those mentioned in 10 11 13)

For the coated glass products listed in section 1, the amount of material in the coatings is extremely small and has an insignificant impact on the composition of the glass with regard disposal. The coated glass can be recycled through conventional means alongside other glass.

SECTION 14 TRANSPORTATION INFORMATION

Glass is not classified as hazardous under European Directive 67/548/EC or Regulation 1272/2008 and does not require specific transportation conditions.

Glass is not classified as hazardous for transport (ADR(Road), RID (Rail), IMDG/GGVSea (Sea)).

Glass is not a hazardous material under USDOT regulations, RQ = NA.

Glass is not considered dangerous goods per Canadian TDG regulations.

SECTION 15 REGULATORY INFORMATION

15.1. European standards and legislation on health, safety and environment.

Substances in Candidate List (Art. 59 REACH).

None.

Substances subject to authorization (Annex XIV REACH).

None.

Substances subject to export notification Reg. (EC) 649/2012:

None.

Substances subject to the Rotterdam Convention:

None.

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Substances subject to the Stockholm Convention:
None.

RoHS

The European Restriction of the Use of certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) Directive bans the placing of new electrical and electronic equipment on the EU market containing more than certain levels of lead, cadmium, mercury, hexavalent chromium, polybrominated biphenyl (PBB) and polybrominated diphenyl ether (PBDE) flame retardants. The products listed in section 1 meet these requirements and do not exceed threshold levels

15.2 US standards and legislation on health, safety and environment.

Carcinogenicity:	Glass and Glass Dust is not listed by IARC, NTP or OSHA
EPCRA, CERCLA, SARA:	Glass and Glass dust is not listed as an Extremely Hazardous Substance under Section 302 and is not listed as a Hazardous Substance under Section 304 The products do not contain any listed Section 313 (40 CFR 372) chemicals in amounts above the <i>de minimis</i> notification levels.
Reportable Quantity (RQ):	NA
TSCA (USA):	Listed

15.3. Chemical safety assessment.

Not applicable.

SECTION 16 OTHER INFORMATION

Important note regarding REACH

Although Pilkington and the NSG Group provide this information in this format, **this document does not constitute a Safety Data Sheet with regard the European REACH regulation**. The “*substance*” glass referred to in section 1 and “*articles*” manufactured from it are exempt from registration and thus do not require a Safety Data Sheet.

The information in this sheet is based on knowledge available at the date of the last version. Users must verify the suitability and completeness of information in relation to the specific use of the product. It should not be construed as a guarantee on any specific product property.

The information presented above is believed to be accurate and reliable to the best of our knowledge, however NSG makes no warranties expressed or implied regarding this information. In addition, since the use of the product is not within the control of NSG, it is the user's obligation to determine the conditions of safe use of the product.

1. Identification

Product identifier Galvanized Steel-Low C and HSLA Steel (Hot Dipped)
Other means of identification
 Product code TECHS 001
Synonyms Steel
Recommended use Construction Products, Finished Goods Components, Capital Goods Components.
Recommended restrictions None known.
Manufacturer / Importer / Supplier / Distributor information
Manufacturer/Supplier Steel Dynamics, Inc. - Flat Roll Group - The Techs Division
Address 2400 Second Avenue
 Pittsburgh, PA 15219
Telephone number 412-464-5000
Fax 412-464-2019
E-mail info@thetechs.com
Emergency telephone number 412-464-5000

2. Hazard(s) identification

Physical hazards Not classified.
Health hazards Not classified.
Environmental hazards Not classified.
OSHA defined hazards Not classified.
Label elements
 Hazard symbol None.
 Signal word None.
 Hazard statement None.
 Precautionary statement
 Prevention Observe good industrial hygiene practices.
 Response Wash skin with soap and water.
 Storage Store away from incompatible materials.
 Disposal Dispose of waste and residues in accordance with local authority requirements.
Hazard(s) not otherwise classified (HNOC) None known.

3. Composition/information on ingredients
Mixtures

Chemical name	CAS number	%
Iron	7439-89-6	80-99.5
Zinc	7440-66-6	0.5-19.0
Manganese	7439-96-5	0.0-1.35
Nickel	7440-02-0	0-0.2

The product is an alloy. At temperatures above the melting point steel products may liberate fumes containing oxides of iron and alloying elements.

Composition comments All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.
 Product contains less than 0.004% cadmium and less than 0.01% lead, mercury, hexavalent chromium, antimony, polybrominated biphenyls (PBB) and polybrominated diphenyl ethers (PBDE). Some of these components are specifically regulated by OSHA.

4. First-aid measures

Inhalation	In case of inhalation of fumes from heated product: Move into fresh air and keep at rest. Get medical attention if symptoms persist. If breathing is difficult, give oxygen. If breathing stops, provide artificial respiration.
Skin contact	Contact with dust: Wash skin with soap and water. Cuts or abrasions should be treated promptly with thorough cleansing of the affected area. In case of burns with hot metal, rinse with plenty of cold water. If burns are severe, consult a physician.
Eye contact	Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses. Do not rub eye. Get medical attention if irritation develops and persists.
Ingestion	Not likely, due to the form of the product. However, ingestion of dusts generated during working operations may cause nausea and vomiting.
Most important symptoms/effects, acute and delayed	Symptoms can include irritation, redness, scratching of the cornea, and tearing. Mechanical rubbing may increase skin irritation. Heating above the melting point releases metallic oxides which may cause metal fume fever by inhalation. The symptoms are shivering, fever, malaise and muscular pain.
General information	Processing may generate hazardous fumes and dusts.

5. Fire-fighting measures

Suitable extinguishing media	This material will not burn. Use fire-extinguishing media appropriate for surrounding materials.
Unsuitable extinguishing media	None.
Specific hazards arising from the chemical	Metallic coating will begin to melt around 427°C (800°F) and the metal will begin to melt around 1510°C (2750°F). This product will proceed to a liquid and will form irritating and toxic gaseous metallic oxides at extremely high temperatures.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment/instructions	Use standard firefighting procedures and consider the hazards of other involved materials.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Cold solid metal: No special precautions are necessary beyond normal good hygiene practices. See Section 8 of the SDS for additional personal protection advice when handling this product. Hot metal: Avoid contact with hot material. Wear protective clothing as described in Section 8 of this safety data sheet. Avoid generation and spreading of dust and fumes.
Methods and materials for containment and cleaning up	In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations. Collect dust using a vacuum cleaner equipped with HEPA filter. Steel products may be recycled.
Environmental precautions	Metals in massive forms presents a limited hazard for the environment.

7. Handling and storage

Precautions for safe handling	Avoid generation and spreading of dust. Do not breathe fumes or dust from this material. Avoid contact with sharp edges and hot surfaces. Use appropriate gloves and tools to ensure safe handling. Follow the recommendations in ANSI Z49.1, Safety in welding and cutting (ANSI=American National Standard Institute).
Conditions for safe storage, including any incompatibilities	Store in a dry area.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Manganese (CAS 7439-96-5)	Ceiling	5 mg/m3	Fume.
Nickel (CAS 7440-02-0)	PEL	1 mg/m3	

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Manganese (CAS 7439-96-5)	TWA	0.1 mg/m3	Inhalable fraction.
Nickel (CAS 7440-02-0)	TWA	0.02 mg/m3 1.5 mg/m3	Respirable fraction. Inhalable fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Manganese (CAS 7439-96-5)	STEL	3 mg/m3	Fume.
Nickel (CAS 7440-02-0)	TWA	1 mg/m3	Fume.
	TWA	0.015 mg/m3	
Biological limit values	No biological exposure limits noted for the ingredient(s).		
Appropriate engineering controls	Use local exhaust when welding, burning, sawing, brazing, grinding or machining to prevent excessive dust or fume exposure. Inorganic lead and cadmium are specifically regulated material. Consult 29 CFR 1910 for other requirement if action level is attained.		
Individual protection measures, such as personal protective equipment			
Eye/face protection	Use of safety glasses or goggles is required for welding, burning, sawing, brazing, grinding or machining operations.		
Skin protection			
Hand protection	Wear suitable protective gloves to prevent contact, cuts and abrasions.		
Other	Risk of contact: Wear suitable protective clothing.		
Respiratory protection	Not normally needed. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits.		
Thermal hazards	When material is heated, wear gloves to protect against thermal burns. Thermally protective apron and long sleeves are recommended when volume of hot material is significant.		
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.		

9. Physical and chemical properties

Appearance	Massive, solid metal.
Physical state	Solid.
Form	Solid.
Color	Metallic gray.
Odor	None.
Odor threshold	Not applicable.
pH	Not applicable.
Melting point/freezing point	2751.8 °F (1511 °C) Base metal, 798.8 - 899.6 °F (426 - 482 °C) Metallic Coating
Initial boiling point and boiling range	Not applicable.
Flash point	Not applicable.
Evaporation rate	Not applicable.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not applicable.
Flammability limit - upper (%)	Not applicable.
Explosive limit - lower (%)	Not applicable.
Explosive limit - upper (%)	Not applicable.
Vapor pressure	Not applicable.
Vapor density	Not applicable.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Insoluble in water.
Partition coefficient (n-octanol/water)	Not applicable.
Auto-ignition temperature	Not applicable.
Decomposition temperature	Not available.
Viscosity	Not applicable.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
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Chemical stability	Stable at normal conditions.
Possibility of hazardous reactions	Contact with strong acids will release highly flammable hydrogen gas.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong acids.
Hazardous decomposition products	Metal oxides.

11. Toxicological information

Information on likely routes of exposure

Ingestion	Solid steel: Not relevant, due to the form of the product. However, ingestion of dusts generated during working operations may cause nausea and vomiting.
Inhalation	No inhalation hazard under normal conditions. Welding, burning, sawing, brazing, grinding or machining operations may generate fumes and dusts of metal oxides. High concentrations of freshly formed fumes/dusts of metal oxides can produce symptoms of metal fume fever. Typical symptoms last 12 to 48 hours and are characterized by metallic taste in the mouth, dryness, and irritation of the throat, followed by weakness, muscle pain, fever, and chills.
Skin contact	Under normal conditions of intended use, this material does not pose a risk to health. Dust may irritate skin. Contact with hot material can cause thermal burns which may result in permanent damage.
Eye contact	Under normal conditions of intended use, this material does not pose a risk to health. Contact with hot material can cause thermal burns which may result in permanent damage. Grinding and sanding this product may generate dust. Dust may irritate the eyes.
Symptoms related to the physical, chemical and toxicological characteristics	Symptoms include itching, burning, redness, and tearing of eyes. Mechanical irritation of skin. Heating above the melting point releases metallic oxides which may cause metal fume fever by inhalation. The symptoms are shivering, fever, malaise and muscular pain.

Information on toxicological effects

Acute toxicity	Welding, cutting and metalizing can generate ozone. Ozone can cause irritation of eyes, nose and respiratory tract.
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Components	Species	Test Results
Iron (CAS 7439-89-6)		
Acute		
<i>Oral</i>		
LD50	Rat	30 g/kg
Manganese (CAS 7439-96-5)		
Acute		
<i>Oral</i>		
LD50	Rat	9000 mg/kg
Skin corrosion/irritation	Not classified.	
Serious eye damage/eye irritation	Not classified.	
Respiratory or skin sensitization		
Respiratory sensitization	No data available.	
Skin sensitization	Contains nickel: May cause an allergic skin reaction.	
Germ cell mutagenicity	No data available.	
Carcinogenicity	For solid product: The product is not classified as carcinogen.	
IARC Monographs. Overall Evaluation of Carcinogenicity		
Nickel (CAS 7440-02-0)		2B Possibly carcinogenic to humans.
NTP Report on Carcinogens		
Nickel (CAS 7440-02-0)		Reasonably Anticipated to be a Human Carcinogen.
Reproductive toxicity	No data available.	
Specific target organ toxicity - single exposure	Not classified.	
Specific target organ toxicity - repeated exposure	Not classified.	
Aspiration hazard	Not applicable for solids.	
Chronic effects	Frequent inhalation of dust over a long period of time increases the risk of developing lung diseases. Exposure to manganese fume/dust can affect the central nervous system (apathy, drowsiness, weakness and other chronic symptoms such as postural tremors).	

Further information

The ingredients of the alloy are bound within the product and release is not expected under normal conditions. In its manufactured and shipped state, this product is considered non-hazardous. Processing may generate hazardous fumes and dusts.

12. Ecological information

Ecotoxicity	Not expected to be harmful to aquatic organisms.		
Components	Species	Test Results	
Iron (CAS 7439-89-6)			
Aquatic			
Fish	LC50	Channel catfish (<i>Ictalurus punctatus</i>)	> 500 mg/l, 96 hours
Nickel (CAS 7440-02-0)			
Aquatic			
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>)	2.916 mg/l, 96 hours
Zinc (CAS 7440-66-6)			
Aquatic			
Fish	LC50	Rainbow trout, donaldson trout (<i>Oncorhynchus mykiss</i>)	0.24 mg/l, 96 hours
Persistence and degradability	No data available.		
Bioaccumulative potential	No data available on bioaccumulation.		
Mobility in soil	Not available.		
Mobility in general	Not relevant, due to the form of the product.		
Other adverse effects	None known.		

13. Disposal considerations

Disposal instructions	Dispose waste and residues in accordance with applicable federal, state, and local regulations.
Hazardous waste code	Not regulated.
Waste from residues / unused products	Disposal recommendations are based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal. Recover and recycle, if practical.
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT	Not regulated as dangerous goods.
IATA	Not regulated as dangerous goods.
IMDG	Not regulated as dangerous goods.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

15. Regulatory information

US federal regulations	Under some use conditions, this material may be considered to be hazardous in accordance with OSHA 29 CFR 1910.1200.	
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)	Not regulated.	
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)	Not listed.	
CERCLA Hazardous Substance List (40 CFR 302.4)		
Manganese (CAS 7439-96-5)		LISTED
Nickel (CAS 7440-02-0)		LISTED
Zinc (CAS 7440-66-6)		LISTED
Superfund Amendments and Reauthorization Act of 1986 (SARA)		
Hazard categories	Immediate Hazard - No Delayed Hazard - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No	

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No**SARA 313 (TRI reporting)**

Chemical name	CAS number	% by wt.
Zinc	7440-66-6	0.5-19.0
Manganese	7439-96-5	0.0-1.35
Nickel	7440-02-0	0-0.2

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Manganese (CAS 7439-96-5)

Nickel (CAS 7440-02-0)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.**US state regulations****US. Massachusetts RTK - Substance List**

Manganese (CAS 7439-96-5)

Nickel (CAS 7440-02-0)

Zinc (CAS 7440-66-6)

US. New Jersey Worker and Community Right-to-Know Act

Manganese (CAS 7439-96-5)

Nickel (CAS 7440-02-0)

Zinc (CAS 7440-66-6)

US. Pennsylvania Worker and Community Right-to-Know Law

Manganese (CAS 7439-96-5)

Nickel (CAS 7440-02-0)

Zinc (CAS 7440-66-6)

US. Rhode Island RTK

Manganese (CAS 7439-96-5)

Nickel (CAS 7440-02-0)

Zinc (CAS 7440-66-6)

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

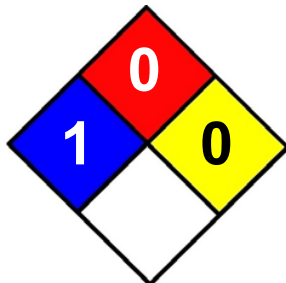
Nickel (CAS 7440-02-0)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision**Revision date** June 11, 2015**Version #** 02**NFPA Ratings****Disclaimer**

This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment. SDS's for specific coatings are available upon request.



Safety Data Sheet

Material Name: Gasoline All Grades

SDS No. 9950
US GHS

Synonyms: Hess Conventional (Oxygenated and Non-oxygenated) Gasoline; Reformulated Gasoline (RFG); Reformulated Gasoline Blendstock for Oxygenate Blending (RBOB); Unleaded Motor or Automotive Gasoline

*** Section 1 - Product and Company Identification ***

Manufacturer Information

Hess Corporation
1 Hess Plaza
Woodbridge, NJ 07095-0961

Phone: 732-750-6000 Corporate EHS
Emergency # 800-424-9300 CHEMTREC
www.hess.com (Environment, Health, Safety Internet Website)

*** Section 2 - Hazards Identification ***

GHS Classification:

Flammable Liquid - Category 2
Skin Corrosion/Irritation - Category 2
Germ Cell Mutagenicity - Category 1B
Carcinogenicity - Category 1B
Toxic to Reproduction - Category 1A
Specific Target Organ Toxicity (Single Exposure) - Category 3 (respiratory irritation, narcosis)
Specific Target Organ Toxicity (Repeat Exposure) - Category 1 (liver, kidneys, bladder, blood, bone marrow, nervous system)
Aspiration Hazard - Category 1
Hazardous to the Aquatic Environment – Acute Hazard - Category 3

GHS LABEL ELEMENTS

Symbol(s)



Signal Word

DANGER

Hazard Statements

Highly flammable liquid and vapour.
Causes skin irritation.
May cause genetic defects.
May cause cancer.
May damage fertility or the unborn child.
May cause respiratory irritation.
May cause drowsiness or dizziness.
Causes damage to organs (liver, kidneys, bladder, blood, bone marrow, nervous system) through prolonged or repeated exposure.
May be fatal if swallowed and enters airways.
Harmful to aquatic life.

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Precautionary Statements

Prevention

Keep away from heat/sparks/open flames/hot surfaces. No smoking
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting/equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wear protective gloves/protective clothing/eye protection/face protection.
Wash hands and forearms thoroughly after handling.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe mist/vapours/spray.
Use only outdoors or in well-ventilated area.
Do not eat, drink or smoke when using this product.
Avoid release to the environment.

Response

In case of fire: Use water spray, fog, dry chemical fire extinguishers or hand held fire extinguisher.
IF ON SKIN (or hair): Wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing and wash before reuse. If skin irritation occurs, get medical advice/attention.
IF exposed or concerned: Get medical advice/attention.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell.
Get medical advice/attention if you feel unwell.
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do not induce vomiting.

Storage

Store in a well-ventilated place.
Keep cool. Keep container tightly closed.
Store locked up.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

* * * Section 3 - Composition / Information on Ingredients * * *

CAS #	Component	Percent
86290-81-5	Gasoline, motor fuel	100
108-88-3	Toluene	1-25
106-97-8	Butane	<10
1330-20-7	Xylenes (o-, m-, p- isomers)	1-15
95-63-6	Benzene, 1,2,4-trimethyl-	<6
64-17-5	Ethyl alcohol	0-10
100-41-4	Ethylbenzene	<3
71-43-2	Benzene	0.1-4.9

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110-54-3	Hexane	0.5-4
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A complex blend of petroleum-derived normal and branched-chain alkane, cycloalkane, alkene, and aromatic hydrocarbons. May contain antioxidant and multifunctional additives. Non-oxygenated Conventional Gasoline and RBOB do not have oxygenates (Ethanol). Oxygenated Conventional and Reformulated Gasoline will have oxygenates for octane enhancement or as legally required.

* * * Section 4 - First Aid Measures * * *

First Aid: Eyes

In case of contact with eyes, immediately flush with clean, low-pressure water for at least 15 min. Hold eyelids open to ensure adequate flushing. Seek medical attention.

First Aid: Skin

Remove contaminated clothing. Wash contaminated areas thoroughly with soap and water or with waterless hand cleanser. Obtain medical attention if irritation or redness develops.

First Aid: Ingestion

DO NOT INDUCE VOMITING. Do not give liquids. Obtain immediate medical attention. If spontaneous vomiting occurs, lean victim forward to reduce the risk of aspiration. Monitor for breathing difficulties. Small amounts of material which enter the mouth should be rinsed out until the taste is dissipated.

First Aid: Inhalation

Remove person to fresh air. If person is not breathing, provide artificial respiration. If necessary, provide additional oxygen once breathing is restored if trained to do so. Seek medical attention immediately.

* * * Section 5 - Fire Fighting Measures * * *

General Fire Hazards

See Section 9 for Flammability Properties.

Vapors may be ignited rapidly when exposed to heat, spark, open flame or other source of ignition. Flowing product may be ignited by self-generated static electricity. When mixed with air and exposed to an ignition source, flammable vapors can burn in the open or explode in confined spaces. Being heavier than air, vapors may travel long distances to an ignition source and flash back. Runoff to sewer may cause fire or explosion hazard.

Hazardous Combustion Products

Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke). Contact with nitric and sulfuric acids will form nitrocresols that can decompose violently.

Extinguishing Media

SMALL FIRES: Any extinguisher suitable for Class B fires, dry chemical, CO₂, water spray, fire fighting foam, or gaseous extinguishing agent.

LARGE FIRES: Water spray, fog or fire fighting foam. Water may be ineffective for fighting the fire, but may be used to cool fire-exposed containers.

Firefighting foam suitable for polar solvents is recommended for fuel with greater than 10% oxygenate concentration.

Unsuitable Extinguishing Media

None

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Fire Fighting Equipment/Instructions

Small fires in the incipient (beginning) stage may typically be extinguished using handheld portable fire extinguishers and other fire fighting equipment. Firefighting activities that may result in potential exposure to high heat, smoke or toxic by-products of combustion should require NIOSH/MSHA- approved pressure-demand self-contained breathing apparatus with full facepiece and full protective clothing. Isolate area around container involved in fire. Cool tanks, shells, and containers exposed to fire and excessive heat with water. For massive fires the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied fire fighting foam.

*** Section 6 - Accidental Release Measures ***

Recovery and Neutralization

Carefully contain and stop the source of the spill, if safe to do so.

Materials and Methods for Clean-Up

Take up with sand or other oil absorbing materials. Carefully shovel, scoop or sweep up into a waste container for reclamation or disposal. Caution, flammable vapors may accumulate in closed containers.

Emergency Measures

Evacuate nonessential personnel and remove or secure all ignition sources. Consider wind direction; stay upwind and uphill, if possible. Evaluate the direction of product travel, diking, sewers, etc. to confirm spill areas. Spills may infiltrate subsurface soil and groundwater; professional assistance may be necessary to determine the extent of subsurface impact.

Personal Precautions and Protective Equipment

Response and clean-up crews must be properly trained and must utilize proper protective equipment (see Section 8).

Environmental Precautions

Protect bodies of water by diking, absorbents, or absorbent boom, if possible. Do not flush down sewer or drainage systems, unless system is designed and permitted to handle such material. The use of fire fighting foam may be useful in certain situations to reduce vapors. The proper use of water spray may effectively disperse product vapors or the liquid itself, preventing contact with ignition sources or areas/equipment that require protection.

Prevention of Secondary Hazards

None

*** Section 7 - Handling and Storage ***

Handling Procedures

USE ONLY AS A MOTOR FUEL.
DO NOT SIPHON BY MOUTH

Handle as a flammable liquid. Keep away from heat, sparks, and open flame! Electrical equipment should be approved for classified area. Bond and ground containers during product transfer to reduce the possibility of static-initiated fire or explosion.

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Special slow load procedures for "switch loading" must be followed to avoid the static ignition hazard that can exist when higher flash point material (such as fuel oil) is loaded into tanks previously containing low flash point products (such as this product) - see API Publication 2003, "Protection Against Ignitions Arising Out Of Static, Lightning and Stray Currents."

Storage Procedures

Keep away from flame, sparks, excessive temperatures and open flame. Use approved vented containers. Keep containers closed and clearly labeled. Empty product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose such containers to sources of ignition.

Store in a well-ventilated area. This storage area should comply with NFPA 30 "Flammable and Combustible Liquid Code". Avoid storage near incompatible materials. The cleaning of tanks previously containing this product should follow API Recommended Practice (RP) 2013 "Cleaning Mobile Tanks In Flammable and Combustible Liquid Service" and API RP 2015 "Cleaning Petroleum Storage Tanks".

Incompatibilities

Keep away from strong oxidizers.

* * * Section 8 - Exposure Controls / Personal Protection * * *

Component Exposure Limits

Gasoline, motor fuel (86290-81-5)

ACGIH: 300 ppm TWA
500 ppm STEL

Toluene (108-88-3)

ACGIH: 20 ppm TWA
OSHA: 200 ppm TWA; 375 mg/m³ TWA
150 ppm STEL; 560 mg/m³ STEL
NIOSH: 100 ppm TWA; 375 mg/m³ TWA
150 ppm STEL; 560 mg/m³ STEL

Butane (106-97-8)

ACGIH: 1000 ppm TWA (listed under Aliphatic hydrocarbon gases: Alkane C1-4)
OSHA: 800 ppm TWA; 1900 mg/m³ TWA
NIOSH: 800 ppm TWA; 1900 mg/m³ TWA

Xylenes (o-, m-, p- isomers) (1330-20-7)

ACGIH: 100 ppm TWA
150 ppm STEL
OSHA: 100 ppm TWA; 435 mg/m³ TWA
150 ppm STEL; 655 mg/m³ STEL

Benzene, 1,2,4-trimethyl- (95-63-6)

NIOSH: 25 ppm TWA; 125 mg/m³ TWA

Ethyl alcohol (64-17-5)

ACGIH: 1000 ppm STEL
OSHA: 1000 ppm TWA; 1900 mg/m³ TWA
NIOSH: 1000 ppm TWA; 1900 mg/m³ TWA

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Ethylbenzene (100-41-4)

ACGIH: 20 ppm TWA
OSHA: 100 ppm TWA; 435 mg/m³ TWA
125 ppm STEL; 545 mg/m³ STEL
NIOSH: 100 ppm TWA; 435 mg/m³ TWA
125 ppm STEL; 545 mg/m³ STEL

Benzene (71-43-2)

ACGIH: 0.5 ppm TWA
2.5 ppm STEL
Skin - potential significant contribution to overall exposure by the cutaneous route
OSHA: 5 ppm STEL (Cancer hazard, Flammable, See 29 CFR 1910.1028, 15 min); 0.5 ppm Action Level; 1 ppm TWA
NIOSH: 0.1 ppm TWA
1 ppm STEL

Hexane (110-54-3)

ACGIH: 50 ppm TWA
Skin - potential significant contribution to overall exposure by the cutaneous route
OSHA: 500 ppm TWA; 1800 mg/m³ TWA
NIOSH: 50 ppm TWA; 180 mg/m³ TWA

Engineering Measures

Use adequate ventilation to keep vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces.

Personal Protective Equipment: Respiratory

A NIOSH/MSHA-approved air-purifying respirator with organic vapor cartridges or canister may be permissible under certain circumstances where airborne concentrations are or may be expected to exceed exposure limits or for odor or irritation. Protection provided by air-purifying respirators is limited.

Use a positive pressure, air-supplied respirator if there is a potential for uncontrolled release, exposure levels are not known, in oxygen-deficient atmospheres, or any other circumstance where an air-purifying respirator may not provide adequate protection.

Personal Protective Equipment: Hands

Gloves constructed of nitrile, neoprene, or PVC are recommended.

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment: Eyes

Safety glasses or goggles are recommended where there is a possibility of splashing or spraying.

Personal Protective Equipment: Skin and Body

Chemical protective clothing such as of E.I. DuPont TyChem®, Saranex® or equivalent recommended based on degree of exposure. Note: The resistance of specific material may vary from product to product as well as with degree of exposure. Consult manufacturer specifications for further information.

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*** Section 9 - Physical & Chemical Properties ***

Appearance:	Translucent, straw-colored or light yellow	Odor:	Strong, characteristic aromatic hydrocarbon odor. Sweet-ether like
Physical State:	Liquid	pH:	ND
Vapor Pressure:	6.4 - 15 RVP @ 100 °F (38 °C) (275-475 mm Hg @ 68 °F (20 °C)	Vapor Density:	AP 3-4
Boiling Point:	85-437 °F (39-200 °C)	Melting Point:	ND
Solubility (H2O):	Negligible to Slight	Specific Gravity:	0.70-0.78
Evaporation Rate:	10-11	VOC:	ND
Percent Volatile:	100%	Octanol/H2O Coeff.:	ND
Flash Point:	-45 °F (-43 °C)	Flash Point Method:	PMCC
Upper Flammability Limit (UFL):	7.6%	Lower Flammability Limit (LFL):	1.4%
Burning Rate:	ND	Auto Ignition:	>530°F (>280°C)

*** Section 10 - Chemical Stability & Reactivity Information ***

Chemical Stability

This is a stable material.

Hazardous Reaction Potential

Will not occur.

Conditions to Avoid

Avoid high temperatures, open flames, sparks, welding, smoking and other ignition sources.

Incompatible Products

Keep away from strong oxidizers.

Hazardous Decomposition Products

Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke). Contact with nitric and sulfuric acids will form nitrocresols that can decompose violently.

*** Section 11 - Toxicological Information ***

Acute Toxicity

A: General Product Information

Harmful if swallowed.

B: Component Analysis - LD50/LC50

Gasoline, motor fuel (86290-81-5)

Inhalation LC50 Rat >5.2 mg/L 4 h; Oral LD50 Rat 14000 mg/kg; Dermal LD50 Rabbit >2000 mg/kg

Toluene (108-88-3)

Inhalation LC50 Rat 12.5 mg/L 4 h; Inhalation LC50 Rat >26700 ppm 1 h; Oral LD50 Rat 636 mg/kg; Dermal LD50 Rabbit 8390 mg/kg; Dermal LD50 Rat 12124 mg/kg

Butane (106-97-8)

Inhalation LC50 Rat 658 mg/L 4 h

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Xylenes (o-, m-, p- isomers) (1330-20-7)

Inhalation LC50 Rat 5000 ppm 4 h; Inhalation LC50 Rat 47635 mg/L 4 h; Oral LD50 Rat 4300 mg/kg; Dermal LD50 Rabbit >1700 mg/kg

Benzene, 1,2,4-trimethyl- (95-63-6)

Inhalation LC50 Rat 18 g/m³ 4 h; Oral LD50 Rat 3400 mg/kg; Dermal LD50 Rabbit >3160 mg/kg

Ethyl alcohol (64-17-5)

Oral LD50 Rat 7060 mg/kg; Inhalation LC50 Rat 124.7 mg/L 4 h

Ethylbenzene (100-41-4)

Inhalation LC50 Rat 17.2 mg/L 4 h; Oral LD50 Rat 3500 mg/kg; Dermal LD50 Rabbit 15354 mg/kg

Benzene (71-43-2)

Inhalation LC50 Rat 13050-14380 ppm 4 h; Oral LD50 Rat 1800 mg/kg

Hexane (110-54-3)

Inhalation LC50 Rat 48000 ppm 4 h; Oral LD50 Rat 25 g/kg; Dermal LD50 Rabbit 3000 mg/kg

Potential Health Effects: Skin Corrosion Property/Stimulativeness

Practically non-toxic if absorbed following acute (single) exposure. May cause skin irritation with prolonged or repeated contact. Liquid may be absorbed through the skin in toxic amounts if large areas of skin are repeatedly exposed.

Potential Health Effects: Eye Critical Damage/ Stimulativeness

Moderate irritant. Contact with liquid or vapor may cause irritation.

Potential Health Effects: Ingestion

Ingestion may cause gastrointestinal disturbances, including irritation, nausea, vomiting and diarrhea, and central nervous system (brain) effects similar to alcohol intoxication. In severe cases, tremors, convulsions, loss of consciousness, coma, respiratory arrest, and death may occur.

Potential Health Effects: Inhalation

Excessive exposure may cause irritations to the nose, throat, lungs and respiratory tract. Central nervous system (brain) effects may include headache, dizziness, loss of balance and coordination, unconsciousness, coma, respiratory failure, and death.

WARNING: the burning of any hydrocarbon as a fuel in an area without adequate ventilation may result in hazardous levels of combustion products, including carbon monoxide, and inadequate oxygen levels, which may cause unconsciousness, suffocation, and death.

Respiratory Organs Sensitization/Skin Sensitization

This product is not reported to have any skin sensitization effects.

Generative Cell Mutagenicity

This product may cause genetic defects.

Carcinogenicity

A: General Product Information

May cause cancer.

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IARC has determined that gasoline and gasoline exhaust are possibly carcinogenic in humans. Inhalation exposure to completely vaporized unleaded gasoline caused kidney cancers in male rats and liver tumors in female mice. The U.S. EPA has determined that the male kidney tumors are species-specific and are irrelevant for human health risk assessment. The significance of the tumors seen in female mice is not known. Exposure to light hydrocarbons in the same boiling range as this product has been associated in animal studies with effects to the central and peripheral nervous systems, liver, and kidneys. The significance of these animal models to predict similar human response to gasoline is uncertain.

This product contains benzene. Human health studies indicate that prolonged and/or repeated overexposure to benzene may cause damage to the blood-forming system (particularly bone marrow), and serious blood disorders such as aplastic anemia and leukemia. Benzene is listed as a human carcinogen by the NTP, IARC, OSHA and ACGIH.

B: Component Carcinogenicity

Gasoline, motor fuel (86290-81-5)

ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans

Toluene (108-88-3)

ACGIH: A4 - Not Classifiable as a Human Carcinogen

IARC: Monograph 71 [1999]; Monograph 47 [1989] (Group 3 (not classifiable))

Xylenes (o-, m-, p- isomers) (1330-20-7)

ACGIH: A4 - Not Classifiable as a Human Carcinogen

IARC: Monograph 71 [1999]; Monograph 47 [1989] (Group 3 (not classifiable))

Ethyl alcohol (64-17-5)

ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans

IARC: Monograph 100E [in preparation] (in alcoholic beverages); Monograph 96 [2010] (in alcoholic beverages) (Group 1 (carcinogenic to humans))

Ethylbenzene (100-41-4)

ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans

IARC: Monograph 77 [2000] (Group 2B (possibly carcinogenic to humans))

Benzene (71-43-2)

ACGIH: A1 - Confirmed Human Carcinogen

OSHA: 5 ppm STEL (Cancer hazard, Flammable, See 29 CFR 1910.1028, 15 min); 0.5 ppm Action Level; 1 ppm TWA

NIOSH: potential occupational carcinogen

NTP: Known Human Carcinogen (Select Carcinogen)

IARC: Monograph 100F [in preparation]; Supplement 7 [1987]; Monograph 29 [1982] (Group 1 (carcinogenic to humans))

Reproductive Toxicity

This product is suspected of damaging fertility or the unborn child.

Specified Target Organ General Toxicity: Single Exposure

This product may cause drowsiness or dizziness.

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Specified Target Organ General Toxicity: Repeated Exposure

This product causes damage to organs through prolonged or repeated exposure.

Aspiration Respiratory Organs Hazard

The major health threat of ingestion occurs from the danger of aspiration (breathing) of liquid drops into the lungs, particularly from vomiting. Aspiration may result in chemical pneumonia (fluid in the lungs), severe lung damage, respiratory failure and even death.

* * * Section 12 - Ecological Information * * *

Ecotoxicity

A: General Product Information

Very toxic to aquatic life with long lasting effects. Keep out of sewers, drainage areas and waterways. Report spills and releases, as applicable, under Federal and State regulations.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

Gasoline, motor fuel (86290-81-5)

Test & Species

Conditions

96 Hr LC50 <i>Alburnus alburnus</i>	119 mg/L [static]
96 Hr LC50 <i>Cyprinodon variegatus</i>	82 mg/L [static]
72 Hr EC50 <i>Pseudokirchneriella subcapitata</i>	56 mg/L
24 Hr EC50 <i>Daphnia magna</i>	170 mg/L

Toluene (108-88-3)

Test & Species

Conditions

96 Hr LC50 <i>Pimephales promelas</i>	15.22-19.05 mg/L [flow-through]	1 day old
96 Hr LC50 <i>Pimephales promelas</i>	12.6 mg/L [static]	
96 Hr LC50 <i>Oncorhynchus mykiss</i>	5.89-7.81 mg/L [flow-through]	
96 Hr LC50 <i>Oncorhynchus mykiss</i>	14.1-17.16 mg/L [static]	
96 Hr LC50 <i>Oncorhynchus mykiss</i>	5.8 mg/L [semi-static]	
96 Hr LC50 <i>Lepomis macrochirus</i>	11.0-15.0 mg/L [static]	
96 Hr LC50 <i>Oryzias latipes</i>	54 mg/L [static]	
96 Hr LC50 <i>Poecilia reticulata</i>	28.2 mg/L [semi-static]	
96 Hr LC50 <i>Poecilia reticulata</i>	50.87-70.34 mg/L [static]	
96 Hr EC50 <i>Pseudokirchneriella subcapitata</i>	>433 mg/L	
72 Hr EC50 <i>Pseudokirchneriella subcapitata</i>	12.5 mg/L [static]	
48 Hr EC50 <i>Daphnia magna</i>	5.46 - 9.83 mg/L [Static]	
48 Hr EC50 <i>Daphnia magna</i>	11.5 mg/L	

Xylenes (o-, m-, p- isomers) (1330-20-7)

Test & Species

Conditions

96 Hr LC50 <i>Pimephales promelas</i>	13.4 mg/L [flow-through]
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96 Hr LC50 Oncorhynchus mykiss	2.661-4.093 mg/L [static]
96 Hr LC50 Oncorhynchus mykiss	13.5-17.3 mg/L
96 Hr LC50 Lepomis macrochirus	13.1-16.5 mg/L [flow-through]
96 Hr LC50 Lepomis macrochirus	19 mg/L
96 Hr LC50 Lepomis macrochirus	7.711-9.591 mg/L [static]
96 Hr LC50 Pimephales promelas	23.53-29.97 mg/L [static]
96 Hr LC50 Cyprinus carpio	780 mg/L [semi- static]
96 Hr LC50 Cyprinus carpio	>780 mg/L
96 Hr LC50 Poecilia reticulata	30.26-40.75 mg/L [static]
48 Hr EC50 water flea	3.82 mg/L
48 Hr LC50 Gammarus lacustris	0.6 mg/L

Benzene, 1,2,4-trimethyl- (95-63-6)

Test & Species

Conditions

96 Hr LC50 Pimephales promelas	7.19-8.28 mg/L [flow-through]
48 Hr EC50 Daphnia magna	6.14 mg/L

Ethyl alcohol (64-17-5)

Test & Species

Conditions

96 Hr LC50 Oncorhynchus mykiss	12.0 - 16.0 mL/L [static]
96 Hr LC50 Pimephales promelas	>100 mg/L [static]
96 Hr LC50 Pimephales promelas	13400 - 15100 mg/L [flow-through]
48 Hr LC50 Daphnia magna	9268 - 14221 mg/L
24 Hr EC50 Daphnia magna	10800 mg/L
48 Hr EC50 Daphnia magna	2 mg/L [Static]

Ethylbenzene (100-41-4)

Test & Species

Conditions

96 Hr LC50 Oncorhynchus mykiss	11.0-18.0 mg/L [static]
96 Hr LC50 Oncorhynchus mykiss	4.2 mg/L [semi- static]
96 Hr LC50 Pimephales promelas	7.55-11 mg/L [flow- through]
96 Hr LC50 Lepomis macrochirus	32 mg/L [static]
96 Hr LC50 Pimephales promelas	9.1-15.6 mg/L [static]
96 Hr LC50 Poecilia reticulata	9.6 mg/L [static]
72 Hr EC50 Pseudokirchneriella subcapitata	4.6 mg/L
96 Hr EC50 Pseudokirchneriella subcapitata	>438 mg/L
72 Hr EC50 Pseudokirchneriella subcapitata	2.6 - 11.3 mg/L [static]

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96 Hr EC50 Pseudokirchneriella subcapitata	1.7 - 7.6 mg/L [static]
48 Hr EC50 Daphnia magna	1.8 - 2.4 mg/L

Benzene (71-43-2)

Test & Species

Conditions

96 Hr LC50 Pimephales promelas	10.7-14.7 mg/L [flow-through]
96 Hr LC50 Oncorhynchus mykiss	5.3 mg/L [flow-through]
96 Hr LC50 Lepomis macrochirus	22.49 mg/L [static]
96 Hr LC50 Poecilia reticulata	28.6 mg/L [static]
96 Hr LC50 Pimephales promelas	22330-41160 µg/L [static]
96 Hr LC50 Lepomis macrochirus	70000-142000 µg/L [static]
72 Hr EC50 Pseudokirchneriella subcapitata	29 mg/L
48 Hr EC50 Daphnia magna	8.76 - 15.6 mg/L [Static]
48 Hr EC50 Daphnia magna	10 mg/L

Hexane (110-54-3)

Test & Species

Conditions

96 Hr LC50 Pimephales promelas	2.1-2.98 mg/L [flow-through]
24 Hr EC50 Daphnia magna	>1000 mg/L

Persistence/Degradability

No information available.

Bioaccumulation

No information available.

Mobility in Soil

No information available.

***** Section 13 - Disposal Considerations *****

Waste Disposal Instructions

See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.

Disposal of Contaminated Containers or Packaging

Dispose of contents/container in accordance with local/regional/national/international regulations.

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*** Section 14 - Transportation Information ***

Component Marine Pollutants

This material contains one or more of the following chemicals required by US DOT to be identified as marine pollutants.

Component	CAS #	
Gasoline, motor fuel	86290-81-5	DOT regulated marine pollutant

DOT Information

Shipping Name: Gasoline

UN #: 1203 Hazard Class: 3 Packing Group: II

Placard:



*** Section 15 - Regulatory Information ***

Regulatory Information

A: Component Analysis

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

Toluene (108-88-3)

SARA 313: 1.0 % de minimis concentration
CERCLA: 1000 lb final RQ; 454 kg final RQ

Xylenes (o-, m-, p- isomers) (1330-20-7)

SARA 313: 1.0 % de minimis concentration
CERCLA: 100 lb final RQ; 45.4 kg final RQ

Benzene, 1,2,4-trimethyl- (95-63-6)

SARA 313: 1.0 % de minimis concentration

Ethylbenzene (100-41-4)

SARA 313: 0.1 % de minimis concentration
CERCLA: 1000 lb final RQ; 454 kg final RQ

Benzene (71-43-2)

SARA 313: 0.1 % de minimis concentration
CERCLA: 10 lb final RQ (received an adjusted RQ of 10 lbs based on potential carcinogenicity in an August 14, 1989 final rule); 4.54 kg final RQ (received an adjusted RQ of 10 lbs based on potential carcinogenicity in an August 14, 1989 final rule)

Safety Data Sheet

Material Name: Gasoline All Grades

SDS No. 9950

Hexane (110-54-3)

SARA 313: 1.0 % de minimis concentration

CERCLA: 5000 lb final RQ; 2270 kg final RQ

SARA Section 311/312 – Hazard Classes

Acute Health

X

Chronic Health

X

Fire

X

Sudden Release of Pressure

--

Reactive

--

Component Marine Pollutants

This material contains one or more of the following chemicals required by US DOT to be identified as marine pollutants.

Component	CAS #	
Gasoline, motor fuel	86290-81-5	DOT regulated marine pollutant

State Regulations

Component Analysis - State

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA	RI
Gasoline, motor fuel	86290-81-5	No	No	No	No	Yes	No
Toluene	108-88-3	Yes	Yes	Yes	Yes	Yes	No
Butane	106-97-8	Yes	Yes	Yes	Yes	Yes	No
Xylenes (o-, m-, p- isomers)	1330-20-7	Yes	Yes	Yes	Yes	Yes	No
Benzene, 1,2,4-trimethyl-	95-63-6	No	Yes	Yes	Yes	Yes	No
Ethyl alcohol	64-17-5	Yes	Yes	Yes	Yes	Yes	No
Ethylbenzene	100-41-4	Yes	Yes	Yes	Yes	Yes	No
Benzene	71-43-2	Yes	Yes	Yes	Yes	Yes	No
Hexane	110-54-3	No	Yes	Yes	Yes	Yes	No

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

WARNING! This product contains a chemical known to the state of California to cause cancer.

WARNING! This product contains a chemical known to the state of California to cause reproductive/developmental effects.

Safety Data Sheet

Material Name: Gasoline All Grades

SDS No. 9950

Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CAS #	Minimum Concentration
Toluene	108-88-3	1 %
Butane	106-97-8	1 %
Benzene, 1,2,4-trimethyl-	95-63-6	0.1 %
Ethyl alcohol	64-17-5	0.1 %
Ethylbenzene	100-41-4	0.1 %
Benzene	71-43-2	0.1 %
Hexane	110-54-3	1 %

Additional Regulatory Information

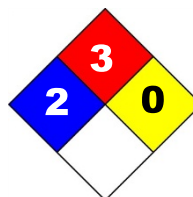
Component Analysis - Inventory

Component	CAS #	TSCA	CAN	EEC
Gasoline, motor fuel	86290-81-5	No	DSL	EINECS
Toluene	108-88-3	Yes	DSL	EINECS
Butane	106-97-8	Yes	DSL	EINECS
Xylenes (o-, m-, p- isomers)	1330-20-7	Yes	DSL	EINECS
Benzene, 1,2,4-trimethyl-	95-63-6	Yes	DSL	EINECS
Ethyl alcohol	64-17-5	Yes	DSL	EINECS
Ethylbenzene	100-41-4	Yes	DSL	EINECS
Benzene	71-43-2	Yes	DSL	EINECS
Hexane	110-54-3	Yes	DSL	EINECS

*** Section 16 - Other Information ***

NFPA® Hazard Rating

Health	2
Fire	3
Reactivity	0



HMIS® Hazard Rating

Health	2	Moderate
Fire	3	Serious
Physical	0	Minimal

*Chronic

Key/Legend

EPA = Environmental Protection Agency; TSCA = Toxic Substance Control Act; ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration., NJTSR = New Jersey Trade Secret Registry.

Literature References

None

Safety Data Sheet

Material Name: Gasoline All Grades

SDS No. 9950

Other Information

Information presented herein has been compiled from sources considered to be dependable, and is accurate and reliable to the best of our knowledge and belief, but is not guaranteed to be so. Since conditions of use are beyond our control, we make no warranties, expressed or implied, except those that may be contained in our written contract of sale or acknowledgment.

Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material, even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in their use of the material.

End of Sheet



SAFETY DATA SHEET

1. Identification

Product number 1000000075
Product identifier GLASS CLEANER
Revision date 05-30-2015
Company information Sprayway, Inc.
1005 S. Westgate Drive
Addison, IL 60101 United States
Company phone General Assistance 1-630-628-3000
Emergency telephone US 1-866-836-8855
Emergency telephone outside US 1-952-852-4646
Version # 02
Supersedes date 05-26-2015
Recommended use cleaner
Recommended restrictions None known.

2. Hazard(s) identification

Physical hazards Gases under pressure Liquefied gas
Health hazards Not classified.
Environmental hazards Not classified.
OSHA defined hazards Not classified.

Label elements



Signal word Warning
Hazard statement Contains gas under pressure; may explode if heated.
Precautionary statement
Prevention Observe good industrial hygiene practices.
Response Wash hands after handling.
Storage Protect from sunlight. Store in a well-ventilated place.
Disposal Dispose of waste and residues in accordance with local authority requirements.
Hazard(s) not otherwise classified (HNOC) None known.
Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
2-Butoxyethanol		111-76-2	2.5 - 10
Ethyl Alcohol		64-17-5	2.5 - 10
Butane		106-97-8	1 - 2.5
Propane		74-98-6	1 - 2.5
Other components below reportable levels			90 - 100

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Move to fresh air. Get medical attention if symptoms persist.
Skin contact	Get medical attention if irritation develops and persists.
Eye contact	Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth.
Most important symptoms/effects, acute and delayed	Direct contact with eyes may cause temporary irritation.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Contents under pressure. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment/instructions	In case of fire: Stop leak if safe to do so. Do not move cargo or vehicle if cargo has been exposed to heat. Move containers from fire area if you can do so without risk. Cool containers exposed to heat with water spray and remove container, if no risk is involved. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Emergency personnel need self-contained breathing equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. See Section 8 of the SDS for Personal Protective Equipment. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Refer to attached safety data sheets and/or instructions for use. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Isolate area until gas has dispersed. Prevent entry into waterways, sewer, basements or confined areas. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Ground and bond containers when transferring material. Do not re-use empty containers. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
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Conditions for safe storage, including any incompatibilities

Level 1 Aerosol.

Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. Keep containers tightly closed in a dry, cool and well-ventilated place. Refrigeration recommended. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection**Occupational exposure limits****US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	PEL	240 mg/m3
		50 ppm
Ethyl Alcohol (CAS 64-17-5)	PEL	1900 mg/m3
		1000 ppm
Propane (CAS 74-98-6)	PEL	1800 mg/m3
		1000 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	TWA	20 ppm
Butane (CAS 106-97-8)	STEL	1000 ppm
Ethyl Alcohol (CAS 64-17-5)	STEL	1000 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	TWA	24 mg/m3
		5 ppm
Butane (CAS 106-97-8)	TWA	1900 mg/m3
		800 ppm
Ethyl Alcohol (CAS 64-17-5)	TWA	1900 mg/m3
		1000 ppm
Propane (CAS 74-98-6)	TWA	1800 mg/m3
		1000 ppm

Biological limit values**ACGIH Biological Exposure Indices**

Components	Value	Determinant	Specimen	Sampling Time
2-Butoxyethanol (CAS 111-76-2)	200 mg/g	Butoxyacetic acid (BAA), with hydrolysis	Creatinine in urine	*

* - For sampling details, please see the source document.

Exposure guidelines**US - California OELs: Skin designation**

2-Butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

2-Butoxyethanol (CAS 111-76-2) Skin designation applies.

US - Tennessee OELs: Skin designation

2-Butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

US NIOSH Pocket Guide to Chemical Hazards: Skin designation

2-Butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

2-Butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection	If contact is likely, safety glasses with side shields are recommended.
Hand protection	For prolonged or repeated skin contact use suitable protective gloves.
Skin protection	
Other	Wear suitable protective clothing.
Respiratory protection	If permissible levels are exceeded use NIOSH mechanical filter / organic vapor cartridge or an air-supplied respirator. If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance	Clear.
Physical state	Gas.
Form	Aerosol. Liquefied gas.
Color	Light yellow.
Odor	Characteristic.
Odor threshold	Not available.
pH	9.1 - 10.1 estimated
Melting point/freezing point	Not available.
Initial boiling point and boiling range	212 °F (100 °C) estimated
Flash point	-156.0 °F (-104.4 °C) Propellant estimated
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	80 - 100 psig @70F estimated
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Aerosol spray enclosed space	
Deflagration density	> 2.52 g/cm ³ Tested
Aerosol spray ignition distance	< 15 cm Tested estimated
Specific gravity	0.977 - 0.997

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use. Hazardous polymerization does not occur.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Ingestion	Expected to be a low ingestion hazard.
Inhalation	Prolonged inhalation may be harmful.
Skin contact	No adverse effects due to skin contact are expected. 2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged. These effects have not been observed in humans.

Eye contact	Direct contact with eyes may cause temporary irritation.
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Symptoms related to the physical, chemical and toxicological characteristics	Direct contact with eyes may cause temporary irritation.
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Information on toxicological effects

Acute toxicity	May be harmful if swallowed. May be harmful in contact with skin. May be harmful if inhaled. Expected to be a low hazard for usual industrial or commercial handling by trained personnel.
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Components	Species	Test Results
2-Butoxyethanol (CAS 111-76-2)		
Acute		
<i>Dermal</i>		
LD50	Guinea pig	230 ml/kg, 24 Hours
		7.3 ml/kg, 4 Days
	Rabbit	450 ml/kg, 24 Hours
		435 mg/kg, 24 Hours
		0.63 ml/kg
	Rat	> 2000 mg/kg, 24 Hours
<i>Inhalation</i>		
LC50	Rabbit	400 ppm, 7 Hours
	Rat	450 ppm, 4 Hours
<i>Oral</i>		
LD100	Rabbit	695 mg/kg
LD50	Dog	> 695 mg/kg
	Guinea pig	1200 mg/kg
	Rat	530 - 2800 mg/kg
Butane (CAS 106-97-8)		
Acute		
<i>Inhalation</i>		
LC50	Mouse	1237 mg/l, 120 Minutes
		52 %, 120 Minutes
	Rat	1355 mg/l

Components	Species	Test Results	
Ethyl Alcohol (CAS 64-17-5)			
Acute			
Inhalation			
LC50	Cat	85.41 mg/l, 4.5 Hours	
		43.68 mg/l, 6 Hours	
	Mouse	> 60000 ppm	
		79.43 mg/l, 134 Minutes	
	Rat	> 115.9 mg/l, 4 Hours	
		51.3 mg/l, 6 Hours	
	Oral		
	LD50	Monkey	6000 mg/kg
Mouse		10500 ml/kg	
Rat		1187 - 2769 mg/kg	
			7800 ml/kg
Propane (CAS 74-98-6)			
Acute			
Inhalation			
LC50	Mouse	1237 mg/l, 120 Minutes	
		52 %, 120 Minutes	
	Rat	1355 mg/l	
			658 mg/l/4h

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation May be irritating to the skin. Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation Direct contact with eyes may cause temporary irritation. May be irritating to eyes.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

2-Butoxyethanol (CAS 111-76-2)

3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not an aspiration hazard. Not likely, due to the form of the product.

Chronic effects Prolonged inhalation may be harmful. May be harmful if absorbed through skin.

2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged. These effects have not been observed in humans.

12. Ecological information

Ecotoxicity Harmful to aquatic life.

Product	Species		Test Results
GLASS CLEANER (CAS Mixture)			
Aquatic			
Crustacea	EC50	Daphnia	13838.1602 mg/l, 48 hours estimated
Components	Species		Test Results
2-Butoxyethanol (CAS 111-76-2)			
Aquatic			
Fish	LC50	Inland silverside (Menidia beryllina)	1250 mg/l, 96 hours
Ethyl Alcohol (CAS 64-17-5)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	7700 - 11200 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	> 100.1 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Partition coefficient n-octanol / water (log Kow)

2-Butoxyethanol	0.83
Butane	2.89
Ethyl Alcohol	-0.31
Propane	2.36

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Consult authorities before disposal. Contents under pressure. Do not puncture, incinerate or crush. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied. Do not re-use empty containers.

14. Transport information

DOT

UN number	UN1950
UN proper shipping name	Aerosols
Transport hazard class(es)	
Class	2.2
Subsidiary risk	-
Label(s)	2.2
Packing group	Not applicable.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Packaging exceptions	306
Packaging non bulk	None
Packaging bulk	None

This product meets the exception requirements of section 173.306 as a limited quantity and may be shipped as a limited quantity. Until 12/31/2020, the "Consumer Commodity - ORM-D" marking may still be used in place of the new limited quantity diamond mark for packages of UN 1950 Aerosols. Limited quantities require the limited quantity diamond mark on cartons after 12/31/20 and may be used now in place of the "Consumer Commodity ORM-D" marking and both may be displayed concurrently.

IATA

UN number	UN1950
UN proper shipping name	Aerosols, non-flammable

Transport hazard class(es)**Class** 2.2**Subsidiary risk** -**Label(s)** 2.2**Packing group** Not applicable.**Environmental hazards** No.**ERG Code** 2L**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.**Other information****Passenger and cargo aircraft** Allowed.**Cargo aircraft only** Allowed.**Packaging Exceptions** LTD QTY**IMDG****UN number** UN1950**UN proper shipping name** AEROSOLS**Transport hazard class(es)****Class** 2.2**Subsidiary risk** -**Label(s)** 2.2**Packing group** Not applicable.**Environmental hazards****Marine pollutant** No.**EmS** Not available.**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.**Packaging Exceptions** LTD QTY**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.**DOT****IATA; IMDG****15. Regulatory information****US federal regulations**

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - No
 Delayed Hazard - No
 Fire Hazard - No
 Pressure Hazard - Yes
 Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Butane (CAS 106-97-8)

Propane (CAS 74-98-6)

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations**US. Massachusetts RTK - Substance List**

2-Butoxyethanol (CAS 111-76-2)

Butane (CAS 106-97-8)

Ethyl Alcohol (CAS 64-17-5)

Propane (CAS 74-98-6)

US. New Jersey Worker and Community Right-to-Know Act

2-Butoxyethanol (CAS 111-76-2)

Butane (CAS 106-97-8)

Ethyl Alcohol (CAS 64-17-5)

Propane (CAS 74-98-6)

US. Pennsylvania Worker and Community Right-to-Know Law

2-Butoxyethanol (CAS 111-76-2)

Butane (CAS 106-97-8)

Ethyl Alcohol (CAS 64-17-5)

Propane (CAS 74-98-6)

US. Rhode Island RTK

Butane (CAS 106-97-8)

Propane (CAS 74-98-6)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No

Country(s) or region	Inventory name	On inventory (yes/no)*
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	05-26-2015
Revision date	05-30-2015
Version #	02
References	EPA: AQUIRE database NLM: Hazardous Substances Data Base US. IARC Monographs on Occupational Exposures to Chemical Agents
Disclaimer	The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.
Revision Information	Product and Company Identification: Alternate Trade Names



TBP Converting, Inc.
V490,V620, V700, V800 V900 SDS

Safety Data Sheet

SDS N

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: NORSEAL PVC (Polyvinyl Chloride Foam)
Pertains to the following product series: V490, V620, V710, V730, V740, V760, V820, V830, V930, V990, A Isom, B Isom, C Isom, CB Isom, BL Isom, L Isom, LA Isom

MANUFACTURER: Saint-Gobain Performance Plastics, 1 Sealants Park, Granville, NY 12832
Phone (518) 642-2200, Fax (518) 642-1792

EMERGENCY TELEPHONE NUMBER: CHEMTREC 800-424-9300

Issue Date: 07/18/2015

Supersedes: 01/23/2015

Product Use: Used in insulation, gasket, cushioning, and vibration dampening applications

Intended Use: Industrial Use

SECTION 2: INGREDIENTS

Ingredient	% by Wt
Foam Backing	51 – 100
Acrylic Adhesive	1 – 49

This material is produced as an "article" as defined in 29 CFR 1910.1200 and REGULATION (EC) 1831/2003 and is, therefore, exempt from the Hazard Communication Standard and REACH. Since material does not release and will not result in exposure to a hazardous chemical under normal conditions of use, no Safety Data Sheet is required. This form is provided as a convenience to our customers.

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Roll of tape

Odor, Color, Grade: Soft solid foam tape

Immediate health, physical, and environmental hazards: The environmental properties of this product present a low environmental hazard. This product, when used under reasonable conditions and in accordance with directions for use, should not present a health hazard. However, use processing of the product in a manner not in accordance with the product's directions for use affect the performance of the product and may present potential health and safety hazards.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact: No health effects are expected.

Skin Contact: No health effects are expected.

Inhalation: No health effects are expected.

Ingestion: No health effects are expected.

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: No need for first aid is anticipated.

Skin Contact: No need for first aid is anticipated.

Inhalation: No need for first aid is anticipated.

If Swallowed: No need for first aid is anticipated.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Autoignition temperature: Not Applicable

Flash Point: Not Applicable

Flammable Limits (LEL): Not Applicable

Flammable Limits (UEL): Not Applicable

5.2 EXTINGUISHING MEDIA

Use fire extinguishers with class B extinguishing agents (e.g. dry chemical, carbon dioxide).

Safety Data Sheet

SDS No. 1034

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: No unusual fire or explosion hazards are anticipated.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures: Not Applicable

6.2 Environmental precautions: Reclaim undamaged product.

6.3 Clean-up methods: Collect as much of the spilled material as possible.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING: This product is considered to be an article, which does not release or otherwise result in exposure to a hazardous chemical under normal use conditions.

7.2 STORAGE: Not Applicable

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS: Not Applicable

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection: Avoid eye contact.

8.2.2 Skin Protection: Avoid prolonged or repeated skin contact.

8.2.3 Respiratory Protection: Under normal use conditions, airborne exposures are not expected to be significant enough to require respiratory protection.

8.2.4 Prevention of Swallowing: Not an expected route of exposure.

8.3 EXPOSURE GUIDELINES: None Established.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Specific Physical Form:	Roll of tape
Odor, Color, Grade:	Soft solid foam tape
General Physical Form:	Solid
Autoignition Temperature:	Not Applicable
Flash Point:	Not Applicable
Flammable Limits (LEL):	Not Applicable
Flammable Limits (UEL):	Not Applicable
Boiling Point:	Not Applicable
Density:	Not Applicable
Vapor Density:	Not Applicable
Vapor Pressure:	Not Applicable
Specific Gravity:	Not Applicable
pH:	Not Applicable
Melting Point:	Not Applicable
Solubility in Water:	Nil
Evaporation Rate:	Not Applicable
Volatile Organic Compounds:	Not Applicable
Percent Volatile:	Not Applicable
VOC Less H ₂ O & Exempt Solvents:	Not Applicable
Viscosity:	Not Applicable

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid:

10.1 Conditions to Avoid: None known

10.2 Materials to Avoid: None known

Hazard Polymerization: Hazardous polymerization will not occur.

Safety Data Sheet

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Hazard Decomposition or By-Products:

<u>Substance</u>	<u>Condition</u>
Hydrocarbons	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion

Hazardous Decomposition: Under recommended usage conditions, hazardous decomposition products are not expected. Hazardous decomposition products may occur as a result of oxidation, heating, or reaction with another material.

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact Saint-Gobain for toxicological information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicological Information: Not determined.
Chemical Fate Information: Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Reclaim if feasible. If product can't be reclaimed, dispose of waste product in a sanitary landfill. Alternatively, incinerate the waste product in an industrial, commercial, or municipal incinerator.

Since regulations vary, consult applicable regulations or authorities before disposal

SECTION 14: TRANSPORT INFORMATION

Not regulated per U.S. DOT, IATA, or IMO.

These transportation classifications are provided as a customer service. As the shipper YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging. These transportation classifications are based on product formulation, packaging, Saint-Gobain policies and Saint-Gobain's understanding of applicable current regulations. Saint-Gobain does not guarantee the accuracy of this classification information. This information applies only to transportation classification and not the packaging, labeling, or marking requirements. The original Saint-Gobain package is certified for U.S. ground shipment only. If you are shipping by air or ocean, the package may not meet applicable regulatory requirements.

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS: Contact Saint-Gobain for more information

311/312 Hazard Categories:

Fire Hazard – No Pressure Hazard – No Reactivity Hazard – No Immediate Hazard – No Delayed Hazard – No

STATE REGULATIONS:

Proposition 65 Warning: This product may contain a chemical known to the State of California to cause cancer and/or other reproductive harm.

CHEMICAL INVENTORIES: This product is an article as defined by TSCA regulations, and is exempt from TSCA inventory listing requirements. Contact Saint-Gobain for more information.

INTERNATIONAL REGULATIONS: Contact Saint-Gobain for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1201.

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification: Health: 0 Flammability: 1 Reactivity: 0 Special Hazards: None

FLEXOVIT USA INC.

SAFETY DATA SHEET

SECTION 1 - Identification of the Product and Company

- 1.1 Product Name Reinforced Resinoid Bonded Abrasive Wheel
- 1.2 Product Use For material removal. See ANSI B7.1-2000
- 1.3 Company Details: **Flexovit Abrasives Inc.**
Address: 1305 Eden-Evans Center Rd.
Angola, NY 14006
Phone: 1-716-549-5100
Fax: 1-716-549-4078

SECTION 2 - Hazard Information

2.1 Precautionary statements

Wear Respirator, eye protection, and protective clothing when using product

Product will produce sparks and debris when in use, avoid using product near reactive or flammable substances or electrical equipment

Discard if product comes in contact with water

2.2 Description of Hazards

Respiratory Wheel dust is a respiratory irritant

Skin Wheel dust and fiberglass reinforcement is a skin irritant

Ingestion Acute product toxicity unknown

Eyes Wheel Dust is an eye irritant

Chronic Potential Chronic Effects include skin sensitization and restricted breathing

Hazard Status This product is classified as non hazardous under OSHA HCS 29 CFR 1910.1200

SECTION 3 - Composition

<u>Ingredient</u>	<u>Formula</u>	<u>% Weight</u>	<u>Cas #</u>
Aluminum Oxide	Al ₂ O ₃	60 - 80	1344-28-1
Silicon Carbide	SiC	0-70	409-21-2
Zirconium Oxide	ZrO ₂	0 - 12	1314-23-4
Calcium Hydroxide	Ca(OH) ₂	0-1	1305-62-0
Barium Sulfate	BaSO ₄	0-10	7727-43-7
Iron Sulfide	FeS ₂	0-18	12068-85-8
Alkali Aluminum Fluorides	-	0-15	15096-52-3/ 60304-36-1
Cured Phenolic Resin	-	0 - 15	N/A
Glass Fiber	-	0 - 5	N/A
Steel	-	0.1 - 1	N/A
Carbon Black	-	trace	N/A
Zinc	Zn	N/A	N/A

SECTION 4-First Aid

4.1 First Aid for exposure

- Dust Inhalation: Terminate exposure and remove to fresh air. Obtain medical assistance.
- Ingestion: Obtain medical assistance.
- Absorption: N/A
- Skin contact: Terminate exposure and remove to fresh air. Obtain medical assistance.
- Eye: Flush eyes with water.

4.2 Signs and Symptoms of Exposure

- Acute: May cause coughing and shortness of breath during grinding.
- Skin irritation.
- Eye irritation.

SECTION 5 - Fire Fighting Measures

- 5.1 Flammable Properties: None
- Means Of Extinction: Water or carbon dioxide
- Special Fire Fighting Procedures: Consult NFPA or CFPA procedures
- Unusual Fire or Explosion Hazards: None

SECTION 6 - Accidental Release Measures

- Normal clean up procedures should be used if material is released
- Use of gloves to clean up spent wheels is recommended

SECTION 7- Storage, Handling and Use Procedures

- Handling: Avoid damage to wheel. Do not drop.
- Always handle in accordance with ANSI B7.1.
- Use: Always use in accordance with ANSI Z43.1 and OSHA 1910.215. Do not use dropped or damaged wheels. Do not use without machine guard in place.
- Do not exceed maximum RPM on wheel.
- Storage: Avoid excessive temperatures in storage. Store in a dry area.

SECTION 8- Personal Protective Control Measures

8.1 Control Measures

- Protection: Requirements and Referrals.
- Respiratory: OSHA/NIOSH approved respirator. See OSHA 29 CFR 1910.134 or European Standard EN 149.
- Ventilation: Engineering Controls recommended. See ANSI Z43.1. Refer to OSHA 29 CFR 1910.94.
- Protective Gloves: Leather gloves.
- Eye Protection: Protective eyewear such as safety glasses or face shield. Refer to OSHA 29 CFR 1910.133.
- Hearing Protection: Hearing protection such as approved ear muffs or ear plugs. Refer to OSHA 29 CFR 1910.95.
- Body Protection: Leather apron, chaps, or shoe coverings to shield from heavy spark showers in operation.
- Hygienic Practices: Wash with soap and water after handling and grinding.

8.2 Exposure

<u>Chemical</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>
Aluminum C	NA	10mg/m ³
Silicon Carb	NA	10mg/m ³
Zirconium C	NA	10mg/m ³
Calcium Hyr	NA	5mg/m ³
Barium	5mg/m ³	10mg/m ³
Iron Dis	NA	10mg/m ³
Alkali Aluminum Fluorides	2.5mg/m ³	2.5mg/m ³ (As F)
Phenolic Re	N/A	N/A
Fiber Gl	5mg/m ³	10mg/m ³
Carbon	3.5 mg/m ³	3.5 mg/m ³

SECTION 9- Physical/Chemical Characteristics

Boiling Point	N/A	(H ₂ O=1, Specific Gravity	2 - 4
Vapor Pressure (<i>mm Hg.</i>)	N/A	Melting Point	N/A
Vapor Density (<i>A/R=1</i>)	N/A	Evaporation Rate (<i>Butyl Acetate=1</i>)	N/A
Solubility in Water	Insoluble	Appearance	Dark colored solid
Lower And Upper Explosion Limits	N/A	Odor	burning plastic odor in use
Flammable Limits	N/A	Degradation Temperature	~ 800 F (427 C)
Flash Point	N/A		

SECTION 10 - Stability and Reactivity Data

Stable - Avoid excessive moisture and humidity, temperature extremes and contact with acids or solvents

Not incompatible with any materials

Hazardous Polymerization will not occur

Dust and organic fumes are generated in use

SECTION 11 - Toxicological Data

11.1 Acute Toxicological Effects

<u>Chemical</u>	<u>Route of Exposure</u>	<u>Acute LD50</u>
Aluminum Oxide	oral	>5000 mg/kg (rat)
Zirconium Oxide	oral	>8800 mg/kg (mouse)
Glass fiber	N/A	N/A
Alkali Aluminum Fluorides	oral	>5000 mg/kg (rat)
Cured Phenolic resin	N/A	N/A
Carbon black	oral	8000 mg/kg (rat)
Silicon Carbide	N/A	N/A
Calcium Hydroxide	oral	7340 mg/kg (rat)
Barium Sulfate	N/A	N/A
Iron Disulfide	N/A	N/A

11.2 Toxicological Effects

Dust Inhalation	Coughing and shortness of breath, aggravation, decreased lung capacity of medical conditions such as asthma or emphysema
Ingestion	Can cause stomach pain, vomiting and diarrhea
Absorption	N/A
Skin contact	Grinding wheel may cause abrasions Dust may cause skin irritation
Eye	Dust or fumes may cause eye irritation
Carcinogenicity	Unknown
Mutagenicity	Unknown
Reproductive Effects	Unknown

Section 12-Ecological Information

No Data Available

Section 13-Disposal Considerations

Dispose in accordance to local and federal regulations

Section 14-Transport Information

Not regulated as a hazardous material for transport

Section 15-Regulatory Information

No Data Available

Section 16-Other Information

SDS Revision Date: November 1, 2014
Reason for Update: Mandated Update
Preparation By: FlexOvit USA

COMPANY USE

The information and recommendations set forth herein are taken from sources and references believed to be accurate and complete as of the date hereof. However, FlexOvit USA, Inc makes no expressed or implied warranty with respect to the accuracy of the information or the suitability of the recommendations, and assumes no liability to any user thereof.

**GOJO® NATURAL* ORANGE™ Pumice Hand Cleaner**

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SECTION 1. IDENTIFICATION

Product name : GOJO® NATURAL* ORANGE™ Pumice Hand Cleaner

Manufacturer or supplier's details

Company name of supplier : GOJO Industries, Inc.

Address : One GOJO Plaza, Suite 500
Akron OH 44311

Telephone : 1 (330) 255-6000

Emergency telephone : 1-800-424-9300 CHEMTREC

Recommended use of the chemical and restrictions on use

Recommended use : Skin-care

Restrictions on use : This is a personal care or cosmetic product that is safe for consumers and other users under normal and reasonably foreseeable use. Cosmetics and consumer products, specifically defined by regulations around the world, are exempt from the requirement of an SDS for the consumer. While this material is not considered hazardous, this SDS contains valuable information critical to the safe handling and proper use of the product for industrial workplace conditions as well as unusual and unintended exposures such as large spills. This SDS should be retained and available for employees and other users of this product. For specific intended-use guidance, please refer to the information provided on the package or instruction sheet.

SECTION 2. HAZARDS IDENTIFICATION**GHS Classification**

Eye irritation : Category 2A

GHS Label element

Hazard pictograms :



Signal Word : Warning

Hazard Statements : H319 Causes serious eye irritation.

Precautionary Statements : **Prevention:**

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P264 Wash skin thoroughly after handling.

P280 Wear eye protection/ face protection.

Response:

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313 If eye irritation persists: Get medical advice/ attention.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous ingredients

Chemical Name	CAS-No.	Concentration (%)
1-Methyl 4-(1-Methylethenyl) Cyclohexene	5989-27-5	≥ 5 - < 10
Alcohols, C12-15, ethoxylated propoxylated	68551-13-3	≥ 1 - < 5

SECTION 4. FIRST AID MEASURES

- | | |
|---|--|
| General advice | : In the case of accident or if you feel unwell, seek medical advice immediately.
When symptoms persist or in all cases of doubt seek medical advice. |
| If inhaled | : If inhaled, remove to fresh air.
Get medical attention if symptoms occur. |
| In case of skin contact | : Wash with water and soap as a precaution.
Get medical attention if symptoms occur. |
| In case of eye contact | : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.
If easy to do, remove contact lens, if worn.
Get medical attention. |
| If swallowed | : If swallowed, DO NOT induce vomiting.
Get medical attention if symptoms occur.
Rinse mouth thoroughly with water. |
| Most important symptoms and effects, both acute and delayed | : Causes serious eye irritation. |
| Protection of first-aiders | : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists. |

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Notes to physician : Treat symptomatically and supportively.

SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Water spray
Alcohol-resistant foam
Dry chemical
Carbon dioxide (CO₂)
- Unsuitable extinguishing media : None known.
- Specific hazards during fire fighting : Exposure to combustion products may be a hazard to health.
- Hazardous combustion products : Carbon oxides
- Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use water spray to cool unopened containers.
Remove undamaged containers from fire area if it is safe to do so.
Evacuate area.
- Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Follow safe handling advice and personal protective equipment recommendations.
- Environmental precautions : Discharge into the environment must be avoided.
Prevent further leakage or spillage if safe to do so.
Prevent spreading over a wide area (e.g. by containment or oil barriers).
Retain and dispose of contaminated wash water.
Local authorities should be advised if significant spillages cannot be contained.
- Methods and materials for containment and cleaning up : Soak up with inert absorbent material.
For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container.
Clean up remaining materials from spill with suitable absorbent.
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items

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employed in the cleanup of releases. You will need to determine which regulations are applicable. Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

SECTION 7. HANDLING AND STORAGE

- | | |
|-----------------------------|---|
| Technical measures | : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section. |
| Local/Total ventilation | : Use only with adequate ventilation. |
| Advice on safe handling | : Avoid inhalation of vapor or mist.
Do not swallow.
Do not get in eyes.
Avoid prolonged or repeated contact with skin.
Handle in accordance with good industrial hygiene and safety practice.
Take care to prevent spills, waste and minimize release to the environment. |
| Conditions for safe storage | : Keep in properly labeled containers.
Store in accordance with the particular national regulations. |
| Materials to avoid | : Do not store with the following product types:
Strong oxidizing agents |

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Ingredients with workplace control parameters**

Contains no substances with occupational exposure limit values.

Hazardous components without workplace control parameters

Ingredients	CAS-No.
1-Methyl 4-(1-Methylethenyl) Cyclohexene	5989-27-5
Alcohols, C12-15, ethoxylated propoxylated	68551-13-3

- | | |
|-----------------------------|--|
| Engineering measures | : Ensure adequate ventilation, especially in confined areas.
Minimize workplace exposure concentrations.
Dust formation may be relevant in the processing of this product. In addition to substance-specific OELs, general limitations of concentrations of particulates in the air at workplaces have to be considered in workplace risk assessment. Relevant limits include: OSHA PEL for Particulates Not Otherwise Regulated of 15 mg/m ³ - total dust, 5 mg/m ³ - respirable fraction; and ACGIH TWA for Particles (insoluble or poorly soluble) Not Otherwise Specified of 3 mg/m ³ - respirable particles, 10 mg/m ³ - inhalable particles. |
|-----------------------------|--|

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Personal protective equipment

- Respiratory protection : General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.
- Hand protection
Material : Impervious gloves
- Remarks : Choose gloves to protect hands against chemicals depending on the concentration specific to place of work. Breakthrough time is not determined for the product. Change gloves often! For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.
- Eye protection : Wear the following personal protective equipment:
Safety goggles
- Skin and body protection : Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.
Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).
- Hygiene measures : Ensure that eye flushing systems and safety showers are located close to the working place.
When using do not eat, drink or smoke.
Wash contaminated clothing before re-use.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : liquid
- Color : gray, opaque
- Odor : citrus
- Odor Threshold : No data available

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pH	: 5.0 - 8.0
Melting point/freezing point	: No data available
Initial boiling point and boiling range	: 95 °C
Flash point	: > 100 °C
Evaporation rate	: No data available
Flammability (solid, gas)	: Not applicable
Upper explosion limit	: No data available
Lower explosion limit	: No data available
Vapor pressure	: No data available
Relative vapor density	: No data available
Density	: 1.0390 g/cm3
Solubility(ies) Water solubility	: soluble
Partition coefficient: n-octanol/water	: Not applicable
Autoignition temperature	: No data available
Decomposition temperature	: The substance or mixture is not classified self-reactive.
Viscosity Viscosity, kinematic	: 10,000 - 50,000 mm2/s (20 °C)
Explosive properties	: Not explosive
Oxidizing properties	: The substance or mixture is not classified as oxidizing.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: Not classified as a reactivity hazard.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: Can react with strong oxidizing agents.
Conditions to avoid	: None known.

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Incompatible materials	: Oxidizing agents
Hazardous decomposition products	: No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure**

Inhalation
Skin contact
Ingestion
Eye contact

Acute toxicity

Not classified based on available information.

Ingredients:**1-Methyl 4-(1-Methylethenyl) Cyclohexene:**

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Assessment: The substance or mixture has no acute oral toxicity
Remarks: Based on data from similar materials

Alcohols, C12-15, ethoxylated propoxylated:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Remarks: Based on data from similar materials

Acute inhalation toxicity : LC50 (Rat): > 1.6 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: Based on data from similar materials

Skin corrosion/irritation

Not classified based on available information.

Product:

Result: No skin irritation

Ingredients:**1-Methyl 4-(1-Methylethenyl) Cyclohexene:**

Species: Rabbit
Result: Skin irritation

Alcohols, C12-15, ethoxylated propoxylated:

Species: Rabbit
Method: OECD Test Guideline 404

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Result: No skin irritation
Remarks: Based on data from similar materials

Serious eye damage/eye irritation

Causes serious eye irritation.

Ingredients:**1-Methyl 4-(1-Methylethenyl) Cyclohexene:**

Species: Rabbit

Result: No eye irritation

Alcohols, C12-15, ethoxylated propoxylated:

Result: Irreversible effects on the eye

Remarks: Based on data from similar materials

Respiratory or skin sensitization

Skin sensitization: Not classified based on available information.

Respiratory sensitization: Not classified based on available information.

Product:

Assessment: Does not cause skin sensitization.

Ingredients:**1-Methyl 4-(1-Methylethenyl) Cyclohexene:**

Test Type: Local lymph node assay (LLNA)

Routes of exposure: Skin contact

Species: Mouse

Result: positive

Assessment: Probability or evidence of skin sensitization in humans

Alcohols, C12-15, ethoxylated propoxylated:

Test Type: Maximization Test (GPMT)

Routes of exposure: Skin contact

Species: Guinea pig

Method: OECD Test Guideline 406

Result: negative

Remarks: Based on data from similar materials

Germ cell mutagenicity

Not classified based on available information.

Ingredients:**1-Methyl 4-(1-Methylethenyl) Cyclohexene:**

Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test
Result: negative

Genotoxicity in vivo : Test Type: Transgenic rodent somatic cell gene mutation assay
Species: Rat
Application Route: Ingestion

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Result: negative

Alcohols, C12-15, ethoxylated propoxylated:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative
Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)
Species: Rat
Application Route: Ingestion
Result: negative
Remarks: Based on data from similar materials

Carcinogenicity

Not classified based on available information.

Ingredients:**1-Methyl 4-(1-Methylethenyl) Cyclohexene:**

Species: Mouse
Application Route: Ingestion
Exposure time: 103 weeks
Result: negative

IARC

No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

Ingredients:**Alcohols, C12-15, ethoxylated propoxylated:**

Effects on fertility : Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: Skin contact
Result: negative
Remarks: Based on data from similar materials

Effects on fetal development : Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: Skin contact
Result: negative
Remarks: Based on data from similar materials

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STOT-single exposure

Not classified based on available information.

STOT-repeated exposure

Not classified based on available information.

Repeated dose toxicity**Ingredients:****1-Methyl 4-(1-Methylethenyl) Cyclohexene:**

Species: Rat

NOAEL: 600 mg/kg

Application Route: Ingestion

Exposure time: 13 w

Alcohols, C12-15, ethoxylated propoxylated:

Species: Rat

NOAEL: 500 mg/kg

Application Route: Ingestion

Exposure time: 90 d

Remarks: Based on data from similar materials

Aspiration toxicity

Not classified based on available information.

Ingredients:**1-Methyl 4-(1-Methylethenyl) Cyclohexene:**

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Ingredients:****1-Methyl 4-(1-Methylethenyl) Cyclohexene:**

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 0.72 mg/l
Exposure time: 96 h

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 0.36 mg/l
aquatic invertebrates Exposure time: 48 h

Toxicity to algae : ErC50 (Desmodesmus subspicatus (green algae)): 150 mg/l
Exposure time: 72 h
Test substance: Water Accommodated Fraction
Remarks: Based on data from similar materials

M-Factor (Acute aquatic tox- : 1
icity)

Alcohols, C12-15, ethoxylated propoxylated:

Toxicity to fish : LC50 (Scophthalmus maximus (turbot)): 3.1 mg/l


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Exposure time: 96 h
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.14 mg/l
Exposure time: 48 h
Remarks: Based on data from similar materials

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): 0.75 mg/l
Exposure time: 72 h
Remarks: Based on data from similar materials

M-Factor (Acute aquatic toxicity) : 1

Toxicity to bacteria : EC50 (Pseudomonas putida): > 10,000 mg/l
Exposure time: 16.9 h
Remarks: Based on data from similar materials

Persistence and degradability
Ingredients:
1-Methyl 4-(1-Methylethenyl) Cyclohexene:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 80 %
Exposure time: 28 d
Remarks: Based on data from similar materials

Alcohols, C12-15, ethoxylated propoxylated:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 80 - 88 %
Exposure time: 28 d
Remarks: Based on data from similar materials

Bioaccumulative potential
Ingredients:
1-Methyl 4-(1-Methylethenyl) Cyclohexene:

Partition coefficient: n-octanol/water : log Pow: 4.38

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS
Disposal methods

Waste from residues : Dispose of in accordance with local regulations.



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Contaminated packaging : Dispose of as unused product.
Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION

International Regulation

UNRTDG

UN number : UN 3082
 Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
 (1-Methyl 4-(1-Methylethenyl) Cyclohexene)
 Class : 9
 Packing group : III
 Labels : 9

IATA-DGR

UN/ID No. : UN 3082
 Proper shipping name : Environmentally hazardous substance, liquid, n.o.s.
 (1-Methyl 4-(1-Methylethenyl) Cyclohexene)
 Class : 9
 Packing group : III
 Labels : Miscellaneous
 Packing instruction (cargo aircraft) : 964
 Packing instruction (passenger aircraft) : 964

IMDG-Code

UN number : UN 3082
 Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
 (1-Methyl 4-(1-Methylethenyl) Cyclohexene)
 Class : 9
 Packing group : III
 Labels : 9
 EmS Code : F-A, S-F
 Marine pollutant : yes

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation

49 CFR

UN/ID/NA number : UN 3082
 Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
 (1-Methyl 4-(1-Methylethenyl) Cyclohexene)
 Class : 9


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Packing group	: III
Labels	: CLASS 9
ERG Code	: 171
Marine pollutant	: yes (1-Methyl 4-(1-Methylethenyl) Cyclohexene)
Remarks	: Shipment by ground under DOT is non-regulated; however it may be shipped per the applicable hazard classification to facilitate multi-modal transport involving ICAO (IATA) or IMO.

SECTION 15. REGULATORY INFORMATION
EPCRA - Emergency Planning and Community Right-to-Know
CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards	: Acute Health Hazard
SARA 302	: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313	: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations
Pennsylvania Right To Know

Water	7732-18-5	70 - 90 %
Pumice	1332-09-8	5 - 10 %
1-Methyl 4-(1-Methylethenyl) Cyclohexene	5989-27-5	5 - 10 %

New Jersey Right To Know

Water	7732-18-5	70 - 90 %
Pumice	1332-09-8	5 - 10 %
1-Methyl 4-(1-Methylethenyl) Cyclohexene	5989-27-5	5 - 10 %
Alcohols, C12-15, ethoxylated propoxylated	68551-13-3	1 - 5 %

California Prop 65	This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.
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The ingredients of this product are reported in the following inventories:

REACH	: All ingredients (pre-)registered or exempt.
TSCA	: All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory



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exemption.

DSL : All chemical substances in this product comply with the CEPA 1999 and NSNR and are on or exempt from listing on the Canadian Domestic Substances List (DSL).

AICS : All ingredients listed or exempt.

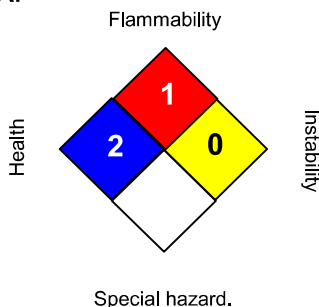
Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS III:

HEALTH	2
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Sources of key data used to compile the Material Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

Revision Date : 03/02/2015

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

US / Z8

SAFETY DATA SHEET



Isopropyl Alcohol (Isopropanol)

Section 1. Identification

GHS product identifier	: Isopropyl Alcohol (Isopropanol)
Chemical name	: Isopropyl alcohol
Other means of identification	: propan-2-ol; 2-Propanol; isopropanol; isopropyl alcohol
Product use	: Synthetic/Analytical chemistry.
Synonym	: propan-2-ol; 2-Propanol; isopropanol; isopropyl alcohol
SDS #	: 001105
Supplier's details	: Airgas USA, LLC and its affiliates 259 North Radnor-Chester Road Suite 100 Radnor, PA 19087-5283 1-610-687-5253
Emergency telephone number (with hours of operation)	: 1-866-734-3438

Section 2. Hazards identification

OSHA/HCS status	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture	: FLAMMABLE LIQUIDS - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3

GHS label elements

Hazard pictograms



Signal word

: Danger

Hazard statements

: Highly flammable liquid and vapor.
May form explosive mixtures with air.
Causes serious eye irritation.
May cause drowsiness and dizziness.

Precautionary statements

General

: Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention

: Wear protective gloves. Wear eye or face protection. Keep away from heat, sparks, open flames and hot surfaces. - No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Avoid breathing vapor. Wash hands thoroughly after handling. Use and store only outdoors or in a well ventilated place.

Section 2. Hazards identification

- Response** : IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
- Storage** : Store locked up. Store in a well-ventilated place. Keep cool.
- Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Hazards not otherwise classified** : None known.

Section 3. Composition/information on ingredients

- Substance/mixture** : Substance
- Chemical name** : Isopropyl alcohol
- Other means of identification** : propan-2-ol; 2-Propanol; isopropanol; isopropyl alcohol

CAS number/other identifiers

- CAS number** : 67-63-0
- Product code** : 001105

Ingredient name	%	CAS number
propan-2-ol	100	67-63-0

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention.

Section 4. First aid measures

immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness.
- Skin contact** : No known significant effects or critical hazards.
- Frostbite** : Try to warm up the frozen tissues and seek medical attention.
- Ingestion** : Can cause central nervous system (CNS) depression. Irritating to mouth, throat and stomach.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : Adverse symptoms may include the following:
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
- Skin contact** : No specific data.
- Ingestion** : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO₂, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

- Specific hazards arising from the chemical** : Highly flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

Section 5. Fire-fighting measures

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Section 7. Handling and storage

Advice on general occupational hygiene

- : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities

- : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
propan-2-ol	<p>ACGIH TLV (United States, 3/2012). TWA: 200 ppm 8 hours. STEL: 400 ppm 15 minutes.</p> <p>OSHA PEL 1989 (United States, 3/1989). TWA: 400 ppm 8 hours. TWA: 980 mg/m³ 8 hours. STEL: 500 ppm 15 minutes. STEL: 1225 mg/m³ 15 minutes.</p> <p>NIOSH REL (United States, 1/2013). TWA: 400 ppm 10 hours. TWA: 980 mg/m³ 10 hours. STEL: 500 ppm 15 minutes. STEL: 1225 mg/m³ 15 minutes.</p> <p>OSHA PEL (United States, 6/2010). TWA: 400 ppm 8 hours. TWA: 980 mg/m³ 8 hours.</p>

Appropriate engineering controls

- : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls

- : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures

- : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Section 8. Exposure controls/personal protection

- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Liquid. [COLORLESS LIQUID WITH THE ODOR OF RUBBING ALCOHOL]
- Color** : Colorless.
- Molecular weight** : 60.11 g/mole
- Molecular formula** : C₃H₈O
- Boiling/condensation point** : 83°C (181.4°F)
- Melting/freezing point** : -90°C (-130°F)
- Critical temperature** : Not available.
- Odor** : Alcohol-like.
- Odor threshold** : Not available.
- pH** : Not available.
- Flash point** : Closed cup: 11.7°C (53.1°F)
- Burning time** : Not applicable.
- Burning rate** : Not applicable.
- Evaporation rate** : 1.7 (butyl acetate = 1)
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Lower: 2%
Upper: 12%
- Vapor pressure** : 4.4 kPa (33.002681467 mm Hg) [room temperature]
- Vapor density** : 2.1 (Air = 1)
- Specific Volume (ft³/lb)** : 1.2739
- Gas Density (lb/ft³)** : 0.785
- Relative density** : 0.79

Section 9. Physical and chemical properties

Solubility	: Not available.
Solubility in water	: Not available.
Partition coefficient: n-octanol/water	: 0.05
Auto-ignition temperature	: 456°C (852.8°F)
Decomposition temperature	: Not available.
SADT	: Not available.
Viscosity	: Not available.

Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.
Incompatibility with various substances	: Highly reactive or incompatible with the following materials: acids and moisture.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
propan-2-ol	LC50 Inhalation Gas.	Rat	45248 ppm	1 hours
	LD50 Dermal	Rabbit	12800 mg/kg	-
	LD50 Oral	Rat	5000 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
propan-2-ol	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	10 milligrams	-
	Eyes - Severe irritant	Rabbit	-	100 milligrams	-
	Skin - Mild irritant	Rabbit	-	500 milligrams	-

Sensitization

Not available.

Section 11. Toxicological information

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
propan-2-ol	-	3	-

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
propan-2-ol	Category 3	Not applicable.	Narcotic effects

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : Can cause central nervous system (CNS) depression. Irritating to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : Adverse symptoms may include the following:
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
- Skin contact** : No specific data.
- Ingestion** : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Section 11. Toxicological information

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
propan-2-ol	Acute LC50 1400000 to 1950000 µg/l Marine water	Crustaceans - Crangon crangon	48 hours
	Acute LC50 4200 mg/l Fresh water	Fish - Rasbora heteromorpha	96 hours

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
propan-2-ol	0.05	-	low

Mobility in soil






Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT	TDG	Mexico	IMDG	IATA
UN number	UN1219	UN1219	UN1219	UN1219	UN1219
UN proper shipping name	ISOPROPANOL OR ISOPROPYL ALCOHOL	ISOPROPANOL; OR ISOPROPYL ALCOHOL	ISOPROPANOL OR ISOPROPYL ALCOHOL	ISOPROPANOL (ISOPROPYL ALCOHOL)	ISOPROPANOL
Transport hazard class(es)	3 	3 	3 	3 	3 
Packing group	II	II	II	II	II
Environment	No.	No.	No.	No.	No.
Additional information	<u>Limited quantity</u> Yes. <u>Packaging instruction</u> Passenger aircraft Quantity limitation: 5 L Cargo aircraft Quantity limitation: 60 L <u>Special provisions</u> IB2, T4, TP1	<u>Explosive Limit and Limited Quantity Index</u> 1 <u>Passenger Carrying Road or Rail Index</u> 5	-	-	<u>Passenger and Cargo Aircraft</u> Quantity limitation: 5 L <u>Cargo Aircraft Only</u> Quantity limitation: 60 L <u>Limited Quantities - Passenger Aircraft</u> Quantity limitation: 1 L

“Refer to CFR 49 (or authority having jurisdiction) to determine the information required for shipment of the product.”

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations : TSCA 8(a) CDR Exempt/Partial exemption: Not determined
United States inventory (TSCA 8b): This material is listed or exempted.

Clean Air Act Section 112 : Not listed

(b) Hazardous Air Pollutants (HAPs)

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Fire hazard
 Immediate (acute) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
propan-2-ol	100	Yes.	No.	No.	Yes.	No.

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	Isopropyl alcohol	67-63-0	100
Supplier notification	Isopropyl alcohol	67-63-0	100

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts : This material is listed.

New York : This material is not listed.

New Jersey : This material is listed.

Pennsylvania : This material is listed.

Canada inventory : This material is listed or exempted.

International regulations

Section 15. Regulatory information

International lists :

- Australia inventory (AICS):** This material is listed or exempted.
- China inventory (IECSC):** This material is listed or exempted.
- Japan inventory:** This material is listed or exempted.
- Korea inventory:** This material is listed or exempted.
- Malaysia Inventory (EHS Register):** Not determined.
- New Zealand Inventory of Chemicals (NZIoC):** This material is listed or exempted.
- Philippines inventory (PICCS):** This material is listed or exempted.
- Taiwan inventory (CSNN):** Not determined.

Chemical Weapons Convention List Schedule I Chemicals :

Not listed

Chemical Weapons Convention List Schedule II Chemicals :

Not listed

Chemical Weapons Convention List Schedule III Chemicals :

Not listed

Canada

WHMIS (Canada) :

- Class B-2: Flammable liquid
- Class D-2B: Material causing other toxic effects (Toxic).
- CEPA Toxic substances:** This material is not listed.
- Canadian ARET:** This material is not listed.
- Canadian NPRI:** This material is listed.
- Alberta Designated Substances:** This material is not listed.
- Ontario Designated Substances:** This material is not listed.
- Quebec Designated Substances:** This material is not listed.

Section 16. Other information

Canada Label requirements :

- Class B-2: Flammable liquid
- Class D-2B: Material causing other toxic effects (Toxic).

Hazardous Material Information System (U.S.A.)

Health	*	2
Flammability		3
Physical hazards		0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)



Section 16. Other information

Reprinted with permission from NFPA 704-2001, Identification of the Hazards of Materials for Emergency Response Copyright ©1997, National Fire Protection Association, Quincy, MA 02269. This reprinted material is not the complete and official position of the National Fire Protection Association, on the referenced subject which is represented only by the standard in its entirety.

Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

History

Date of printing : 5/20/2015.

Date of issue/Date of revision : 5/20/2015.

Date of previous issue : 10/28/2014.

Version : 0.02

Key to abbreviations :

- ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- IATA = International Air Transport Association
- IBC = Intermediate Bulk Container
- IMDG = International Maritime Dangerous Goods
- LogPow = logarithm of the octanol/water partition coefficient
- MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
- UN = United Nations
- ACGIH – American Conference of Governmental Industrial Hygienists
- AIHA – American Industrial Hygiene Association
- CAS – Chemical Abstract Services
- CEPA – Canadian Environmental Protection Act
- CERCLA – Comprehensive Environmental Response, Compensation, and Liability Act (EPA)
- CFR – United States Code of Federal Regulations
- CPR – Controlled Products Regulations
- DSL – Domestic Substances List
- GWP – Global Warming Potential
- IARC – International Agency for Research on Cancer
- ICAO – International Civil Aviation Organisation
- Inh – Inhalation
- LC – Lethal concentration
- LD – Lethal dosage
- NDSL – Non-Domestic Substances List
- NIOSH – National Institute for Occupational Safety and Health
- TDG – Canadian Transportation of Dangerous Goods Act and Regulations
- TLV – Threshold Limit Value
- TSCA – Toxic Substances Control Act
- WEEL – Workplace Environmental Exposure Level
- WHMIS – Canadian Workplace Hazardous Material Information System

References : Not available.

Indicates information that has changed from previously issued version.

Notice to reader

Section 16. Other information

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

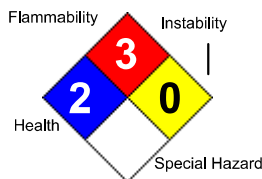
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

SAFETY DATA SHEET

Lacquer Thinner

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HEALTH	*	2
FLAMMABILITY		3
PHYSICAL		1
PPE	X	



Printed: 07/24/2012
Revision: 06/08/2011
Supercedes Revision: 05/21/2009

1. Product and Company Identification

Product Code: 1605.48
Product Name: Lacquer Thinner
Manufacturer Information
Company Name: W. M. Barr
2105 Channel Avenue
Memphis, TN 38113
Phone Number: (901)775-0100
Emergency Contact: 3E 24 Hour Emergency Contact (800)451-8346
Information: W.M. Barr Customer Service (800)398-3892
Web site address: www.wmbarr.com
Preparer Name: W.M. Barr EHS Dept (901)775-0100
Intended Use: Paint thinning
Synonyms

GML170, QML170, CML170, QML170L, DML170, GML170P, GML170PTMP, G17024, PA12782, Q17014

2. Hazards Identification

GHS Classification

GHS Hazard Phrases

No data available.

GHS Precaution Phrases

No data available.

GHS Response Phrases

No data available.

GHS Storage and Disposal Phrases

No data available.

Potential Health Effects (Acute and Chronic)

Inhalation Acute Exposure Effects:

Vapor harmful. May cause dizziness; headache; watering of eyes; irritation of respiratory tract; weakness; drowsiness; nausea; numbness in fingers, arms and legs; depression of central nervous system; loss of appetite; fatigue; hallucinations; light headedness; visual disturbances; giddiness and intoxication; sleepiness; cough and dyspnea; cold, clammy extremities; diarrhea; vomiting; dilation of pupils; spotted vision. Severe overexposure may cause convulsions; unconsciousness; coma; and death. Intentional misuse of this product by deliberately concentrating and inhaling can be harmful or fatal.

Skin Contact Acute Exposure Effects:

May be absorbed through the skin. May cause irritation; numbness in the fingers and arms; drying of skin; and dermatitis. May cause increased severity of symptoms listed under inhalation.

Eye Contact Acute Exposure Effects:

This material is an eye irritant. May cause irritation; burns; conjunctivitis of eyes; and corneal ulcerations of the eye. Vapors may irritate eyes.

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Ingestion Acute Exposure Effects:

Poison. Cannot be made non-poisonous. May be fatal or cause blindness. May cause dizziness; headache; nausea; vomiting; burning sensation in mouth, throat, and stomach; loss of coordination; depression of the central nervous system; narcosis; stupor; gastrointestinal irritation; liver, kidney, and heart damage; diarrhea; loss of appetite; coma and death. May produce symptoms listed under inhalation.

Chronic Exposure Effects:

Reports have associated repeated and prolonged overexposure to solvents with neurological and other physiological damage. Prolonged or repeated contact may cause dermatitis. Prolonged skin contact may result in absorption of a harmful amount of this material. May cause conjunctivitis; gastric disturbances; insomnia; dizziness; headache; weakness; fatigue; nausea; heart palpitations; skin irritation; numbness in hands and feet; permanent central nervous system changes; some loss of memory; pancreatic damage; giddiness; visual impairment or blindness; kidney or liver damage; and death. May cause symptoms listed under inhalation.

Target Organs: Central Nervous System, Liver, Kidney, Heart, Stomach, Respiratory System

Primary Routes of Entry: Inhalation, Ingestion, Skin Absorption

Medical Conditions Generally Aggravated By Exposure

Diseases of the skin, eyes, liver, kidneys, central nervous system and respiratory system.

OSHA Regulatory Status:

This material is classified as hazardous under OSHA regulations.

3. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration
1. Methanol {Methyl alcohol; Carbinol; Wood alcohol}	67-56-1	15.0 -40.0 %
2. Toluene {Benzene, Methyl-, Toluol}	108-88-3	1.0 -5.0 %
3. Acetone {2-Propanone}	67-64-1	10.0 -30.0 %
4. Ethanol, 2-Butoxy- {Ethylene glycol n-butyl ether, (a glycol ether)}	111-76-2	1.0 -5.0 %
5. Acetic acid, ethyl ester {Ethyl acetate}	141-78-6	7.0 -13.0 %
6. Light aliphatic solvent naphtha (petroleum)	64742-89-8	15.0 -40.0 %

4. First Aid Measures

Emergency and First Aid Procedures

Skin:

Immediately begin washing the skin thoroughly with large amounts of water and mild soap, if available, while removing contaminated clothing. Seek medical attention if irritation persists.

Eyes:

Immediately begin to flush eyes with water, remove any contact lens. Continue to flush the eyes for at least 15 minutes, then seek immediate medical attention.

Inhalation:

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention.

Ingestion:

If swallowed, do not induce vomiting. Seek immediate medical attention. Call a physician, hospital emergency room, or poison control center immediately. Never give anything by mouth to an unconscious person.

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Note to Physician

Poison. This product contains methanol. Methanol is metabolized to formaldehyde and formic acid. These metabolites may cause metabolic acidosis, visual disturbances and blindness. Since metabolism is required for these toxic symptoms, their onset may be delayed from 6 to 30 hours following ingestion. Ethanol competes for the same metabolic pathway and has been used as an antidote. Methanol is effectively removed by hemodialysis. Call your local poison control center for further information.

Signs and Symptoms Of Exposure

See Potential Health Effects.

5. Fire Fighting Measures

Flammability Classification:

NFPA Class IB

Flash Pt:

-4.0 F Method Used: Setaflash Closed Cup (Rapid Setaflash)

Explosive Limits:

LEL: No data.

UEL: No data.

Autoignition Pt:

No data available.

Fire Fighting Instructions

Self-contained respiratory protection should be provided for fire fighters fighting fires in buildings or confined areas. Storage containers exposed to fire should be kept cool with water spray to prevent pressure build-up. Stay away from heads of containers that have been exposed to intense heat or flame.

Flammable Properties and Hazards

No data available.

Hazardous Combustion Products

Carbon monoxide and carbon dioxide.

Suitable Extinguishing Media

Use carbon dioxide, dry powder, or foam.

Unsuitable Extinguishing Media

Do not use a solid water stream, as this may spread the fire.

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled

Vapors may cause flash fire or ignite explosively.

Clean up: Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind, out of low areas, and ventilate closed spaces before entering. Shut off ignition sources; keep flares, smoking or flames out of hazard area. Use non-sparking tools. Use proper bonding and grounding methods for all equipment and processes. Keep out of waterways and bodies of water. Be cautious of vapors collecting in small enclosed spaces, sewers, low lying areas, confined spaces, etc.

Small spills: Take up with sand, earth or other noncombustible absorbent material and place in a plastic container where applicable.

Large spills: Dike far ahead of spill for later disposal.

Waste Disposal: Dispose in accordance with applicable local, state and federal regulations.

7. Handling and Storage

Precautions To Be Taken in Handling

Do not use in small enclosed spaces, such as basements and bathrooms. Vapors can accumulate and explode if ignited.

Read carefully all cautions and directions on product label before use. Since empty container retains residue, follow all label warnings even after container is empty. Dispose of empty container according to all regulations. Do not reuse this container.

Do not use this product near any source of heat or open flame, furnace areas, pilot lights, stoves, etc.

Do not use in small enclosed spaces, such as basements and bathrooms. Vapors can accumulate and explode if ignited.

Do not spread this product over large surface areas because fire and health safety risks will increase dramatically.

Precautions To Be Taken in Storing

Keep container tightly closed when not in use. Store in a cool, dry place. Do not store near flames or at elevated temperatures.

8. Exposure Controls/Personal Protection

Hazardous Components (Chemical Name)	CAS #	OSHA TWA	ACGIH TWA	Other Limits
1. Methanol {Methyl alcohol; Carbinol; Wood alcohol}	67-56-1	PEL: 200 ppm	TLV: 200 ppm STEL: 250 ppm	No data.
2. Toluene {Benzene, Methyl-, Toluol}	108-88-3	PEL: 200 ppm STEL: 500 ppm/(10min) CEIL: 300 ppm	TLV: 50 ppm	No data.
3. Acetone {2-Propanone}	67-64-1	PEL: 1000 ppm	TLV: 500 ppm STEL: 750 ppm	No data.
4. Ethanol, 2-Butoxy- {Ethylene glycol n-butyl ether, (a glycol ether)}	111-76-2	PEL: 50 ppm	TLV: 20 ppm	No data.
5. Acetic acid, ethyl ester {Ethyl acetate}	141-78-6	PEL: 400 ppm	TLV: 400 ppm	No data.
6. Light aliphatic solvent naphtha (petroleum)	64742-89-8	No data.	No data.	No data.

Respiratory Equipment (Specify Type)

For OSHA controlled work place and other regular users. Use only with adequate ventilation under engineered air control systems designed to prevent exceeding appropriate TLV.

For occasional use, where engineered air control is not feasible, use properly maintained and properly fitted NIOSH approved respirator for organic solvent vapors. A dust mask does not provide protection against vapors.

Eye Protection

Protect eyes with chemical splash goggles.

Protective Gloves

Wear gloves with as much resistance to the chemical ingredients as possible. Glove materials such as nitrile rubber may provide protection. Glove selection should be based on chemicals being used and conditions of use. Consult your glove supplier for additional information. Gloves contaminated with product should be discarded and not reused.

Other Protective Clothing

Various application methods can dictate use of additional protective safety equipment, such as impermeable aprons, etc., to minimize exposure.

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Engineering Controls (Ventilation etc.)

Use only with adequate ventilation to prevent build-up of vapors. Open all windows and doors. Use only with a cross ventilation of moving fresh air across the work area. If strong odor is noticed or you experience slight dizziness, headache, nausea, or eye-watering - Stop - ventilation is inadequate. Leave area immediately.

Do not use in small enclosed spaces, such as basements and bathrooms.

Work/Hygienic/Maintenance Practices

A source of clean water should be available in the work area for flushing eyes and skin.

Do not eat, drink, or smoke in the work area.

Wash hands thoroughly after use.

Before reuse, thoroughly clean any clothing or protective equipment that has been contaminated by prior use.

Discard any clothing or other protective equipment that cannot be decontaminated, such as gloves or shoes.

9. Physical and Chemical Properties

Physical States:	<input type="checkbox"/> Gas <input checked="" type="checkbox"/> Liquid <input type="checkbox"/> Solid
Melting Point:	No data.
Boiling Point:	130 F
Autoignition Pt:	No data.
Flash Pt:	-4.0 F Method Used: Setaflash Closed Cup (Rapid Setaflash)
Specific Gravity (Water = 1):	0.7742 - 0.7942
Density:	6.518 LB/GL
Vapor Pressure (vs. Air or mm Hg):	115 MM HG at 68 F
Vapor Density (vs. Air = 1):	> 1
Evaporation Rate:	> 1
Solubility in Water:	Slight
Percent Volatile:	100 % by weight.
VOC / Volume:	590 G/L
Viscosity:	Water thin
Appearance and Odor	
	Water White / Free and Clear

10. Stability and Reactivity

Stability: Unstable ☐ Stable ☒

Conditions To Avoid - Instability

No data available.

Incompatibility - Materials To Avoid

Incompatible with strong oxidizing agents, strong caustics, hydrogen peroxide, and nitrates.

Hazardous Decomposition Or Byproducts

Decomposition may produce carbon monoxide; carbon dioxide; formaldehyde; and unidentified organic compounds in black smoke.

Possibility of Hazardous Reactions: Will occur ☐ Will not occur ☒

Conditions To Avoid - Hazardous Reactions

No data available.

11. Toxicological Information

Toxicological Information

This product has not been tested as a whole. Information below will be for individual ingredients.

Acute Toxicity:

Methanol:

LD50 Rat oral 5628 mg/kg

LC50 Rat inhalation 64000 ppm/4 hr

LD50 Mouse oral 7300 mg/kg

Toluene:

LD50 Rat oral 2.6 to 7.5 g/kg

LD50 Rabbit dermal 14.1 ml/kg

LC50 Mice inhalation 5320 ppm/8 hr

Acetone:

LD50 Rat oral 10.7 mL/kg (=8450 mg/kg bw); acetone given by gastric intubation to groups of five non-fasted Carworth-Wistar female rats

LD50 Rat oral 9800 mg/kg/ bw

LC50 Rat inhalation exposure 76 mg/L/4 hr

LD50 Rabbit dermal 20 mg/kg bw

2-Butoxyethanol:

LD50 Rat oral 1.48 g/kg

LD50 Mouse oral 1.2 g/kg

LD50 Rabbit oral 0.32 g/kg

LD50 Rabbit dermal 400 mg/kg

LC50 Rat (male) inhalation 486 ppm/4 hr /from table/

LC50 Mouse inhalation 700 ppm/7 hr /from table/

Skin Corrosion/Irritation:

Methanol, toluene, MEK, and acetone are skin irritants.

Serious Eye Damage/Irritation:

Methanol and acetone are eye irritants.

Toluene and MEK are severe eye irritants.

Respiratory or Skin Sensitization: No data available.

Aspiration Hazard: No data available.

Chronic Toxicological Effects

This product has not been tested as a whole. Information below will be for individual ingredients.

Germ Cell Mutagenicity: No data available.

Reproductive Toxicity:

Gross toluene exposure during pregnancy can produce renal toxicity, fetal toxicity, and teratogenicity.

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STOT-Single Exposure: No data available.

STOT-Repeated Exposure: No data available.

Carcinogenicity/Other Information

IARC 3: Not Classifiable as to Carcinogenicity in Humans

ACGIH A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans

ACGIH A4 - Not Classifiable as a Human Carcinogen

Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
1. Methanol {Methyl alcohol; Carbinol; Wood alcohol}	67-56-1	n.a.	n.a.	n.a.	n.a.
2. Toluene {Benzene, Methyl-, Toluol}	108-88-3	n.a.	3	A4	n.a.
3. Acetone {2-Propanone}	67-64-1	n.a.	n.a.	A4	n.a.
4. Ethanol, 2-Butoxy- {Ethylene glycol n-butyl ether, (a glycol ether)}	111-76-2	n.a.	3	A3	n.a.
5. Acetic acid, ethyl ester {Ethyl acetate}	141-78-6	n.a.	n.a.	n.a.	n.a.
6. Light aliphatic solvent naphtha (petroleum)	64742-89-8	n.a.	n.a.	n.a.	n.a.

12. Ecological Information

General Ecological Information

No information available for this product as a whole. Information below will be for individual ingredients:

Toxicity:

Toluene: LC50 FOR BLUEGILL WAS 17 MG/L/24 HR & 13 MG/L/96 HR

Acetone: LC50 Pimephales promelas (Fathead minnow, age 33 days, length 22.6 mm, weight 0.159 g) 8,120 mg/L/96 h (95% confidence limit: 7,530-8,760 mg/L); flow through, 25.0 deg C, dissolved oxygen 6.7 mg/L, hardness 48.5 mg/L CaCO₃, alkalinity 45.8 mg/L CaCO₃, pH 7.58 /99% pure/

Persistence and Degradability:

Toluene is readily degradable.

Acetone: Based on a vapor pressure of 231 mm Hg at 25 deg C, acetone is expected to exist solely as a vapor in the ambient atmosphere. Vapor-phase acetone is degraded in the atmosphere by reaction with photochemically-produced hydroxyl radicals with an estimated atmospheric half-life of about 79 days. Acetone also undergoes photodecomposition by sunlight with an estimated half-life of about 80 days.

Bioaccumulative Potential:

Methanol is not expected to bioaccumulate in the environment.

Toluene: Bioaccumulation is low to moderate.

Acetone: Volatilization from moist soil surfaces is also expected based upon the measured Henry's Law constant of 3.97X10⁻⁵ atm-cu m/mol. This compound is expected to biodegrade under aerobic and anaerobic conditions based upon the results of numerous screening tests. If released into water, acetone is not expected to adsorb to suspended solids or sediment based upon its estimated Koc value. Methyl ethyl ketone may volatilize from dry soil surfaces based upon its vapor pressure.

Mobility in Soil:

Methanol is expected to have very high mobility in soil.

Toluene is expected to have high to moderate mobility in soil.

Acetone is expected to have very high mobility in soils.

Other Adverse Effects: No data available.

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13. Disposal Considerations

Waste Disposal Method

Dispose of in accordance with all applicable local, state, and federal regulations.

14. Transport Information

LAND TRANSPORT (US DOT)

DOT Proper Shipping Name	Paint Related Material
DOT Hazard Class:	3
DOT Hazard Label:	FLAMMABLE LIQUID
UN/NA Number:	UN1263
Packing Group:	II

Additional Transport Information

For D.O.T. information, contact W.M. Barr Technical Services at 1-800-398-3892.

The shipper/supplier may apply one of the following exceptions: Combustible Liquid, Consumer Commodity, Limited Quantity, Viscous Liquid, Does Not Sustain Combustion, or others, as allowed under 49CFR Hazmat Regulations. Please consult 49CFR Subchapter C to ensure that subsequent shipments comply with these exceptions.

15. Regulatory Information

US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Methanol {Methyl alcohol; Carbinol; Wood alcohol}	67-56-1	No	Yes 5000 LB	Yes	No
2. Toluene {Benzene, Methyl-; Toluol}	108-88-3	No	Yes 1000 LB	Yes	Yes
3. Acetone {2-Propanone}	67-64-1	No	Yes 5000 LB	No	Yes
4. Ethanol, 2-Butoxy- {Ethylene glycol n-butyl ether, (a glycol ether)}	111-76-2	No	No	Yes-Cat. N230	No
5. Acetic acid, ethyl ester {Ethyl acetate}	141-78-6	No	Yes 5000 LB	No	No
6. Light aliphatic solvent naphtha (petroleum)	64742-89-8	No	No	No	No

US EPA CAA, CWA, TSCA

Hazardous Components (Chemical Name)	CAS #	EPA CAA	EPA CWA NPDES	EPA TSCA	CA PROP 65
1. Methanol {Methyl alcohol; Carbinol; Wood alcohol}	67-56-1	HAP, ODC ()	No	Inventory	Yes
2. Toluene {Benzene, Methyl-; Toluol}	108-88-3	HAP, ODC ()	Yes	Inventory, 8A CAIR	Yes
3. Acetone {2-Propanone}	67-64-1	HAP, ODC ()	No	Inventory, 4 Test	No
4. Ethanol, 2-Butoxy- {Ethylene glycol n-butyl ether, (a glycol ether)}	111-76-2	HAP, ODC ()	No	Inventory	No
5. Acetic acid, ethyl ester {Ethyl acetate}	141-78-6	HAP, ODC ()	No	Inventory, 4 Test	No
6. Light aliphatic solvent naphtha (petroleum)	64742-89-8	HAP, ODC ()	No	Inventory	No

EPA Hazard Categories:

This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:

☒ Yes ☐ No Acute (immediate) Health Hazard

☒ Yes ☐ No Chronic (delayed) Health Hazard

☒ Yes ☐ No Fire Hazard

☐ Yes ☒ No Sudden Release of Pressure Hazard

☐ Yes ☒ No Reactive Hazard

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16. Other Information

Company Policy or Disclaimer

The information contained herein is presented in good faith and believed to be accurate as of the effective date shown above. This information is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. Any use of this data and information must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.



SAFETY DATA SHEET

ADHESIVE TAPES/COVERINGS - ROLL AND STROLL, QUICK SCRIM, ALL PURPOSE AND MASKING

Page 1

Issued: 11/04/2003

Revision No: 1

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING

Product name: ADHESIVE TAPES/COVERINGS - ROLL AND STROLL, QUICK SCRIM, ALL PURPOSE AND MASKING

Product code: MASK, QUICK48, ROLL

Synonyms: QUICK SCRIM PLASTERBOARD JOINTING TAPE
STICK 2 ALL PURPOSE TAPE
MASKING TAPE - ALL TYPES
ROLL AND STROLL - ALL TYPES

Use of substance / preparation: Various tapes as detailed - all not classified under current CHIP regs.

Company name: EVERBUILD BUILDING PRODUCTS LTD
SITE 41, KNOWSTHORPE WAY
CROSS GREEN INDUSTRIAL ESTATE
LEEDS
WEST YORKSHIRE
LS9OSW
ENGLAND
Tel: 0044 113 240 3456
Fax: 0044 113 240 0024
Emergency tel: 0044 113 240 3456 (office hours only)
Email: paul@everbuild.co.uk

2. HAZARDS IDENTIFICATION

Main hazards: No significant hazard.

3. COMPOSITION / INFORMATION ON INGREDIENTS

4. FIRST AID MEASURES (SYMPTOMS)

Skin contact: There may be mild irritation at the site of contact.

Eye contact: There may be irritation and redness.

Ingestion: There may be irritation of the throat.

Inhalation: No symptoms.

4. FIRST AID MEASURES (ACTION)

Skin contact: Wash immediately with plenty of soap and water.

Eye contact: Bathe the eye with running water for 15 minutes.

Ingestion: Wash out mouth with water.

5. FIRE-FIGHTING MEASURES

Extinguishing media: Suitable extinguishing media for the surrounding fire should be used.

Exposure hazards: In combustion emits toxic fumes.

[cont...]

Protection of fire-fighters: Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Refer to section 8 of SDS for personal protection details.

Environmental precautions: Do not discharge into drains or rivers.

Clean-up procedures: Wash the spillage site with large amounts of water.

7. HANDLING AND STORAGE

Storage conditions: Store in original containers between +5 and +25°C. Storage outside these parameters will dramatically reduce shelf life and invalidates all product warranties.

Suitable packaging: Must only be kept in original packaging.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Respiratory protection: Respiratory protection not required.

Hand protection: Protective gloves.

Skin protection: Protective clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

State: Solid

Colour: Various

Odour: Barely perceptible odour

Solubility in water: Insoluble

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions.

Conditions to avoid: Heat. Direct sunlight.

Materials to avoid: Strong oxidising agents. Strong acids.

Haz. decomp. products: In combustion emits toxic fumes.

11. TOXICOLOGICAL INFORMATION

Routes of exposure: Refer to section 4 of SDS for routes of exposure and corresponding symptoms.

12. ECOLOGICAL INFORMATION

Persistence and degradability: No data available.

Bioaccumulative potential: No data available.

Other adverse effects: Negligible ecotoxicity.

13. DISPOSAL CONSIDERATIONS

Disposal of packaging: Dispose of as normal industrial waste.

NB: The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

14. TRANSPORT INFORMATION

ADR / RID

UN no: Not Classified.

IMDG / IMO

UN no: Not Classified.

IATA / ICAO

UN no: Not Classified.

15. REGULATORY INFORMATION

Hazard symbols: No significant hazard.

Note: The regulatory information given above only indicates the principal regulations specifically applicable to the product described in the safety data sheet. The user's attention is drawn to the possible existence of additional provisions which complete these regulations. Refer to all applicable national, international and local regulations or provisions.

16. OTHER INFORMATION

Legal disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.

Fire Resistant Mineral Wool Insulation

Version 1.2

Revision Date 03/01/2016

Print Date 03/07/2016

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Trade name : MinWool-1200® Industrial Board, MinWool-1200® Flexible Batt, MinWool-1200® Pipe, MinWool-1200® Pipe and Tank Wrap, MinWool® Sound Attenuation Fire Batt, MinWool® Safing, MinWool® Curtainwall, MinWool-1200® Field Formed Pipe Insulation, MinWool-1200® Preformed Pipe Insulation, MinWool-1200® Metal Mesh Blanket, MinWool-1200® Precision Cut Pipe Insulation, MinWool-1200® Mitered Fittings, MinWool® Deck Plug Fire Stop, MinWool-1200® Lamella Tank Wrap, MinWool® Marine Board

Manufacturer or supplier's details

Company : Johns Manville
Address : P.O. Box 5108
Denver, CO USA 80127
Telephone : +1 303-978-2000 8:00AM-5:00PM M-F
Emergency telephone : 1-800-424-9300 (Chemtrec, in English)
number
Prepared by : productsafety@jm.com

SECTION 2. HAZARDS IDENTIFICATION**GHS Classification**

Not a hazardous substance or mixture.

GHS Label element

Not a hazardous substance or mixture.

Other hazards

Temporary mechanical abrasion (itching) of skin, eyes and respiratory tract may occur upon exposure to fibers or dust during handling of this product and cannot occur unless there is direct contact.

Trace amounts of formaldehyde may be released when contacted with moisture, including humidity. This release is most prevalent in conditions of high heat and humidity.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**Chemical nature**

Mineral wool product

Hazardous components

Non-hazardous according to 29 CFR 1910.1200, when used as intended.

Relevant ingredients

Chemical Name	CAS-No.	Concentration (%)
Mineral fibers	Not Assigned	>= 95 - <= 100 %
Cured urea extended phenol-formaldehyde resin	Not Assigned	>= 0 - <= 5 %

SECTION 4. FIRST AID MEASURES

Fire Resistant Mineral Wool Insulation

Version 1.2

Revision Date 03/01/2016

Print Date 03/07/2016

General advice	: Get medical attention if symptoms occur.
If inhaled	: Move to fresh air. If symptoms persist, call a physician.
In case of skin contact	: If on skin, rinse well with water. Get medical attention if irritation develops and persists.
In case of eye contact	: In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists, consult a specialist.
If swallowed	: If symptoms persist, call a physician. Rinse mouth with water to remove dust or fibers and drink plenty of water to help reduce irritation.
Most important symptoms and effects, both acute and delayed	: None known.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Special protective equipment for firefighters	: Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	: Avoid dust formation.
Methods and materials for containment and cleaning up	: Pick up and arrange disposal without creating dust.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	: Provide appropriate exhaust ventilation at places where dust is formed.
Advice on safe handling	: For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area.
Conditions for safe storage	: Keep in a dry, cool place.
Materials to avoid	: No materials to be especially mentioned.

Fire Resistant Mineral Wool Insulation

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Print Date 03/07/2016

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Nuisance dust	Not Assigned	TWA (Total particulate)	15 mg/m ³	OSHA
		TWA (Respirable fraction)	5 mg/m ³	OSHA

As a member of the North American Insulation Manufacturers Association (NAIMA), JM subscribes to the NAIMA Product Stewardship Program (NPSP). Under the NPSP, JM recommends that exposures be limited to the voluntary concentration of 1 f/cc TWA. The NPSP also includes work practice and respiratory protection recommendations. For more information, see NAIMA's Health and Safety Reference Library (website: <http://insulationinstitute.org/tools-resources/resource-library/health-safety/>) to find the Product Stewardship Program Pocket Folder (N052) and other Fact Sheets.

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.
When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hand protection

Remarks : For prolonged or repeated contact use protective gloves.

Eye protection : Safety glasses

Skin and body protection : Long sleeved clothing

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : solid

Colour : natural colour

Odour : not significant

Odour Threshold : No data available

pH : Not applicable

Melting point/range : > 2,000 °F

: Not applicable

Flash point : Not applicable

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Evaporation rate	: Not applicable
Flammability (solid, gas)	: No data available
Upper explosion limit	: Not applicable
Lower explosion limit	: Not applicable
Vapour pressure	: Not applicable
Relative vapour density	: Not applicable
Relative density	: No data available
Density	: Not applicable
Solubility(ies)	
Water solubility	: Not applicable
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Thermal decomposition	: Not applicable
Viscosity	
Viscosity, dynamic	: Not applicable
Viscosity, kinematic	: Not applicable

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: No decomposition if stored and applied as directed.
Chemical stability	: No decomposition if stored and applied as directed.
Possibility of hazardous reactions	: Stable under recommended storage conditions. No hazards to be specially mentioned.
Conditions to avoid	: No data available

SECTION 11. TOXICOLOGICAL INFORMATION

IARC	Group 3: Not classifiable as to its carcinogenicity to humans Mineral fibers
OSHA	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

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NTP

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Further information**Product:**

Remarks: Temporary mechanical abrasion (itching) of skin, eyes and respiratory tract may occur upon exposure to fibers or dust during handling of this product and cannot occur unless there is direct contact.'20 Trace amounts of formaldehyde may be released when contacted with moisture, including humidity. This release is most prevalent in conditions of high heat and humidity.

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity**

No data available

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects**Product:**

Additional ecological information : Due to the properties of the product, a hazard to the environment may not be expected.

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

Disposal of residual product : In accordance with local and national regulations.

SECTION 14. TRANSPORT INFORMATION**International transport regulations**

These products are not classified as dangerous goods according to international transport regulations.

SECTION 15. REGULATORY INFORMATION**TSCA list**

Fire Resistant Mineral Wool Insulation

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EPCRA - Emergency Planning and Community Right-to-Know Act**CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

California Prop 65

WARNING! This product contains a chemical known to the State of California to cause cancer.

The components of this product are reported in the following inventories:

TSCA : On TSCA Inventory

DSL : All components of this product are on the Canadian DSL.

SECTION 16. OTHER INFORMATION**Further information**

Revision Date : 03/01/2016

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

SAFETY DATA SHEET

Klean Strip Paint Thinner

Page: 1

Printed: 11/17/2015

Revision: 11/16/2015

Supersedes Revision: 06/01/2015

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Klean Strip Paint Thinner

Company Name: W. M. Barr
2105 Channel Avenue
Memphis, TN 38113

Phone Number: (901)775-0100

Web site address: www.wmbarr.com

Emergency Contact: 3E 24 Hour Emergency Contact (800)451-8346

Information: W.M. Barr Customer Service (800)398-3892

Intended Use: Paint, stain, and varnish thinning.

Product Code: CKPT94402, GKPT94002B, DKPT94403CA, EKPT94401, GKPT94002, GKPT94002P, GKPT94002T, GKPT94400, GPT1KS, PA12779, QKPT94003, QKPT94203, QPT1KS, GKPTDP, EKPT94404

Additional Information This product is regulated by the United States Consumer Product Safety Commission and is subject to certain labeling requirements under the Federal Hazardous Substances Act. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS). The product label also includes other important information, including directions for use, and should always be read in its entirety prior to using the product.

2. HAZARDS IDENTIFICATION

Flammable Liquids, Category 3

Acute Toxicity: Inhalation, Category 4

Skin Corrosion/Irritation, Category 2

Serious Eye Damage/Eye Irritation, Category 2B

Germ Cell Mutagenicity, Category 1B

Toxic To Reproduction, Category 2

Specific Target Organ Toxicity (single exposure), Category 3

Specific Target Organ Toxicity (repeated exposure), Category 2

Aspiration Toxicity, Category 1



GHS Signal Word: Danger

GHS Hazard Phrases:

H226: Flammable liquid and vapor.

H304: May be fatal if swallowed and enters airways.

H315: Causes skin irritation.

H320: Causes eye irritation.

H332: Harmful if inhaled.

H336: May cause drowsiness or dizziness.

H340: May cause genetic defects.

H361: Suspected of damaging fertility or the unborn child.

H373: May cause damage to Central Nervous System (CNS) through prolonged or repeated exposure.

GHS Precaution Phrases:

P201: Obtain special instructions before use.

P202: Do not handle until all safety precautions have been read and understood.

P210: Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P233: Keep container tightly closed.

P240: Ground/bond container and receiving equipment.

P241: Use explosion-proof electrical/ventilating/lighting equipment.

P242: Use only non-sparking tools.

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P243: Take precautionary measures against static discharge.
P260: Do not breathe gas/mist/vapors/spray.
P264: Wash hands thoroughly after handling.
P271: Use only outdoors or in a well-ventilated area.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P281: Use personal protective equipment as required.
P235: Keep cool.

GHS Response Phrases:

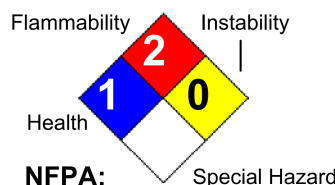
P301+310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P302+352: IF ON SKIN: Wash with plenty of soap and water.
P303+361+353: IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+313: IF exposed or concerned: Get medical attention/advice.
P312: Call a POISON CENTER or doctor/physician if you feel unwell.
P314: Get medical attention/advice if you feel unwell.
P321: Specific treatment see label.
P331: Do NOT induce vomiting.
P332+313: If skin irritation occurs, get medical advice/attention.
P337+313: If eye irritation persists, get medical advice/attention.
P362: Take off contaminated clothing and wash before re-use.
P370+378: In case of fire, use dry chemical powder to extinguish.

GHS Storage and Disposal Phrases:

P403+233: Store container tightly closed in well-ventilated place.
P405: Store locked up.
P501: Dispose of contents/container according to local, state and federal regulations.

Hazard Rating System:

HEALTH	*	1
FLAMMABILITY		2
PHYSICAL		0
PPE		



HMIS:

OSHA Regulatory Status:

This material is classified as hazardous under OSHA regulations.

Potential Health Effects (Acute and Chronic):

Inhalation Acute Exposure Effects:

May cause dizziness; headache; watering of eyes; eye irritation; weakness; nausea; muscle twitches, and depression of central nervous system. Severe overexposure may cause convulsions; unconsciousness; and death. Intentional misuse of this product by deliberately concentrating and inhaling can be harmful or fatal.

Skin Contact Acute Exposure Effects:

May cause irritation; numbness in the fingers and arms; drying of skin; and dermatitis. May cause increased severity of symptoms listed under inhalation.

Eye Contact Acute Exposure Effects:

This material is an eye irritant. May cause irritation; burns; conjunctivitis of eyes; and corneal ulcerations of the eye. Vapors may irritate eyes.

Ingestion Acute Exposure Effects:

Harmful or fatal if swallowed. May cause nausea; weakness; muscle twitches; gastrointestinal irritation; and diarrhea. Severe overexposure may cause convulsions; unconsciousness; and death.

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Chronic Exposure Effects:

Reports have associated repeated and prolonged overexposure to solvents with neurological and other physiological damage. Prolonged or repeated contact may cause dermatitis. May cause jaundice; bone marrow damage; liver damage; anemia; and skin irritation.

Medical Conditions Generally Aggravated By Exposure: Diseases of the skin, eyes, liver, kidneys, central nervous system and respiratory system.

3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS #	Hazardous Components (Chemical Name)	Concentration
8052-41-3	Stoddard solvent {Mineral spirits; Aliphatic Petroleum Distillates; White spirits}	<=95.0 %
25551-13-7	Benzene, Trimethyl-	<=5.0 %

Additional Chemical Information Ingredients vary due to multiple blends and/or raw material suppliers

4. FIRST AID MEASURES

Emergency and First Aid Procedures: Inhalation:
If user experiences breathing difficulty, move to air free of vapors, Administer oxygen or artificial medical assistance can be rendered.

Skin Contact:
Wash with soap and large quantities of water and seek medical attention if irritation from contact persists.

Eye Contact:
Flush with large quantities of water for at least 15 minutes and seek immediate medical attention.

Ingestion:
Do not induce vomiting. Call your local poison control center, hospital emergency room or physician immediately for instructions to induce vomiting.

If spontaneous vomiting is about to occur, place victim's head below knees. If victim is drowsy or unconscious, place on the left side with head down. Never give anything by mouth to a person who is not fully conscious. Do not leave victim unattended. Seek medical attention immediately.

Signs and Symptoms Of Exposure: Inhalation, ingestion, and dermal are possible routes of exposure.

Note to Physician: Call your local poison control center for further information.

Inhalation: Inhalation overexposure can produce toxic effects. Monitor for respiratory distress. If cough or difficulty in breathing develops, evaluate for upper respiratory tract inflammation, bronchitis, and pneumonitis. Administer supplemental oxygen with assisted ventilation as required.

Ingestion: If ingested, this material presents a significant aspiration and chemical pneumonitis hazard. Induction of emesis is not recommended. Consider activated charcoal and/or gastric lavage. If patient is obtunded, protect the airway by cuffed endotracheal intubation or by placement of the body in a Trendelenburg and left lateral decubitus position.

5. FIRE FIGHTING MEASURES

	NFPA Class II
Flash Pt:	> 100.00 F
Explosive Limits:	LEL: 0.5 UEL: 6
Autoignition Pt:	No data.
Suitable Extinguishing Media:	Use carbon dioxide, dry chemical powder, or foam.
Fire Fighting Instructions:	Self-contained respiratory protection should be provided for fire fighters fighting fires in buildings or confined areas. Storage containers exposed to fire should be kept cool with water spray to prevent pressure build-up. Stay away from heads of containers that have been exposed to intense heat or flame.
Flammable Properties and Hazards:	Combustible Liquid.

6. ACCIDENTAL RELEASE MEASURES

Steps To Be Taken In Case Material Is Released Or Spilled:	Clean up: Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind, out of low areas, and ventilate closed spaces before entering. Shut off ignition sources; keep flares, smoking or flames out of hazard area. Small spills: Take up with sand, earth or other noncombustible absorbent material and place in a plastic container where applicable. Large spills: Dike far ahead of spill for later disposal. Waste Disposal: Dispose in accordance with applicable local, state and federal regulations.
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7. HANDLING AND STORAGE

Precautions To Be Taken in Handling:	Read carefully all cautions and directions on product label before use. Since empty container retains residue, follow all label warnings even after container is empty. Dispose of empty container according to all regulations. Do not reuse this container. A static electrical charge can accumulate when this material is flowing through pipes, nozzles or filters, and when it is agitated. A static spark discharge can ignite accumulated vapors particularly during dry weather conditions. Always use proper bonding and grounding procedures.
Precautions To Be Taken in Storing:	Keep container tightly closed when not in use. Store in a cool, dry place. Do not store near flames or at elevated temperatures.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
8052-41-3	Stoddard solvent {Mineral spirits; Aliphatic Petroleum Distillates; White spirits}	PEL: 500 ppm	TLV: 100 ppm	No data.
25551-13-7	Benzene, Trimethyl-	No data.	TLV: 25 ppm	No data.
Respiratory Equipment (Specify Type):	For OSHA controlled work place and other regular users. Use only with adequate ventilation under engineered air control systems designed to prevent exceeding appropriate TLV. For occasional use, where engineered air control is not feasible, use properly maintained and properly fitted NIOSH approved respirator for organic solvent vapors. A dust mask does not provide protection against vapors.			
Eye Protection:	Safety glasses, goggles or face shields are recommended to safeguard against potential eye contact, irritation, or injury. Contact lenses should not be worn while working with chemicals.			
Protective Gloves:	Wear impermeable gloves. Gloves contaminated with product should be discarded. Promptly remove clothing that becomes soiled with product.			
Other Protective Clothing:	Various application methods can dictate use of additional protective safety equipment, such as impermeable aprons, etc., to minimize exposure. Before reuse, thoroughly clean any clothing or protective equipment that has been contaminated by prior use. Discard any clothing or other protective equipment that cannot be decontaminated, such as gloves or shoes.			
Engineering Controls (Ventilation etc.):	Use only with adequate ventilation to prevent build-up of vapors. Open all windows and doors. Use only with a cross ventilation of moving fresh air across the work area. If strong odor is noticed or you experience slight dizziness, headache, nausea, or eye-watering - Stop - ventilation is inadequate. Leave area immediately.			
Work/Hygienic/Maintenance Practices:	A source of clean water should be available in the work area for flushing eyes and skin. Do not eat, drink, or smoke in the work area. Wash hands thoroughly after use.			

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical States:	[] Gas [X] Liquid [] Solid
Appearance and Odor:	Water White / Free and Clear
Melting Point:	No data.
Boiling Point:	318.00 F - 385.00 F
Autoignition Pt:	No data.
Flash Pt:	> 100.00 F
Explosive Limits:	LEL: 0.5 UEL: 6
Specific Gravity (Water = 1):	0.78
Vapor Pressure (vs. Air or mm Hg):	0.3 MM HG at 68.0 F
Vapor Density (vs. Air = 1):	5 Air = 1
Evaporation Rate:	No data.
Solubility in Water:	No data.
Solubility Notes:	Very slightly soluble in cold water.
Percent Volatile:	100.0 % by weight.
VOC / Volume:	778.0000 G/L

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10. STABILITY AND REACTIVITY

Stability: Unstable [] Stable [X]

Conditions To Avoid - No data available.

Instability:

Incompatibility - Materials To Avoid: Incompatible with strong acids, alkalies, and oxidizers such as liquid chlorine and oxygen.

Hazardous Decomposition or Byproducts: Decomposition may produce carbon monoxide and carbon dioxide.

Possibility of Hazardous Reactions: Will occur [] Will not occur [X]

Conditions To Avoid - No data available.

Hazardous Reactions:

11. TOXICOLOGICAL INFORMATION

Toxicological Information: Refer to section 2 for acute and chronic effects.

CAS# 25551-13-7:

Standard Draize Test, Skin, Species: Rabbit, 500.0 MG, 24 H, Moderate.

Result:

Kidney, Ureter, Bladder: Changes in liver weight.

Endocrine: Changes in thymus weight.

Immunological Including Allergic: Decreased immune response.

- "Sbornik Vysledku Toxilogickeho Vysetreni Latek A Pripravku," , Institut Pro Vychovu Vedoucicn P, Marhold, J.V., Institut Pro Vychovu Vedoucicn, Pracovniku Chemickeho, Prumyclu Praha Czechoslovakia, Vol/p/yr: -,24, 1972

Standard Draize Test, Eyes, Species: Rabbit, 500.0 MG, 24 H, Mild.

Result:

Kidney, Ureter, Bladder: Changes in liver weight.

Kidney, Ureter, Bladder: Changes in bladder weight.

Nutritional and Gross Metabolic: Weight loss or decreased weight gain.

- "Sbornik Vysledku Toxilogickeho Vysetreni Latek A Pripravku," , Institut Pro Vychovu Vedoucicn P, Marhold, J.V., Institut Pro Vychovu Vedoucicn, Pracovniku Chemickeho, Prumyclu Praha Czechoslovakia, Vol/p/yr: -,24, 1972

CAS #	Hazardous Components (Chemical Name)	NTP	IARC	ACGIH	OSHA
8052-41-3	Stoddard solvent {Mineral spirits; Aliphatic Petroleum Distillates; White spirits}	n.a.	n.a.	n.a.	n.a.
25551-13-7	Benzene, Trimethyl-	n.a.	n.a.	n.a.	n.a.

12. ECOLOGICAL INFORMATION

No data available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method: Dispose in accordance with federal, state, and local regulations.

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Klean Strip Paint Thinner

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14. TRANSPORT INFORMATION

LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Paint Related Material, Exempt Combustible Liquid per 49 CFR 173.150(f)**DOT Hazard Class:****UN/NA Number:**

Additional Transport Information:

The supplier may apply one of the following exceptions: Combustible Liquid, Consumer Commodity, Limited Quantity, Viscous Liquid, Does Not Sustain Combustion, or others, as allowed under 49CFR Hazmat Regulations. Please consult 49CFR Subchapter C to ensure that subsequent shipments comply with these exceptions.

15. REGULATORY INFORMATION

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

CAS #	Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
8052-41-3	Stoddard solvent {Mineral spirits; Aliphatic Petroleum Distillates; White spirits}	No	No	No
25551-13-7	Benzene, Trimethyl-	No	No	No

This material meets the EPA ☒ Yes ☐ No **Acute (immediate) Health Hazard**
'Hazard Categories' defined ☒ Yes ☐ No **Chronic (delayed) Health Hazard**
for SARA Title III Sections ☒ Yes ☐ No **Fire Hazard**
311/312 as indicated: ☐ Yes ☒ No **Sudden Release of Pressure Hazard**
☐ Yes ☒ No **Reactive Hazard**

CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
8052-41-3	Stoddard solvent {Mineral spirits; Aliphatic Petroleum Distillates; White spirits}	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No
25551-13-7	Benzene, Trimethyl-	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No

Regulatory Information Statement: All components of this material are listed on the TSCA Inventory or are exempt.

16. OTHER INFORMATION

Revision Date: 11/16/2015
Preparer Name: W.M. Barr and Company, Inc. (901)775-0100
Additional Information About This Product: No data available.

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SAFETY DATA SHEET

1. Identification

Product identifier	PAINTED ARCHITECTURAL ALUMINUM EXTRUSIONS	
Other means of identification		
SDS number	1387	
Version #	04	
Revision date	May 27, 2015.	
Recommended use	Various building materials, fabricated aluminum doors, windows, patio enclosures and curtain walls	
Recommended restrictions	For industrial use only.	
Manufacturer/Importer/Supplier/Distributor information		
Manufacturer	Alcoa Inc. 201 Isabella Street Pittsburgh, PA USA 15212 Health and Safety Tel: +1-412-553-4649 Health and Safety Fax: +1-412-553-4822 Health and Safety Email: accmsds@alcoa.com	
	Kawneer Company Canada Limited 4000 18th Avenue North Lethbridge, Alberta, Canada T1H 5S8 Tel: +1-403-320-7755 Fax: +1-403-320-7373	Kawneer Company, Inc. 7200 Doe Avenue Visalia, CA 93291 USA Tel: +1-559-651-4000
	Kawneer Company, Inc. 555 Guthridge Court Norcross, GA 30092	Kawneer Company, Inc. 500 E. 12th St Bloomsburg PA 17815
Emergency Information	CHEMTREC: +1-703-527-3887 +1-800-424-9300 (24 Hour Emergency Telephone, multiple languages spoken); ALCOA: +1-412-553-4001 (24 Hour Emergency Telephone, only English spoken)	
Website	For a current Safety Data Sheet, refer to Alcoa websites: www.alcoa.com or internally at my.alcoa.com EHS Community	

2. Hazard(s) identification

Potential health effects	This product is considered an article and does not pose any health hazard under normal conditions of use. The following health effects are not likely to occur unless sawing or cutting generates dust or unless material is heated to melting.	
Physical hazards	Not classified.	
Health hazards	Not classified.	
Environmental hazards	Not classified.	
Authority defined hazards	Combustible dust	
Label elements		
Hazard symbol	None.	
Signal word	Warning	
Hazard statement	May form combustible dust concentrations in air.	
Precautionary statement		
Prevention	Prevent dust accumulation to minimize explosion hazard.	
Response	Not assigned.	
Storage	Not assigned.	
Disposal	Reuse or recycle material whenever possible.	

Hazard(s) not otherwise classified (HNOC)

None known.

Supplemental information

Dust and fume from processing: Can cause irritation of the eyes, skin and respiratory tract. Combustion of the coatings can generate toxic and irritating gases.

Non-combustible as supplied. Small chips, fine turnings and dust from processing may be readily ignitable.

Explosion/fire hazards may be present when:

- Dust or fines are dispersed in air.
- Chips, dust or fines are in contact with water.
- Dust and fines are in contact with certain metal oxides (e.g., rust, copper oxide).
- Molten metal is in contact with water/moisture or certain metal oxides (e.g., rust, copper oxide).

3. Composition/information on ingredients

Composition comments

Complete composition is provided below and may include some components classified as non-hazardous.

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Aluminum		7429-90-5	85 - 95
Magnesium		7439-95-4	< 1.2
Coatings†		Not available	< 2.0
Strontium chromate		7789-06-2	< 0.03

Additional Information

† Coatings include: acrylic polymer and fluoropolymer resin. Additional compounds which may be formed during processing are listed in Section 8.

4. First-aid measures

Eye contact

Dust and fumes from processing: Rinse eyes with plenty of water or saline for at least 15 minutes. Consult a physician.

Skin contact

Dust and fumes from processing: Wash with soap and water for at least 15 minutes. Get medical attention if irritation develops or persists.

Inhalation

Dust and fumes from processing: Remove to fresh air. Check for clear airway, breathing, and presence of pulse. Provide cardiopulmonary resuscitation for persons without pulse or respirations. If breathing is difficult, provide oxygen. Loosen any tight clothing on neck or chest. Consult a physician.

Ingestion

Not relevant, due to the form of the product.

Most important symptoms/effects, acute and delayed

Dust and fumes from processing: Irritating to eyes, respiratory system and skin. See Section 11 of the SDS for additional information on health hazards.

Indication of immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically.

5. Fire-fighting measures

Suitable extinguishing media

Use Class D extinguishing agents on fines, dust or molten metal. Use coarse water spray on chips and turnings.

Unsuitable extinguishing media

DO NOT USE halogenated extinguishing agents on small chips/fines. DO NOT USE water in fighting fires around molten metal. These fire extinguishing agents will react with the burning material.

Specific hazards arising from the chemical	<p>May be a potential hazard under the following conditions:</p> <ul style="list-style-type: none"> • Dust clouds may be explosive. Even a minor dust cloud can explode violently. Dust accumulation on the floor, ledges and beams can present a risk of ignition, flame propagation and secondary explosions. • Chips, fines and dust in contact with water can generate flammable/explosive hydrogen gas. These gases could present an explosion hazard in confined or poorly ventilated spaces. • Dust and fines in contact with certain metal oxides (e.g., rust, copper oxide). A thermite reaction, with considerable heat generation, can be initiated by a weak ignition source. • Molten metal in contact with water/moisture or certain metal oxides (e.g., rust, copper oxide). Moisture entrapped by molten metal can be explosive. Contact of molten aluminum with certain metal oxides can initiate a thermite reaction. Finely divided metals (e.g., powders or wire) may have enough surface oxide to produce thermite reactions/explosions.
Special protective equipment and precautions for firefighters	Combustion of the coatings can generate hydrogen fluoride.
Fire fighting equipment/instructions	Firefighters should wear NIOSH approved, positive pressure, self-contained breathing apparatus and full protective clothing when appropriate.
General fire hazards	Use gentle surface application of Class D extinguishing agent or dry inert granular material (e.g., sand) to cover and ring the burning material.
Explosion data	This product does not present fire or explosion hazards as shipped. Small chips, fine turnings, and dust from processing may be readily ignitable.
Sensitivity to mechanical impact	None known.
Sensitivity to static discharge	None known.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Avoid contact with sharp edges or heated metal. Use personal protection recommended in Section 8 of the SDS.
Personal precautions, protective equipment and emergency procedures	
For emergency responders	Avoid contact with sharp edges or heated metal. Use personal protection recommended in Section 8 of the SDS.
Evacuation procedures	None necessary.
Methods and materials for containment and cleaning up	Spillage should be collected for recycling. Pick up mechanically. Clean up in accordance with all applicable regulations. If molten: Use dry sand to contain the flow of material. All tooling (e.g., shovels or hand tools) and containers which come in contact with molten metal must be preheated or specially coated, rust free and approved for such use. Allow the spill to cool before remelting as scrap.

7. Handling and storage

Handling	Keep material dry. Hot aluminum does not necessarily glow red. Avoid generating dust. Avoid contact with sharp edges or heated metal. Hot and cold aluminum are not visually different.
Storage	Keep in a dry place.
Requirements for Processes Which Generate Dusts or Fines	<p>If processing of this product generates dust or if extremely fine particulate is generated, obtain and follow the safety procedures and equipment guides contained in Aluminum Association Bulletin F-1 and National Fire Protection Association (NFPA) standards listed in Section 16.</p> <p>Use non-sparking handling equipment, tools and natural bristle brush. Cover and reseal partially empty containers. Provide grounding and bonding where necessary to prevent accumulation of static charges during metal dust handling and transfer operations (See Section 15).</p> <p>Local ventilation and vacuum systems must be designed to handle explosive dusts. Dry vacuums and electrostatic precipitators must not be used, unless specifically approved for use with flammable/explosive dusts. Dust collection systems must be dedicated to aluminum dust only and should be clearly labeled as such. Do not co-mingle fines of aluminum with fines of iron, iron oxide (rust) or other metal oxides.</p> <p>Do not allow chips, fines or dust to contact water, particularly in enclosed areas.</p> <p>Avoid all ignition sources. Good housekeeping practices must be maintained. Do not use compressed air to remove settled material from floors, beams or equipment.</p>

Requirements for Remelting of Scrap Material or Ingot

Molten metal and water can be an explosive combination. The risk is greatest when there is sufficient molten metal to entrap or seal off the water. Water and other forms of contamination on or contained in scrap or remelt ingot are known to have caused explosions in melting operations. While the products may have minimal surface roughness and internal voids, there remains the possibility of moisture contamination or entrapment. If confined, even a few drops of water can lead to violent explosions.

All tooling, containers, molds and ladles which come in contact with molten metal must be preheated or specially coated, rust free and approved for such use. Any surfaces that may contact molten metal (e.g., concrete) should be specially coated.

Drops of molten metal in water (e.g. from plasma arc cutting), while not normally an explosion hazard, can generate enough flammable hydrogen gas to present an explosion hazard. Vigorous circulation of the water and removal of the particles minimize the hazards.

During melting operations, the following minimum guidelines should be observed:

- Inspect all materials prior to furnace charging and completely remove surface contamination such as water, ice, snow, deposits of grease and oil or other surface contamination resulting from weather exposure, shipment, or storage.
- Store materials in dry, heated areas with any cracks or cavities pointed downwards.
- Preheat and dry large items adequately before charging into a furnace containing molten metal. This is typically done by use of a drying oven or homogenizing furnace. The drying cycle should bring the metal temperature of the coldest item of the batch to 400°F (200°C) and then hold at that temperature for 6 hours.

Thermite explosions have been reported when aluminum alloys were melted in furnaces used for alloying with lead, bismuth or other metals with low melting temperatures. These metals, when added as high purity ingots, can seep through cracks in furnace liners and become oxidized. During subsequent melts in the furnace, molten aluminum can contact these metal oxides resulting in a thermite explosion.

8. Exposure controls/personal protection

Occupational exposure limits

U.S. - OSHA

Components

Components	Type	Value	Form
Aluminum (CAS 7429-90-5)	TWA	5 mg/m3 15 mg/m3	Respirable fraction Total dust

Additional components

Additional components	Type	Value	Form
Hydrogen fluoride (CAS 7664-39-3)	TWA	3 ppm	(as F)

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Components

Components	Type	Value
Strontium chromate (CAS 7789-06-2)	TWA	0.005 mg/m3

US ACGIH Threshold Limit Values: Time Weighted Average (TWA): mg/m3, non-standard units

Components	Type	Value	Form
Aluminum (CAS 7429-90-5)	TWA	1 mg/m3	Respirable fraction.
Strontium chromate (CAS 7789-06-2)	TWA	0.0005 mg/m3	

Alcoa

Components

Components	Type	Value	Form
Aluminum (CAS 7429-90-5)	TWA	3 mg/m3 10 mg/m3	Respirable fraction Total dust
Strontium chromate (CAS 7789-06-2)	TWA	0.25 ug/m3	(as Hexavalent Cr)

Additional components

Additional components	Type	Value	Form
Hydrogen fluoride (CAS 7664-39-3)	STEL	1.64 mg/m3	Peak (as F) (Skin)
	TWA	2 ppm 0.5 mg/m3	Peak (as F) (Skin) (as F) (Skin)

General

The need for personal protective equipment should be based upon a hazard assessment and recommendations from health / safety professionals.

Appropriate engineering controls	Dust and fumes from processing: Use with adequate explosion-proof ventilation designed to handle particulates to meet the limits listed in Section 8, Exposure Guidelines.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Wear safety glasses with side shields. If molten: Goggles/face shield are recommended.
Skin protection	
Hand protection	Wear appropriate gloves to avoid any skin injury.
Other	Personnel who handle and work with molten metal should utilize primary protective clothing like polycarbonate face shields, fire resistant tapper's jackets, neck shades (snoods), leggings, spats and similar equipment to prevent burn injuries. In addition to primary protection, secondary or day-to-day work clothing that is fire resistant and sheds metal splash is recommended for use with molten metal. Synthetic materials should never be worn even as secondary clothing (undergarments).
Respiratory protection	Dust and fumes from processing: Use NIOSH-approved respiratory protection as specified by an Industrial Hygienist or other qualified professional if concentrations exceed the limits listed in Section 8. Suggested respiratory protection: N95, Acid gas cartridges for Hydrogen fluoride.
Thermal hazards	Contact with molten material can cause thermal burns.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice.
Control parameters	Follow standard monitoring procedures.

9. Physical and chemical properties

Form	Solid.
Color	Various colors.
Odor	Odorless
Odor threshold	Not applicable
pH	Not applicable
Melting point/freezing point	1025.6 - 1209.2 °F (552 - 654 °C)
Initial boiling point and boiling range	Not determined
Flash point	Not applicable
Evaporation rate	Not applicable.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - upper (%)	Not applicable
Flammability limit - lower (%)	Not applicable
Explosive properties	Not applicable.
Vapor pressure	Not applicable
Vapor density	Not applicable
Relative density	Not determined.
Solubility(ies)	Insoluble
Partition coefficient (n-octanol/water)	Not applicable
Auto-ignition temperature	Not applicable
Decomposition temperature	Not applicable.
Viscosity	Not applicable.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Stable under normal conditions of use, storage, and transportation.
Possibility of hazardous reactions	Hazardous polymerization does not occur.

Conditions to avoid

Chips, fines, dust and molten metal are considerably more reactive with the following:

- Heat: Oxidizes at a rate dependent upon temperature and particle size.
- Water: Slowly generates flammable/explosive hydrogen gas and heat. Generation rate is greatly increased with smaller particles (e.g., fines and dusts). Molten metal can react violently/explosively with water or moisture, particularly when the water is entrapped.

Incompatible materials

Chips, fines, dust and molten metal are considerably more reactive with the following:

- Strong oxidizers: Violent reaction with considerable heat generation. Can react explosively with nitrates (e.g., ammonium nitrate and fertilizers containing nitrate) when heated or molten.
- Acids and alkalis: Reacts to generate flammable/explosive hydrogen gas. Generation rate is greatly increased with smaller particles (e.g., fines and dusts).
- Halogenated compounds: Many halogenated hydrocarbons, including halogenated fire extinguishing agents, can react violently with finely divided or molten aluminum.
- Iron oxide (rust) and other metal oxides (e.g., copper and lead oxides): A violent thermite reaction generating considerable heat can occur. Reaction with aluminum fines and dusts requires only very weak ignition sources for initiation. Molten aluminum can react violently with iron oxide without external ignition source.
- Iron powder and water: Explosive reaction forming hydrogen gas when heated above 1470°F (800°C).

Thermite explosions have been reported when aluminum alloys were melted in furnaces used for alloying with lead, bismuth or other metals with low melting temperatures. These metals, when added as high purity ingots, can seep through cracks in furnace liners and become oxidized. During subsequent melts in the furnace, molten aluminum can contact these metal oxides resulting in a thermite explosion.

Hazardous decomposition products

Combustion of the coatings can generate hydrogen fluoride.

11. Toxicological information

Health effects associated with ingredients

Aluminum dust/fines and fumes: Low health risk by inhalation. Generally considered to be biologically inert (milling, cutting, grinding).

Strontium chromate [Chromium (VI) compounds]: Can cause irritation of eye, skin and respiratory tract. Skin contact: Can cause irritant dermatitis, allergic reactions and skin ulcers. Chronic overexposures: Can cause perforation of the nasal septum, respiratory sensitization, asthma, fluid in the lungs (pulmonary edema), lung damage, kidney damage, lung cancer, nasal cancer and cancer of the gastrointestinal tract. IARC/NTP: Listed as "known to be a human carcinogen" by the NTP. Listed as carcinogenic to humans by IARC (Group 1).

Health effects associated with compounds formed during processing

Combustion of the coatings can generate Hydrogen fluoride.

Hydrogen fluoride: Can cause severe irritation of the eyes, mucous membranes, skin and respiratory tract. Acute overexposures: Can cause cough, shock, the accumulation of fluid in the lungs (pulmonary edema) and death. Effects can be delayed up to 24 hours.

Information on likely routes of exposure

Eye contact

Dust and fumes from processing: Can cause irritation.

Skin contact

Dust and fumes from processing: Can cause irritation.

Inhalation

Dust and fumes from processing: Can cause irritation of the upper respiratory tract. Additional health effects from mechanical processing (e.g., cutting, grinding): Chronic overexposures: Can cause respiratory sensitization, asthma and lung cancer.

Combustion of the coatings can generate toxic and irritating gases. Acute overexposure: Can cause severe irritation of the respiratory tract and the accumulation of fluid in the lungs. Effects can be delayed up to 24 hours.

Ingestion

Not relevant, due to the form of the product.

Symptoms related to the physical, chemical and toxicological characteristics

Dust and fumes from processing: Can cause irritation of the eyes, skin and upper respiratory tract.

Information on toxicological effects

Components	Species	Test Results
Aluminum (CAS 7429-90-5)		
<u>Acute</u>		
Inhalation		
LC50	Rat	> 2.3 mg/l 7.6 mg/l
Oral		
LD50	Rat	> 2000 mg/kg
Strontium chromate (CAS 7789-06-2)		
<u>Acute</u>		
Oral		
LD50	Rat	811 mg/kg
Additional components	Species	Test Results
Hydrogen fluoride (CAS 7664-39-3)		
<u>Acute</u>		
Inhalation		
LC50	Guinea pig	4327 ppm, 15 Minutes 3.54 mg/l, 15 Minutes
	Monkey	1780 ppm, 1 Hours
	Mouse	500 ppm, 1 Hours
	Rat	4970 ppm, 5 Minutes 2689 ppm, 15 Minutes 2042 ppm, 30 Minutes 1278 ppm, 1 Hours
Acute toxicity	Not classified. Based on available data, the classification criteria are not met.	
Skin corrosion/irritation	Based on available data, the classification criteria are not met.	
Serious eye damage/eye irritation	Based on available data, the classification criteria are not met.	
Respiratory or skin sensitization		
Respiratory sensitization	Based on available data, the classification criteria are not met.	
Skin sensitization	Based on available data, the classification criteria are not met.	
Germ cell mutagenicity	Contains no ingredient listed as a mutagen.	
Pre-existing conditions aggravated by exposure	Dust and fumes from processing: Asthma, chronic lung disease, and skin rashes.	
Carcinogenicity	Dust from processing: Contains a substance which may cause cancer by inhalation.	
IARC Monographs. Overall Evaluation of Carcinogenicity		
Strontium chromate (CAS 7789-06-2)	1 Carcinogenic to humans.	
US. National Toxicology Program (NTP) Report on Carcinogens		
Strontium chromate (CAS 7789-06-2)	Known To Be Human Carcinogen.	
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)		
Strontium chromate (CAS 7789-06-2)	Cancer	
Reproductive toxicity	Based on available data, the classification criteria are not met.	
Specific target organ toxicity - single exposure	Based on available data, the classification criteria are not met.	
Specific target organ toxicity - repeated exposure	Based on available data, the classification criteria are not met.	
Aspiration hazard	Based on available data, the classification criteria are not met.	

12. Ecological information

Ecotoxicity This material is not expected to be harmful to aquatic life.

Additional components		Species	Test Results
Hydrogen fluoride (CAS 7664-39-3)			
Aquatic			
Fish	LC50	Brown trout (Salmo trutta)	125 mg/l, 48 hours
Persistence and degradability	The product contains inorganic compounds which are not biodegradable.		
Bioaccumulative potential	Will not bio-accumulate.		
Mobility in soil	Not considered mobile.		
Other adverse effects	None known.		
13. Disposal considerations			
Disposal instructions	Reuse or recycle material whenever possible. If reuse or recycling is not possible, disposal must be made according to local or governmental regulations.		
Waste codes	RCRA Status: Not federally regulated in the U.S. if disposed of "as is." RCRA waste codes other than described here may apply depending on use of the product. Status must be determined at the point of waste generation. Refer to 40 CFR 261 or state equivalent in the U.S. TCLP testing is recommended for chromium in a waste disposal scenario.		
Waste from residues / unused products	If reuse or recycling is not possible, disposal must be made according to local or governmental regulations.		
Contaminated packaging	Dispose of in accordance with local regulations.		
14. Transport information			
General Shipping Information			
Basic Shipping Information			
ID number	-		
Proper shipping name	Not regulated		
Hazard class	-		
Packing group	-		
General Shipping Notes			
• When "Not regulated", enter the proper freight classification, SDS Number and Product Name onto the shipping paperwork.			
Disclaimer			
This section provides basic classification information and, where relevant, information with respect to specific modal regulations, environmental hazards and special precautions. Otherwise, it is presumed that the information is not available/not relevant			
15. Regulatory information			
US federal regulations	In reference to Title VI of the Clean Air Act of 1990, this material does not contain nor was it manufactured using ozone-depleting chemicals. All electrical equipment must be suitable for use in hazardous atmospheres involving aluminum powder in accordance with 29 CFR 1910.307. The National Electrical Code, NFPA 70, contains guidelines for determining the type and design of equipment and installation which will meet this requirement.		
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)			
Strontium chromate (CAS 7789-06-2)	0.1 % Annual Export Notification required.		
CERCLA Hazardous Substance List (40 CFR 302.4)			
Strontium chromate (CAS 7789-06-2)	Listed.		
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)			
Strontium chromate (CAS 7789-06-2)	Cancer Eye irritation Skin sensitization		
Superfund Amendments and Reauthorization Act of 1986 (SARA)			
Section 311/312 hazard categories	Immediate Hazard - Yes	If particulates/fumes generated during processing	
	Delayed Hazard - Yes	If particulates/fumes generated during processing	
	Fire Hazard - No		
	Pressure Hazard - No		
	Reactivity Hazard - Yes	If molten	

SARA 302 Extremely hazardous substance

Chemical name	CAS number	Reportable quantity	Threshold planning quantity	Threshold planning quantity, lower value	Threshold planning quantity, upper value
Hydrogen fluoride	7664-39-3	100	100 lbs		
SARA 311/312 Hazardous chemical	No				
SARA 313 (TRI reporting)					
Chemical name	CAS number	% by wt.			
Aluminum	7429-90-5	85 - 95			
Hydrogen fluoride	7664-39-3	1			

US state regulations WARNING: This product contains a chemical known to the State of California to cause cancer.

US - New Jersey RTK - Substances: Listed substance

Aluminum (CAS 7429-90-5)
 Magnesium (CAS 7439-95-4)
 Strontium chromate (CAS 7789-06-2)

US - Pennsylvania RTK - Hazardous Substances: Special hazard

Strontium chromate (CAS 7789-06-2)

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Aluminum (CAS 7429-90-5)
 Strontium chromate (CAS 7789-06-2)

US. Massachusetts RTK - Substance List

Aluminum (CAS 7429-90-5)
 Magnesium (CAS 7439-95-4)
 Strontium chromate (CAS 7789-06-2)

US. New Jersey Worker and Community Right-to-Know Act

Aluminum (CAS 7429-90-5)
 Strontium chromate (CAS 7789-06-2)

US. Pennsylvania RTK - Hazardous Substances

Aluminum (CAS 7429-90-5)
 Magnesium (CAS 7439-95-4)
 Strontium chromate (CAS 7789-06-2)

US. Pennsylvania Worker and Community Right-to-Know Law

Aluminum (CAS 7429-90-5)
 Magnesium (CAS 7439-95-4)
 Strontium chromate (CAS 7789-06-2)

US. Rhode Island RTK

Aluminum (CAS 7429-90-5)
 Strontium chromate (CAS 7789-06-2)

US. California Proposition 65**US - California Proposition 65 - CRT: Listed date/Carcinogenic substance**

Strontium chromate (CAS 7789-06-2) Listed: February 27, 1987

US - California Proposition 65 - CRT: Listed date/Developmental toxin

Strontium chromate (CAS 7789-06-2) Listed: December 19, 2008

US - California Proposition 65 - CRT: Listed date/Female reproductive toxin

Strontium chromate (CAS 7789-06-2) Listed: December 19, 2008

US - California Proposition 65 - CRT: Listed date/Male reproductive toxin

Strontium chromate (CAS 7789-06-2) Listed: December 19, 2008

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes

Country(s) or region	Inventory name	On inventory (yes/no)*
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

SDS Status	<p>May 27, 2015: New format. December 11, 2012: Change(s) in Section: 1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15 and 16. June 19, 2009: New format. April 21, 2006: New SDS.</p> <p>Hazardous Materials Control Committee Preparer: Jim Perriello, +1-865-977-2051.</p> <p>SDS System Number: 174867</p>
Revision date	May 27, 2015.
Version #	04
Revision Information	<p>Product and Company Identification: Product and Company Identification Hazards Identification: US Hazardous Composition / Information on Ingredients: Ingredients Physical & Chemical Properties: Multiple Properties Transport Information: Agency Name, Packaging Type, and Transport Mode Selection Regulatory Information: United States GHS: Classification</p>
Disclaimer	The information in the sheet was written based on the best knowledge and experience currently available.

Other information

- Guide to Occupational Exposure Values 2015, Compiled by the American Conference of Governmental Industrial Hygienists (ACGIH).
- NIOSH Pocket Guide to Chemical Hazards, U.S. Department of Health and Human Services, September 2005.
- expub, Expert Publishing, LLC., www.expub.com,
- Ariel, 3E Company, www.3Ecompany.com

Key/Legend:

ACGIH	American Conference of Governmental Industrial Hygienists
AICS	Australian Inventory of Chemical Substances
CAS	Chemical Abstract Services
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CPR	Cardio-pulmonary Resuscitation
DOT	Department of Transportation
DSL	Domestic Substances List (Canada)
EC	Effective Concentration
ED	Effective Dose
EINECS	European Inventory of Existing Commercial Chemical Substances
ENCS	Japan - Existing and New Chemical Substances
EWC	European Waste Catalogue
EPA	Environmental Protective Agency
IARC	International Agency for Research on Cancer
LC	Lethal Concentration
LD	Lethal Dose
MAK	Maximum Workplace Concentration (Germany) "maximale Arbeitsplatz-Konzentration"
NDSL	Non-Domestic Substances List (Canada)
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration
PIN	Product Identification Number
PMCC	Pensky Marten Closed Cup
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act
SIMDUT	Système d'Information sur les Matières Dangereuses Utilisées au Travail
STEL	Short Term Exposure Limit
TCLP	Toxic Chemicals Leachate Program
TDG	Transportation of Dangerous Goods
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
TWA	Time Weighted Average
WHMIS	Workplace Hazardous Materials Information System
m	meter, cm centimeter, mm millimeter, in inch,
g	gram, kg kilogram, lb pound, µg microgram,
ppm	parts per million, ft feet
*** End of SDS ***	

Key/Legend:

ACGIH	American Conference of Governmental Industrial Hygienists
AICS	Australian Inventory of Chemical Substances
CAS	Chemical Abstract Services
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CPR	Cardio-pulmonary Resuscitation
DOT	Department of Transportation
DSL	Domestic Substances List (Canada)
EC	Effective Concentration
ED	Effective Dose
EINECS	European Inventory of Existing Commercial Chemical Substances
ENCS	Japan - Existing and New Chemical Substances
EWG	European Waste Catalogue
EPA	Environmental Protective Agency
IARC	International Agency for Research on Cancer
LC	Lethal Concentration
LD	Lethal Dose
MAK	Maximum Workplace Concentration (Germany) "maximale Arbeitsplatz-Konzentration"
NDSL	Non-Domestic Substances List (Canada)
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration
PIN	Product Identification Number
PMCC	Pensky Marten Closed Cup
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act
SIMDUT	Système d'Information sur les Matières Dangereuses Utilisées au Travail
STEL	Short Term Exposure Limit
TCLP	Toxic Chemicals Leachate Program
TDG	Transportation of Dangerous Goods
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
TWA	Time Weighted Average
WHMIS	Workplace Hazardous Materials Information System
m	meter, cm centimeter, mm millimeter, in inch,
g	gram, kg kilogram, lb pound, µg microgram,
ppm	parts per million, ft feet

*** End of SDS ***

Hazard statement

May form combustible dust concentrations in air.

Precautionary statement**Prevention**

Prevent dust accumulation to minimize explosion hazard.

Response

Not assigned.

Storage

Not assigned.

Disposal

Reuse or recycle material whenever possible.

Warning**Supplemental information**

Dust and fume from processing: Can cause irritation of the eyes, skin and respiratory tract. Combustion of the coatings can generate toxic and irritating gases.

Non-combustible as supplied. Small chips, fine turnings and dust from processing may be readily ignitable.

Explosion/fire hazards may be present when:

- Dust or fines are dispersed in air.
- Chips, dust or fines are in contact with water.
- Dust and fines are in contact with certain metal oxides (e.g., rust, copper oxide).
- Molten metal is in contact with water/moisture or certain metal oxides (e.g., rust, copper oxide).

FIRE FIGHTING MEASURES: Use Class D extinguishing agents on fines, dust or molten metal. Use coarse water spray on chips and turnings.

DO NOT USE halogenated extinguishing agents on small chips/fines.

DO NOT USE water in fighting fires around molten metal.

These fire extinguishing agents will react with the burning material.

IN CASE OF SPILL: Pick up mechanically. Collect scrap for recycling. If molten: Use dry sand to contain the flow of material. All tooling (e.g., shovels or hand tools) and containers which come in contact with molten metal must be preheated or specially coated, rust free and approved for such use. Allow the spill to cool before remelting as scrap.

See Alcoa SDS Number 1387.

USA: Chemtrec: +1-703-527-3887 +1-800-424-9300 (24 Hour Emergency Telephone, multiple languages spoken)

Alcoa Inc., 201 Isabella Street, Pittsburgh, PA 15212-5858 United States +1-412-553-4001 (24 Hour Emergency Telephone, English only)
Alcoa Health and Safety Email: accmsds@alcoa.com Tel: +1-412-553-4649 and Fax: +1-412-553-4822



Safety Data Sheet



1. Identification

Product Name:	PRO LSPP 6PK MARK FLUORESCENT ORANGE	Revision Date:	6/5/2015
Product Identifier:	2554838	Supersedes Date:	New SDS
Product Use/Class:	Marking Paint/Aerosols		
Supplier:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA	Manufacturer:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
Preparer:	Regulatory Department		
Emergency Telephone:	24 Hour Hotline: 847-367-7700		

2. Hazard Identification

Classification

Symbol(s) of Product



Signal Word

Danger

Possible Hazards

60% of the mixture consists of ingredient(s) of unknown acute toxicity

GHS HAZARD STATEMENTS

Flammable Aerosol, category 1	H222	Extremely flammable aerosol.
Acute Toxicity, Dermal, category 4	H312	Harmful in contact with skin.
Germ Cell Mutagenicity, category 1B	H340	May cause genetic defects . Classified as mutagenic Category 1 if one ingredient is present at or above 0.1% Applies to liquids, Solids (w/w units) and gases (v/v). The substance may also have its own exposure limit. Routes of exposure are dependant on ingredient form.
Carcinogenicity, category 1B	H350	May cause cancer. Classified as carcinogenic Category 1 on the basis of epidemiological and/or animal data. Mixtures are classified as carcinogenic when at least 1 ingredient has been classified as carcinogenic and is present at 0.1% or above Routes of exposure are dependant on ingredient form.

GHS LABEL PRECAUTIONARY STATEMENTS

P201	Obtain special instructions before use.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P281	Use personal protective equipment as required.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P410+P412	Protect from sunlight. Do no expose to temperatures exceeding 50°C/ 122°F.

3. Composition/Information On Ingredients

HAZARDOUS SUBSTANCES

<u>Chemical Name</u>	<u>CAS-No.</u>	<u>Wt.% Range</u>	<u>GHS Symbols</u>	<u>GHS Statements</u>
Aliphatic Hydrocarbon	64742-89-8	10-25	GHS08	H304-340-350
Propane	74-98-6	10-25	No Information	No Information
Limestone	1317-65-3	10-25	No Information	No Information
Hydrous Magnesium Silicate	14807-96-6	2.5-10	No Information	No Information
n-Butane	106-97-8	2.5-10	No Information	No Information
Acetone	67-64-1	2.5-10	GHS02-GHS07	H225-319-336
n-Butyl Acetate	123-86-4	2.5-10	GHS02-GHS07	H226-336
Hydrotreated Light Distillate	64742-47-8	2.5-10	GHS06-GHS08	H304-331
Naphtha, Petroleum, Hydrotreated Light	64742-49-0	1.0-2.5	GHS08	H304-340-350
Organoclay	68911-87-5	1.0-2.5	No Information	No Information
Stoddard Solvent	8052-41-3	0.1-1.0	GHS08	H304-340-350-372
Ethylbenzene	100-41-4	0.1-1.0	GHS02-GHS07	H225-332

The text for GHS Hazard Statements shown above (if any) is given in the "16. Other Information" section.

4. First-aid Measures

FIRST AID - EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

FIRST AID - SKIN CONTACT: Wash skin with soap and water. Remove contaminated clothing. Get medical attention if irritation develops or persists.

FIRST AID - INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention. Do NOT use mouth-to-mouth resuscitation. If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

FIRST AID - INGESTION: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention. If swallowed, get medical attention.

5. Fire-fighting Measures

EXTINGUISHING MEDIA: Alcohol Film Forming Foam, Carbon Dioxide, Dry Chemical, Dry Sand, Water Fog

UNUSUAL FIRE AND EXPLOSION HAZARDS: FLASH POINT IS LESS THAN 20°F. EXTREMELY FLAMMABLE LIQUID AND VAPOR! Water spray may be ineffective. Closed containers may explode when exposed to extreme heat due to buildup of steam. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Perforation of the pressurized container may cause bursting of the can. No unusual fire or explosion hazards noted.

SPECIAL FIREFIGHTING PROCEDURES: Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion. Full protective equipment including self-contained breathing apparatus should be used. Evacuate area and fight fire from a safe distance. Use water spray to keep fire-exposed containers cool. Containers may explode when heated.

6. Accidental Release Measures

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers. Ventilate area, isolate spilled material, and remove with inert absorbent. Dispose of contaminated absorbent, container, and unused contents in accordance with local, state, and federal regulations.

7. Handling and Storage

HANDLING: Wash thoroughly after handling. Wash hands before eating. Remove contaminated clothing and launder before reuse. Use only in a well-ventilated area. Use only with adequate ventilation. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Avoid breathing fumes, vapors, or mist. Avoid contact with eyes, skin and clothing.

STORAGE: Store in a dry, well ventilated place. Keep container tightly closed when not in use. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Contents under pressure. Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Keep away from heat, sparks, flame and sources of ignition. Contents under pressure. Do not expose to heat or store above 120 ° F. Avoid excess heat. Product should be stored in tightly sealed containers and protected from heat, moisture, and foreign materials.

8. Exposure Controls/Personal Protection

Chemical Name	CAS-No.	Weight % Less Than	ACGIH TLV- TWA	ACGIH TLV- STEL	OSHA PEL-TWA	OSHA PEL- CEILING
Aliphatic Hydrocarbon	64742-89-8	20.0	N.E.	N.E.	N.E.	N.E.
Propane	74-98-6	20.0	1000 ppm	N.E.	1000 ppm	N.E.
Limestone	1317-65-3	20.0	N.E.	N.E.	15 mg/m3	N.E.
Hydrous Magnesium Silicate	14807-96-6	10.0	2 mg/m3	N.E.	N.E.	N.E.
n-Butane	106-97-8	10.0	N.E.	1000 ppm	N.E.	N.E.
Acetone	67-64-1	10.0	500 ppm	750 ppm	1000 ppm	N.E.
n-Butyl Acetate	123-86-4	5.0	150 ppm	200 ppm	150 ppm	N.E.
Hydrotreated Light Distillate	64742-47-8	5.0	N.E.	N.E.	N.E.	N.E.
Naphtha, Petroleum, Hydrotreated Light	64742-49-0	5.0	N.E.	N.E.	N.E.	N.E.
Organoclay	68911-87-5	5.0	N.E.	N.E.	N.E.	N.E.
Stoddard Solvent	8052-41-3	1.0	100 ppm	N.E.	500 ppm	N.E.
Ethylbenzene	100-41-4	1.0	20 ppm	N.E.	100 ppm	N.E.

PERSONAL PROTECTION

ENGINEERING CONTROLS: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment. Provide general dilution of local exhaust ventilation in volume and pattern to keep TLV of hazardous ingredients below acceptable limits. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation.

RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

SKIN PROTECTION: Use gloves to prevent prolonged skin contact. Use impervious gloves to prevent skin contact and absorption of this material through the skin. Nitrile or Neoprene gloves may afford adequate skin protection.

EYE PROTECTION: Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT: Refer to safety supervisor or industrial hygienist for further guidance regarding types of personal protective equipment and their applications. Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

HYGIENIC PRACTICES: Wash thoroughly with soap and water before eating, drinking or smoking. Remove contaminated clothing immediately and launder before reuse.

9. Physical and Chemical Properties

Appearance:	Aerosolized Mist	Physical State:	Liquid
Odor:	Solvent Like	Odor Threshold:	N.E.
Relative Density:	0.871	pH:	N.A.
Freeze Point, °C:	N.D.	Viscosity:	N.D.
Solubility in Water:	Slight	Partition Coefficient, n-octanol/ water:	N.D.
Decomposition Temp., °C:	N.D.	Explosive Limits, vol%:	0.9 - 13.0
Boiling Range, °C:	-24 - 537	Flash Point, °C:	-96
Flammability:	Supports Combustion	Auto-ignition Temp., °C:	N.D.
Evaporation Rate:	Faster than Ether	Vapor Pressure:	N.D.
Vapor Density:	Heavier than Air		

(See "Other information" Section for abbreviation legend)

10. Stability and Reactivity

CONDITIONS TO AVOID: Avoid temperatures above 120 °F (49°C) Avoid contact with strong acid and strong bases. Avoid all possible sources of ignition.

INCOMPATIBILITY: Incompatible with strong oxidizing agents, strong acids and strong alkalis.

HAZARDOUS DECOMPOSITION: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes. Contains solvents which may form carbon monoxide, carbon dioxide, and formaldehyde.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

11. Toxicological information

EFFECTS OF OVEREXPOSURE - EYE CONTACT: Causes Serious Eye Irritation

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: Substance may cause slight skin irritation. May cause skin irritation. Allergic reactions are possible. Prolonged or repeated contact may cause skin irritation.

EFFECTS OF OVEREXPOSURE - INHALATION: Harmful if inhaled. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Avoid breathing fumes, spray, vapors, or mist. High vapor concentrations are irritating to the eyes, nose, throat and lungs. Prolonged or excessive inhalation may cause respiratory tract irritation.

EFFECTS OF OVEREXPOSURE - INGESTION: Harmful if swallowed. Aspiration hazard if swallowed; can enter lungs and cause damage.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, paralysis, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. IARC lists Ethylbenzene as a possible human carcinogen (group 2B).

PRIMARY ROUTE(S) OF ENTRY: Eye Contact, Ingestion, Inhalation, Skin Absorption, Skin Contact

ACUTE TOXICITY VALUES

The acute effects of this product have not been tested. Data on individual components are tabulated below:

<u>CAS-No.</u>	<u>Chemical Name</u>	<u>Oral LD50</u>	<u>Dermal LD50</u>	<u>Vapor LC50</u>
64742-89-8	Aliphatic Hydrocarbon	N.I.	3000 mg/kg Rabbit	N.I.
74-98-6	Propane	N.I.	N.I.	658 mg/L Rat
123-86-4	n-Butyl Acetate	N.I.	>17600 mg/kg Rabbit	N.I.
64742-47-8	Hydrotreated Light Distillate	>5000 mg/kg Rat	>2000 mg/kg Rabbit	>5.2 mg/L Rat
64742-49-0	Naphtha, Petroleum, Hydrotreated Light	>5000 mg/kg Rat	>3160 mg/kg Rabbit	N.I.
100-41-4	Ethylbenzene	3500 mg/kg Rat	15354 mg/kg Rabbit	17.2 mg/L Rat

N.I. - No Information

12. Ecological Information

ECOLOGICAL INFORMATION: Product is a mixture of listed components. Product is a mixture of listed components.

13. Disposal Information

DISPOSAL INFORMATION: Dispose of material in accordance to local, state, and federal regulations and ordinances. Do not allow to enter waterways, wastewater, soil, storm drains or sewer systems.

14. Transport Information

	<u>Domestic (USDOT)</u>	<u>International (IMDG)</u>	<u>Air (IATA)</u>	<u>TDG (Canada)</u>
UN Number:	N.A.	1950	1950	N.A.
Proper Shipping Name:	Paint Products in Limited Quantities	Aerosols	Aerosols	Paint Products in Limited Quantities
Hazard Class:	N.A.	2.1	2.1	N.A.
Packing Group:	N.A.	N.A.	N.A.	N.A.
Limited Quantity:	Yes	Yes	Yes	Yes

15. Regulatory Information

U.S. Federal Regulations:**CERCLA - SARA Hazard Category**

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Fire Hazard, Pressure Hazard, Acute Health Hazard, Chronic Health Hazard

Sara Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name

Ethylbenzene

CAS-No.

100-41-4

Toxic Substances Control Act:

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(b) if exported from the United States:

No TSCA 12(b) components exist in this product.

16. Other Information**HMIS RATINGS**

Health: 2* Flammability: 4 Physical Hazard: 0 Personal Protection: X

NFPA RATINGS

Health: 2 Flammability: 4 Instability: 0

VOLATILE ORGANIC COMPOUNDS, g/L: 522

MSDS REVISION DATE: 6/5/2015

REASON FOR REVISION:

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Text for GHS Hazard Statements shown in Section 3 describing each ingredient:

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H336	May cause drowsiness or dizziness.
H340	May cause genetic defects.
H350	May cause cancer.
H372	Causes damage to organs through prolonged or repeated exposure.

Icons for GHS Pictograms shown in Section 3 describing each ingredient:

GHS02



GHS06



GHS07**GHS08**

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.



TBP Converting, Inc.
High Impact Polystyrene Virgin Grove SDS

SAFETY DATA SHEET

SECTION1: Identification of the substance and of the company/undertaking

Product Identifier:

Identification on the label/Trade name: High Impact Polystyrene Virgin
Product Code: AVPS100-3

Identification of the product:

Polystyrene, Or CAS# 009003-55-8 > 94%
This covers all prime grades if Impact Polystyrene.

Details of the supplier of the Safety Data Sheet

Supplier (Manufacturer):

Aaron Industries Corp.

Address:

**20 Mohawk Drive
Leominster, Ma 01453**

Telephone:

978-534-6135

Contact person: (E-mail)

debt@aaroinc.com

Emergency telephone number:

978-534-6135

Are there available outside office hours?

N

SECTION 2: HAZARDS IDENTIFICATION

Emergency Overview: Irritating vapors to respiratory system and eyes may form when polymers is processed at high temperatures.

Molten or heated material in skin contact can cause severe burns.

Routes of Entry: FOR HOT MATERIAL: Skin contact, Eye Contact, Inhalation

Potential Acute Health Effects:

Eyes: Dust may cause mechanical irritation to eye.

Heated Polymer: Eye contact can cause serious thermal burns. Vapors formed when polymer is heated may be irritating to the eye.

Skin: No know acute effects of this product resulting from skin contact at room temperature.

Heated Polymer: Skin contact can cause serious thermal burns

Inhalation: Negligible at room temperature. Nuisance dusts can be irritating to the upper respiratory tract. Irritating vapors may form when the polymer is processed at high temperatures.

Ingestion: No effects are expected for ingestion of small amounts. May be a choking hazard.

Potential Chronic Health Effects: Polystyrene is not a known carcinogenic. It is not listed as a carcinogen by OSHA, NTP OR IARC.

Medical Conditions Aggravated by Overexposure: Pre-existing disorders involving any target organs mentioned in this SDS as being at risk may be aggravated by over-exposure to this product.

Overexposure/Signs/Symptoms: No adverse health effects anticipated from the solid pellet.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Mixture:	Polymer	
Ingredient(s):		
Polystyrene, Or	CAS# 009003-55-8	~ 100 %

SECTION 4: FIRST AID MEASURES

Description of First Aid measures

Inhalation: Allow the victim to rest in a well ventilated area

Skin Contact: Polymer: No known effect on skin, rinse with water for a few minutes.

Heated Polymer: For serious burns from heated polymer, get medical attention. In case of skin Contact, immediately immerse or flush with clean, cold water

Eye Contact: Rinse with water for a few minutes. Seek medical attention if necessary.

Ingestion: No first aid procedures are needed.

SECTION 5: FIRE FIGHTING MEASURES

Flammability of the Product: May be combustible at high temperatures.

Auto-ignition Temperature: 440C (824F)

Flash Points: >200C (>392F)

Flammable Limits: Not Available

Products of Combustion: Carbon oxides (CO, CO2) and soot

Fire Hazards in Presence of Carious Substances: No specific information is available regarding the flammability of this product in presence of various materials.

Explosion Hazards in Presence of Various Substances: Risks of explosion of the product in presence of mechanical impact: Not expected

Risks of explosion of the product in presence of static discharge: possible

Risks of explosion from dust accumulation of this product is possible.

Fire-fighting Media and Instructions: SMALL FIRE: Dry chemical extinguisher (ABC or AB). Use water spray or fog.

LARGE FIRE: Use water spray or fog. Do not use water jet. It may re-ignite itself after fire is extinguished.

Protective clothing: Wear MSHA/NIOSH approved self-contained breathing apparatus or equivalent and full protective gear.

Special Remarks on Fire Hazards: Fire may produce irritating gases and dense smoke.

Special Remarks on Explosion Hazards: Processing or material handling equipment may generate dust of sufficiently small particle size, that when suspended in air may be explosive.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Small Spill and Leak: Pellets on the floor could present a serious slipping problem. Good housekeeping must be maintained at all times to avoid this hazard. Sweep, shovel, or vacuum material into clean containers.

Large Spill or Leak: Use a shovel to put material into a convenient waste disposal container. Do not allow any potentially contaminated water with pellets to enter any waterway, sewer, or drain.

SECTION 7: HANDLING AND STORAGE

HANDLING: Avoid temperatures of 600F (316C) or above. Handling of plastic may form nuisance dust. Protect personnel. Pneumatic material handling and processing equipment may generate dust of sufficiently small particle size that when suspended in air, may be explosive. Dust accumulations should be controlled through a comprehensive dust control program that included, but is not limited to, source capture, inspection and repair of leaking equipment. Routine housekeeping and employee training are a must to prevent hazards. Dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. When handled in bulk quantities, this product and its associated packaging may present a crushing hazard due to the large masses involved, possibly resulting in severe injury or death.

STORAGE: Keep container dry. Keep in cool place. Ground all equipment containing this material. Keep container tightly closed. Keep in well ventilated place. Combustible materials should be stored away from extreme heat and keep from strong oxidizing agents.

SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION

ENGINEERING CONTROLS: Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below established levels. If user operations generate dust, fumes or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

PERSONAL PROTECTION:

Eyes: Wear Safety Glasses with side shields.

Body: Wear coveralls

Respiratory: Ventilation is normally required when handling this product at high temperatures. Wear appropriate respirator when ventilation is inadequate.

Hands: Thermally insulated gloves required when handling hot material.

Feet: Shoes or boots

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Solid Pellets
Color:	Polystyrene is translucent
Odor:	Odorless
Molecular Weight:	Not Available
Melting/Freezing Point:	>132.22C (270F)
Specific Gravity:	1.04 (Water = 1)
Soluble in Water:	Insoluble in water

SECTION 10: STABILITY AND REACTIVITY

Reactivity: The product is stable. Avoid temperatures of 600F (316C) or above.

Conditions of Instability: Keep away from heat and flame

Incompatibility with Various Substances: Reactive with strong oxidizing agents

Hazardous Decomposition Products: Hazardous decomposition products are carbon monoxide, carbon dioxide, dense smoke, and various hydrocarbons. Exposure of polystyrene to extremely high temperatures (600 Deg F or higher) may cause partial decomposition. Chemicals that may be released include styrene monomer, benzene and other hydrocarbons.

SECTION 11: TOXICOLOGY INFORMATION

Toxicity to Animals: Very low toxicity to humans or animals

Chronic Effects on Humans: Not listed as a carcinogen by OSH, NTP, OR IARC

SECTION 12: ECOLOGICAL INFORMATION

Eco-toxicity: Avoid release to the environment. The substance is not expected to bio-accumulate through food chains in the environment.

Bio-degradable: Not readily bio-degradable. Persistent in the environment.

Mobility: This product has low mobility in soil.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Information: Transfer to an approved disposal area in accordance with federal, state, and local regulations.

Consult your local or regional authorities.

SECTION 14: TRANSPORT INFORMATION

DOT Classification for Bulk shipments (non-bulk shipments may differ) Not a DOT controlled material.

SECTION 15: REGULATORY INFORMATION

HCS Classification: This product is not a "Hazardous Chemical" as defined by OSHA Hazard Communication Standard 29 CFR 1910.1200

US FEDERAL REGULATIONS: TSCA Inventory: All components listed:

SARA 301/302/303: No chemicals in this product are listed as extremely hazardous in 40 CFR 355, Emergency Planning and Notification

SARA 304: No chemicals in this product require reporting under the requirement of 40 CFR 355, Emergency Planning and Notification (SARA extremely hazardous substances list in Appendix A to Part 355 or CERCLA hazardous substances listed in Table 302.4 of 40 CFR Part 302).

SARA 313: The product contains no chemicals in excess of the applicable de minimus concentration that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372 (Table 372.65)

SARA 311/312: This product is not a "Hazardous Chemical" as defined by OSHA Hazard Communication Standard 29 CFR 1910.1200 and as such does not require reporting under the requirements of 40 CFR 370, Hazardous Chemical Reporting.

INTERNATIONAL REGULATIONS:

WHMIS (Canada): Not controlled under WHMIS (Canada)

DSCL (EEC): This Product is not classified according to EU legislation

SECTION 16: OTHER INFORMATION

LABEL REQUIREMENTS: Irritating vapors to respiratory system and eyes may form when polymer is processed at high temperatures.
Molten or heated material in skin contact can cause severe burns.

HAZARDOUS MATERIAL INFORMATION SYSTEM (USA):

Health: 0 Fire Hazard: 1 REACTIVITY: 0

Safety Data Sheet

according to Hazard Communication Standard; 29 CFR 1910.1200



WINDEX® ORIGINAL GLASS CLEANER WITH AMMONIA-D®

Version 1.1

Print Date 03/04/2015

Revision Date 02/25/2015

SDS Number 350000014153

1. PRODUCT AND COMPANY IDENTIFICATION

Product information

Product name : WINDEX® ORIGINAL GLASS CLEANER WITH AMMONIA-D®

Recommended use : Hard Surface Cleaner

Manufacturer, importer, supplier : S.C. Johnson & Son, Inc.
1525 Howe Street
Racine WI 53403-2236

Telephone : +18005585252
Emergency telephone number : 24 Hour Medical Emergency Phone: (866)231-5406
24 Hour International Emergency Phone: (703)527-3887
24 Hour Transport Emergency Phone: (800)424-9300

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Globally Harmonized System (GHS) Classification

This product does not meet the criteria for classification in any hazard class according to regulation OSHA 29 CFR 1910.1200.

Labelling

Precautionary statements

Other hazards : None identified

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product does not contain hazardous chemicals at or above a reportable level as defined by OSHA 29 CFR 1910.1200

For additional information on product ingredients, see www.whatsinsidescjohnson.com.

4. FIRST AID MEASURES

Safety Data Sheet

according to Hazard Communication Standard; 29 CFR 1910.1200



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Version 1.1

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Revision Date 02/25/2015

SDS Number 350000014153

Eye contact	:	No special requirements
Skin contact	:	No special requirements
Inhalation	:	No special requirements.
Ingestion	:	No special requirements

5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Specific hazards during firefighting	:	Container may melt and leak in heat of fire.
Further information	:	Fight fire with normal precautions from a reasonable distance. Standard procedure for chemical fires. Wear full protective clothing and positive pressure self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	:	Wash thoroughly after handling.
Environmental precautions	:	Outside of normal use, avoid release to the environment.
Methods and materials for containment and cleaning up	:	Dike large spills. Clean residue from spill site.

7. HANDLING AND STORAGE

Handling		
Precautions for safe handling	:	Avoid contact with skin, eyes and clothing. For personal protection see section 8. KEEP OUT OF REACH OF CHILDREN AND PETS.

Safety Data Sheet

according to Hazard Communication Standard; 29 CFR 1910.1200



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Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Storage

Requirements for storage areas and containers : Keep container closed when not in use.

Other data : Stable under normal conditions.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

ACGIH or OSHA exposure limits have not been established for this product or reportable ingredients unless noted in the table above.

Personal protective equipment

Respiratory protection : No special requirements.

Hand protection : No special requirements.

Eye protection : No special requirements.

Skin and body protection : No special requirements.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form : liquid

Color : blue

Odor : pleasant

Odour Threshold : Test not applicable for this product type

pH : 10.7

Safety Data Sheet

according to Hazard Communication Standard; 29 CFR 1910.1200



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at (25 C)

Melting point/freezing point	: 0 C
Initial boiling point and boiling range	: 100 C
Flash point	: > 93 °C > 199.4 °F Approximate
Evaporation rate	: No data available
Flammability (solid, gas)	: Does not sustain combustion.
Upper/lower flammability or explosive limits	: No data available
Vapour pressure	: No data available
Vapour density	: No data available
Relative density	: 1.00 g/cm ³ at 25 C
Solubility(ies)	: soluble
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available

Safety Data Sheet

according to Hazard Communication Standard; 29 CFR 1910.1200



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Viscosity, dynamic	: No data available	
Viscosity, kinematic	: No data available	
Oxidizing properties	: No data available	
Volatile Organic Compounds	: 0.2 % - additional exemptions may apply	
Total VOC (wt. %)*	*as defined by US Federal and State Consumer Product Regulations	
Other information	: None identified	:

10. STABILITY AND REACTIVITY

Possibility of hazardous reactions	: If accidental mixing occurs and toxic gas is formed, exit area immediately. Do not return until well ventilated.
Conditions to avoid	: Direct sources of heat.
Incompatible materials	: Do not mix with bleach or any other household cleaners. Strong bases
Hazardous decomposition products	: Thermal decomposition can lead to release of irritating gases and vapours.

11. TOXICOLOGICAL INFORMATION

Emergency Overview	: This product does not meet the criteria for classification in any hazard class according to regulation OSHA 29 CFR 1910.1200.
Acute oral toxicity	: LD50 estimated

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according to Hazard Communication Standard; 29 CFR 1910.1200



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> 5,000 mg/kg

Acute inhalation toxicity : LC50
estimated
> 2.58 mg/l

Acute dermal toxicity : LD50
estimated
> 5,000 mg/kg

GHS Properties	Classification	Routes of entry
Acute toxicity	No classification proposed	-
Skin corrosion/irritation	No classification proposed	-
Serious eye damage/eye irritation	No classification proposed	-
Skin sensitisation	No classification proposed	-
Respiratory sensitisation	No classification proposed	-
Germ cell mutagenicity	No classification proposed	-
Carcinogenicity	No classification proposed	-
Reproductive toxicity	No classification proposed	-
Specific target organ toxicity - single exposure	No classification proposed	-
Specific target organ toxicity - repeated exposure	No classification proposed	-
Aspiration hazard	No classification proposed	-

Aggravated Medical Condition : None known.

Safety Data Sheet

according to Hazard Communication Standard; 29 CFR 1910.1200



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12. ECOLOGICAL INFORMATION

Product : The product itself has not been tested.

Toxicity

The ingredients in this formula have been reviewed and no adverse impact to the environment is expected when used according to label directions.

No environmental data required.

Other adverse effects : None known.

13. DISPOSAL CONSIDERATIONS

Consumer may discard empty container in trash, or recycle where facilities exist.

14. TRANSPORT INFORMATION

Please refer to the Bill of Lading/receiving documents for up-to-date shipping information.

Land transport

Not classified as dangerous in the meaning of transport regulations.

Sea transport

Not classified as dangerous in the meaning of transport regulations.

Air transport

Not classified as dangerous in the meaning of transport regulations.

15. REGULATORY INFORMATION

Notification status : All ingredients of this product are listed or are excluded from

Safety Data Sheet

according to Hazard Communication Standard; 29 CFR 1910.1200



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listing on the U.S. Toxic Substances Control Act (TSCA)
Chemical Substance Inventory.

Notification status : All ingredients of this product comply with the New Substances Notification requirements under the Canadian Environmental Protection Act (CEPA).

California Prop. 65 : This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

HMIS Ratings

Health	1
Flammability	2
Reactivity	0

NFPA Ratings

Health	1
Fire	2
Reactivity	0
Special	-

This information is being provided in accordance with the Occupational Safety and Health Administration (OSHA) regulation (29 CFR 1910.1200). The information supplied is designed for workplaces where product use and frequency of exposure exceeds that established for the labeled consumer use.

Further information

Safety Data Sheet

according to Hazard Communication Standard; 29 CFR 1910.1200



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Prepared by	SC Johnson Global Safety Assessment & Regulatory Affairs (GSARA)
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SAFETY DATA SHEET

SECTION 1 : IDENTIFICATION

PRODUCT IDENTIFIER:	TUNDRA FOAM (OPEN CELL) BACKER ROD	MANUFACTURER NAME & ADDRESS: INDUSTRIAL THERMO POLYMERS (Owned and Operated by Armacell Canada Inc.) 153 VAN KIRK DRIVE BRAMPTON, ONTARIO , L7A 1A4	
CHEMICAL IDENTITY:	POLYURETHANE	PHONE NO.:	1-905-846-3666
RECOMMENDED USE	PACKAGING, CUSHIONING, SEALING, etc.	FAX NO.:	1-905-846-0363
RESTRICTION OF USE	NONE	EMERGENCY PHONE NO.:	1-800-387-3847

SECTION 2 : HAZARD(S) IDENTIFICATION

- POLYURETHANE FOAM PRODUCTS ARE CLASSIFIED BY OSHA AS "NON HAZARDOUS".
- POLYURETHANE IS MADE FROM POLYHYDROXYL POLYOL , ISOCYNATES CATALYST AND OTHER ADDITIVES(MORE DETAILS IN SEC.3.)
- THIS PRODUCT IS CLASSIFIED AS NON-HAZARDOUS ACCORDING TO CRITERIA ESTABLISHED IN OSHA HAZARD COMMUNICATION STANDARD.

ROUTES OF EXPOSURE:	SWALLOWING <input checked="" type="checkbox"/>	SKIN ABSORPTION <input type="checkbox"/>	INHALATION <input checked="" type="checkbox"/>	SKIN CONTACT <input type="checkbox"/>	EYE CONTACT <input checked="" type="checkbox"/>
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EFFECTS OF A SINGLE (ACUTE) OVEREXPOSURE BY:

SWALLOWING:	CHOKING - MECHANICAL BLOCKAGE
SKIN ABSORPTION:	NOT LIKELY.
INHALATION:	FOAM DUST MAY CAUSE IRRITATION TO NOSE ,THROAT OR LUNGS.
SKIN CONTACT:	NON IRRITATING TO SKIN CONTACT
EYE CONTACT:	EYE INJURY OR FOAM DUST MAY CAUSE IRRITATION TO EYES
OTHER EFFECTS	NOT KNOWN

SECTION 3 : COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENTS	CAS NO.	WEIGHT %	EXPOSURE LIMITS ACGIH - TLV*
POLYURETHANE	9009-54-5	75% -100%	NA

* Applicable provincial TLV's may differ

* Specific chemical names and percentage in the mix has been withheld to protect trade secret.

SECTION 4 : FIRST AID MEASURES

SWALLOWING: CONSULT PHYSICIAN	SKIN CONTACT: WASH WITH SOAP AND WATER
INHALATION: MOVE TO FRESH AIR. SEEK MEDICAL ATTENTION IF BREATHING PROBLEMS PERSIST.	EYE CONTACT: FLUSH EYES WITH CLEAN LUKEWARM WATER. CONSULT PHYSICIAN.

SECTION 5 : FIRE FIGHTING MEASURES

1. POLYURETHANE FOAM IS COMBUSTIBLE AND WILL BURN IF EXPOSED TO SUFFICIENT HEAT SOURCE.
2. FIRE TO BE EXTINGUISHED BY USING CO2, WATER OR DRY CHEMICAL .
3. BURNING WILL PRODUCE BLACK DENSE SMOKE, CARBON MONOXIDE AND TOXIC DECOMPOSITION PRODUCTS.
4. USE SELF-CONTAINED BREATHING APPRATUS AND FULL PROTECTIVE CLOTHING.FIRE WILL RESULT IN INTENSE HEAT.
5. OTHER FIRE EXTINGUISHERS (DRY CHEMICAL, FOAM OR CO2 EXTINGUISHERS) MAY BE USED FOR EXTINGUISHMENT.
6. CHEMICAL/GASEOUS HAZARDS LIKE CO, CO2 AND CARBON MAY BE PRODUCED FROM THE SMOLDERING SUBSTANCES AND FIRE.

SAFETY DATA SHEET

SECTION 6: ACCIDENTAL RELEASE MEASURES

POLYURETHANE FOAM IS COMBUSTIBLE. SHOULD NOT BE EXPOSED TO SPARKS OR OPEN FLAME.

SECTION 7: HANDLING AND STORAGE

- 'POLYURETHANE FOAM SHOULD BE STORED UNDER A FUSIBLE SPRINKLER SYSTEM

- 'POLYURETHANE FOAM IS COMBUSTIBLE AND SHOULD NOT BE STORED NEAR IGNITION SOURCES SUCH AS EXPOSED ELECTRICAL OR GAS HEATING ELEMENTS , OPEN FLAME AND EXPOSED LIGHTS.

POLYURETHANE FOAM SHOULD BE STORED IN COOL, DRY AND WELL VENTILATED LOCATIONS.

POLYURETHANE FOAM SCRAP AND CUTTINGS SHOULD NOT BE ALLOWED TO ACCUMULATE IN STORAGE AREAS.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

- NOT NECESSARY OTHER THAN STATED IN SECTION 2

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE:	SOLID	FREEZING POINT:	N/A	SPECIFIC GRAVITY VAPOUR	N/A
BOILING POINT 760 mm Hg:	N/A	VAP. PRESS at 20°C:	N/A	MOLECULAR WEIGHT:	N/A
SPECIFIC GRAVITY	0.01 - 0.15	SOLUBILITY IN WATER	INSOLUBLE	COEFFICIENT OF WATER / OIL DISTRIBUTION:	N/A
MELTING POINT:	350-375°F	EVAPORATION RATE	N/A		
DENSITY	0.5-10 lbs/cuft	% VOLATILES BY VOLUME:	N/A	VAPOUR DENSITY	N/A
APPEARANCE	CELLULAR SOLID	ODOR:	NEGLECTIBLE	ODOR THRESHOLD:	N/A

SECTION 10 : STABILITY AND REACTIVITY

- AVOID STRONG ACIDS & ALKALIS, THESE WILL DETERIORATE FOAM PROPERTIES.

SECTION 11 : TOXICOLOGICAL INFORMATION

POLYURETHANE FOAM HAS NO CARCINOGENIC SUBSTANCES. INHALATION OF FOAM DUST TO BE AVOIDED.

ROUTES OF EXPOSURE : SWALLOWING FOAM DUST INHALATION EYE CONTACT

EFFECTS OF ABOVE EXPOSURE STATED IN SECTION 4

SECTION 12 : ECOLOGICAL INFORMATION

POLYURETHANE FOAM DOES NOT EXHIBIT ANY SIGNIFICANT BIODEGRADATION.

SECTION 13 : DISPOSAL CONSIDERATIONS

POLYURETHANE FOAM CAN BE REPROCESSED OR CAN BE DISPOSED OFF IN ACCORDANCE TO FEDERAL, STATE AND LOCAL REGULATIONS.

SECTION 14 : TRANSPORT INFORMATION

- POLYURETHANE FOAM IS NOT CURRENTLY REGULATED BY DOT.

SECTION 15 : REGULATORY INFORMATION

POLYURETHANE FOAM HAS NO CARCINOGENIC SUBSTANCES AND IS CLASSIFIED AS NON HAZARDOUS UNDER THE FEDERAL OSHA STANDARDS.

SECTION 16 : OTHER INFORMATION

PREPARED BY / DEPARTMENT	PHONE NUMBER	DATE UPDATED
HARENDRA RATHOD / QA DEPARTMENT	905-846-3666 / 1-800-387-3847	April 16, 2015

FOR INFORMATION : Visit Web: www.tundrafoam.com or Email: info@tundrafoam.com



Safety Data Sheet

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This Safety Data Sheet (SDS) is provided as a courtesy in response to a customer request. This product is not regulated under, and a SDS is not required for this product by the OSHA Hazard Communication Standard (29 CFR 1910.1200) because, when used as recommended or under ordinary conditions, it should not present a health and safety hazard. However, use or processing of the product not in accordance with the product's recommendations or not under ordinary conditions may affect the performance of the product and may present potential health and safety hazards.

Document Group:	26-3873-2	Version Number:	3.02
Issue Date:	03/06/14	Supersedes Date:	11/14/13

SECTION 1: Identification

1.1. Product identifier

3M™ VHB™ Tapes - 4905, 4906, 4907, 4910, 4910P, 4914, 4919F, 4920, 4926, 4929, 4930, 4930F, 4932, 4936, 4936F, 4941, 4941F, 4943F, 4945, 4946, 4947F, 4949, 4950, 4951, 4952, 4955, 4956, 4956F, 4957F, 4959, 4959F, 4979F & 4991, 2630B, 2625B

1.2. Recommended use and restrictions on use

Recommended use

Attachment/Reinforcement, Industrial use

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Industrial Adhesives and Tapes Division
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number

1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

2.1. Hazard classification

This product is exempt from hazard classification according to OSHA Hazard Communication Standard, 29 CFR 1910.1200.

2.2. Label elements

Signal word

Not applicable.

Symbols

Not applicable.

3M™ VHB™ Tapes - 4905, 4906, 4907, 4910, 4910P, 4914, 4919F, 4920, 4926, 4929, 4930, 4930F, 4932, 4936, 4936F, 4941, 4941F, 4943F, 4945, 4946, 4947F, 4949, 4950, 4951, 4952, 4955, 4956, 4956F, 4957F, 4959, 4959F, 4979F & 4991, 2630B, 2625B 03/06/14

Pictograms

Not applicable.

Notes to Physician:

Not applicable

2.3. Hazards not otherwise classified

None.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Foam Carrier	Trade Secret*	50 - 99
Acrylic Adhesive	Trade Secret*	1 - 50

*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:

No need for first aid is anticipated.

Skin Contact:

Wash with soap and water. If signs/symptoms develop, get medical attention.

Eye Contact:

Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

If Swallowed:

No need for first aid is anticipated.

4.2. Most important symptoms and effects, both acute and delayed

See Section 11.1. Information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required

Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products

Substance

Hydrocarbons

Condition

During Combustion

Carbon monoxide
Carbon dioxide

During Combustion
During Combustion

5.3. Special protective actions for fire-fighters

No unusual fire or explosion hazards are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Not applicable.

6.2. Environmental precautions

Not applicable. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Not applicable. Sweep up. Seal the container.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

This product is considered to be an article which does not release or otherwise result in exposure to a hazardous chemical under normal use conditions.

7.2. Conditions for safe storage including any incompatibilities

Not applicable.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

No occupational exposure limit values exist for any of the components listed in Section 3 of this SDS.

8.2. Exposure controls

8.2.1. Engineering controls

No engineering controls required.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Eye protection not required.

Skin/hand protection

No chemical protective gloves are required.

Respiratory protection

Respiratory protection is not required.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

General Physical Form:	Solid
Specific Physical Form:	Roll of Tape
Odor, Color, Grade:	various colors of foam coated with acrylic adhesive, paper or film liner.
Odor threshold	<i>Not Applicable</i>
pH	<i>Not Applicable</i>
Melting point	<i>Not Applicable</i>
Boiling Point	<i>Not Applicable</i>
Flash Point	<i>Not Applicable</i>
Evaporation rate	<i>Not Applicable</i>
Flammability (solid, gas)	Not Classified
Flammable Limits(LEL)	<i>Not Applicable</i>
Flammable Limits(UEL)	<i>Not Applicable</i>
Vapor Pressure	<i>Not Applicable</i>
Vapor Density	<i>Not Applicable</i>
Density	<i>Not Applicable</i>
Specific Gravity	<i>Not Applicable</i>
Solubility in Water	Nil
Solubility- non-water	<i>Not Applicable</i>
Partition coefficient: n-octanol/ water	<i>Not Applicable</i>
Autoignition temperature	<i>Not Applicable</i>
Decomposition temperature	<i>Not Applicable</i>
Viscosity	<i>Not Applicable</i>
Volatile Organic Compounds	<i>Not Applicable</i>
Percent volatile	<i>Not Applicable</i>
VOC Less H2O & Exempt Solvents	<i>Not Applicable</i>

SECTION 10: Stability and reactivity

10.1. Reactivity

This material is considered to be non reactive under normal use conditions.

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

Substance

None known.

Condition

Refer to section 5.2 for hazardous decomposition products during combustion.

Under recommended usage conditions, hazardous decomposition products are not expected. Hazardous decomposition products may occur as a result of oxidation, heating, or reaction with another material.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:

No health effects are expected.

Skin Contact:

No health effects are expected. Contact with the skin during product use is not expected to result in significant irritation.

Eye Contact:

No health effects are expected. Contact with the eyes during product use is not expected to result in significant irritation.

Ingestion:

No health effects are expected.

Additional Information:

This product, when used under reasonable conditions and in accordance with the 3M directions for use, should not present a health hazard. However, use or processing of the product in a manner not in accordance with the product's directions for use may affect the performance of the product and may present potential health and safety hazards.

Toxicological Data

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value

Serious Eye Damage/Irritation

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Name	Species	Value

Skin Sensitization

Name	Species	Value

Respiratory Sensitization

Name	Species	Value

Germ Cell Mutagenicity

Name	Route	Value

Carcinogenicity

Name	Route	Species	Value

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration

Aspiration Hazard

Name	Value

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

Ecotoxicological information

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

Chemical fate information

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

SECTION 13: Disposal considerations

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13.1. Disposal methods

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Prior to disposal, consult all applicable authorities and regulations to insure proper classification. Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. If no other disposal options are available, waste product may be placed in a landfill properly designed for industrial waste.

SECTION 14: Transport Information

Not regulated per U.S. DOT, IATA or IMO.

*These transportation classifications are provided as a customer service. As the shipper YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging. 3M transportation classifications are based on product formulation, packaging, 3M policies and 3M understanding of applicable current regulations. 3M does not guarantee the accuracy of this classification information. This information applies only to transportation classification and **not the packaging, labeling, or marking requirements**. The original 3M package is certified for U.S. ground shipment only. If you are shipping by air or ocean, the package may not meet applicable regulatory requirements.*

SECTION 15: Regulatory information

15.1. US Federal Regulations

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - No Delayed Hazard - No

15.2. State Regulations

Contact 3M for more information.

15.3. Chemical Inventories

This product is an article as defined by TSCA regulations, and is exempt from TSCA Inventory listing requirements.

Contact 3M for more information.

15.4. International Regulations

Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification

Health: 0 **Flammability:** 1 **Instability:** 0 **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Document Group: 26-3873-2
Issue Date: 03/06/14

Version Number: 3.02
Supersedes Date: 11/14/13

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Safety Data Sheet

1 - Identification

Product Name: WD-40 Multi-Use Product Aerosol NOT FOR SALE IN CALIFORNIA	Manufacturer: WD-40 Company Address: 1061 Cudahy Place (92110) P.O. Box 80607 San Diego, California, USA 92138 -0607
Product Use: Lubricant, Penetrant, Drives Out Moisture, Removes and Protects Surfaces From Corrosion	Telephone: Emergency only: 1-888-324-7596 (PROSAR) Information: 1-888-324-7596 Chemical Spills: 1-800-424-9300 (Chemtrec) 1-703-527-3887 (International Calls)
Restrictions on Use: None identified	
SDS Date Of Preparation: 07/20/2014	

2 – Hazards Identification

Hazcom 2012/GHS Classification:

Flammable Aerosol Category 1

Gas Under Pressure: Compressed Gas

Aspiration Toxicity Category 1

Note: This product is a consumer product and is labeled in accordance with the US Consumer Product Safety Commission regulations which take precedence over OSHA Hazard Communication labeling. The actual container label will not include the label elements below. The labeling below applies to industrial/professional products.

Label Elements:**DANGER!**

Extremely Flammable Aerosol.

Contains gas under pressure; may explode if heated.

May be fatal if swallowed and enters airways.

Prevention

Keep away from heat, sparks, open flames, hot surfaces – No smoking.

Do not spray on an open flame or other ignition source.

Pressurized container: Do not pierce or burn, even after use.

Response

IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting.

Storage

Store locked up.

Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. Store in a well-ventilated place.

Disposal

Dispose of contents and container in accordance with local and national regulations.

3 - Composition/Information on Ingredients

Ingredient	CAS #	Weight Percent	US Hazcom 2012/ GHS Classification
Aliphatic Hydrocarbon	64742-47-8	45-50	Flammable Liquid Category 3

			Aspiration Toxicity Category 1
Petroleum Base Oil	64742-56-9 64742-65-0 64742-53-6 64742-54-7 64742-71-8	<25	Not Hazardous
LVP Aliphatic Hydrocarbon	64742-47-8	12-18	Aspiration Toxicity Category 1
Carbon Dioxide	124-38-9	2-3	Simple Asphyxiant Gas Under Pressure, Compressed Gas
Non-Hazardous Ingredients	Mixture	<10	Not Hazardous

Note: The exact percentages are a trade secret.

4 – First Aid Measures

Ingestion (Swallowed): Aspiration Hazard. DO NOT induce vomiting. Call physician, poison control center or the WD-40 Safety Hotline at 1-888-324-7596 immediately.

Eye Contact: Flush thoroughly with water. Remove contact lenses if present after the first 5 minutes and continue flushing for several more minutes. Get medical attention if irritation persists.

Skin Contact: Wash with soap and water. If irritation develops and persists, get medical attention.

Inhalation (Breathing): If irritation is experienced, move to fresh air. Get medical attention if irritation or other symptoms develop and persist.

Signs and Symptoms of Exposure: May cause eye and respiratory irritation. Inhalation may cause coughing, headache and dizziness. Skin contact may cause drying of the skin.

Indication of Immediate Medical Attention/Special Treatment Needed: Immediate medical attention is needed for ingestion.

5 – Fire Fighting Measures

Suitable (and unsuitable) Extinguishing Media: Use water fog, dry chemical, carbon dioxide or foam. Do not use water jet or flooding amounts of water. Burning product will float on the surface and spread fire.

Specific Hazards Arising from the Chemical: Contents under pressure. Keep away from ignition sources and open flames. Exposure of containers to extreme heat and flames can cause them to rupture often with violent force. Vapors are heavier than air and may travel along surfaces to remote ignition sources and flash back. Combustion will produce oxides of carbon and hydrocarbons.

Special Protective Equipment and Precautions for Fire-Fighters: Firefighters should always wear positive pressure self-contained breathing apparatus and full protective clothing. Cool fire-exposed containers with water. Use shielding to protect against bursting containers.

6 – Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures: Wear appropriate protective clothing (see Section 8). Eliminate all sources of ignition and ventilate area.

Methods and Materials for Containment/Cleanup: Leaking cans should be placed in a plastic bag or open pail until the pressure has dissipated. Contain and collect liquid with an inert absorbent and place in a container for disposal. Clean spill area thoroughly. Report spills to authorities as required.

7 – Handling and Storage

Precautions for Safe Handling: Avoid contact with eyes. Avoid prolonged contact with skin. Avoid breathing vapors or aerosols. Use only with adequate ventilation. Keep away from heat, sparks, pilot lights, hot surfaces and open flames. Unplug electrical tools, motors and appliances before spraying or bringing the can near any source of electricity. Electricity can burn a hole in the can and cause contents to burst into flames. To avoid serious burn injury, do not let the can touch battery terminals, electrical connections on motors or appliances or any other source of electricity. Wash thoroughly with soap and water after handling. Keep containers closed when not in use. Keep out of the reach of children. Do not puncture, crush or incinerate containers, even when empty.

Conditions for Safe Storage: Store in a cool, well-ventilated area, away from incompatible materials Do not store above 120°F or in direct sunlight. U.F.C (NFPA 30B) Level 3 Aerosol. Store away from oxidizers.

8 – Exposure Controls/Personal Protection

Chemical	Occupational Exposure Limits
Aliphatic Hydrocarbon	1200 mg/m ³ TWA (manufacturer recommended)
Petroleum Base Oil	5 mg/m ³ TWA, 10 mg/m ³ STEL ACGIH TLV 5 mg/m ³ TWA OSHA PEL
LVP Aliphatic Hydrocarbon	1200 mg/m ³ TWA (manufacturer recommended)
Carbon Dioxide	5000 ppm TWA (OSHA/ACGIH), 30,000 ppm STEL (ACGIH)
Non-Hazardous Ingredients	None Established

The Following Controls are Recommended for Normal Consumer Use of this Product

Appropriate Engineering Controls: Use in a well-ventilated area.

Personal Protection:

Eye Protection: Avoid eye contact. Always spray away from your face.

Skin Protection: Avoid prolonged skin contact. Chemical resistant gloves recommended for operations where skin contact is likely.

Respiratory Protection: None needed for normal use with adequate ventilation.

For Bulk Processing or Workplace Use the Following Controls are Recommended

Appropriate Engineering Controls: Use adequate general and local exhaust ventilation to maintain exposure levels below that occupational exposure limits.

Personal Protection:

Eye Protection: Safety goggles recommended where eye contact is possible.

Skin Protection: Wear chemical resistant gloves.

Respiratory Protection: None required if ventilation is adequate. If the occupational exposure limits are exceeded, wear a NIOSH approved respirator. Respirator selection and use should be based on contaminant type, form and concentration. Follow OSHA 1910.134, ANSI Z88.2 and good Industrial Hygiene practice.

Work/Hygiene Practices: Wash with soap and water after handling.

9 – Physical and Chemical Properties

Appearance:	Light amber liquid	Flammable Limits: (Solvent Portion)	LEL: 0.6% UEL: 8%
Odor:	Mild petroleum odor	Vapor Pressure:	95-115 PSI @ 70°F
Odor Threshold:	Not established	Vapor Density:	Greater than 1 (air=1)
pH:	Not Applicable	Relative Density:	0.8 – 0.82 @ 60°F
Melting/Freezing Point	Not established	Solubilities:	Insoluble in water
Boiling Point/Range:	361 - 369°F (183 - 187°C)	Partition Coefficient; n-octanol/water:	Not established
Flash Point:	122°F (49°C) Tag Closed Cup (concentrate)	Autoignition Temperature:	Not established
Evaporation Rate:	Not established	Decomposition Temperature:	Not established
Flammability (solid, gas)	Flammable Aerosol	Viscosity:	2.79-2.96 cSt @ 100°F
VOC:	412 grams/liter (49.5%)	Pour Point:	-63°C (-81.4°F) ASTM D-97

10 – Stability and Reactivity

Reactivity: Not reactive under normal conditions

Chemical Stability: Stable

Possibility of Hazardous Reactions: May react with strong oxidizers generating heat.

Conditions to Avoid: Avoid heat, sparks, flames and other sources of ignition. Do not puncture or incinerate containers.

Incompatible Materials: Strong oxidizing agents.

Hazardous Decomposition Products: Carbon monoxide and carbon dioxide.

11 – Toxicological Information

Symptoms of Overexposure:

Inhalation: High concentrations may cause nasal and respiratory irritation and central nervous system effects such as headache, dizziness and nausea. Intentional abuse may be harmful or fatal.

Skin Contact: Prolonged and/or repeated contact may produce mild irritation and defatting with possible dermatitis.

Eye Contact: Contact may be irritating to eyes. May cause redness and tearing.

Ingestion: This product has low oral toxicity. Swallowing may cause gastrointestinal irritation, nausea, vomiting and diarrhea. This product is an aspiration hazard. If swallowed, can enter the lungs and may cause chemical pneumonitis, severe lung damage and death.

Chronic Effects: None expected.

Carcinogen Status: None of the components are listed as a carcinogen or suspect carcinogen by IARC, NTP, ACGIH or OSHA.

Reproductive Toxicity: None of the components is considered a reproductive hazard.

Numerical Measures of Toxicity:

The oral toxicity of this product is estimated to be greater than 5,000 mg/kg and the dermal toxicity greater than 2,000 mg/kg based on an assessment of the ingredients. This product is not classified as toxic by established criteria. It is an aspiration hazard.

12 – Ecological Information

Ecotoxicity: No specific aquatic toxicity data is currently available, however components of this product are not expected to be harmful to aquatic organisms

Persistence and Degradability: Component are readily biodegradable.

Bioaccumulative Potential: Bioaccumulation is not expected based on an assessment of the ingredients.

Mobility in Soil: No data available

Other Adverse Effects: None known

13 - Disposal Considerations

If this product becomes a waste, it would be expected to meet the criteria of a RCRA ignitable hazardous waste (D001). However, it is the responsibility of the generator to determine at the time of disposal the proper classification and method of disposal. Do not puncture or incinerate containers, even empty. Dispose in accordance with federal, state, and local regulations.

14 – Transportation Information

DOT Surface Shipping Description:

UN1950, Aerosols, 2.1 Ltd. Qty (Note: Shipping Papers are not required for Limited Quantities unless transported by air or vessel – each package must be marked with the Limited Quantity Mark)

IMDG Shipping Description: Un1950, Aerosols, 2.1, LTD QTY

ICAO Shipping Description: UN1950, Aerosols, flammable, 2.1 NOTE: WD-40 does not test aerosol cans to assure that they meet the pressure and other requirements for transport by air. We do not recommend that our aerosol products be transported by air.

15 – Regulatory Information

U.S. Federal Regulations:

CERCLA 103 Reportable Quantity: This product is not subject to CERCLA reporting requirements, however, oil spills are reportable to the National Response Center under the Clean Water Act and many

states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

SARA TITLE III:

Hazard Category For Section 311/312: Acute Health, Fire Hazard, Sudden Release of Pressure

Section 313 Toxic Chemicals: This product contains the following chemicals subject to SARA Title III

Section 313 Reporting requirements: None

Section 302 Extremely Hazardous Substances (TPQ): None

EPA Toxic Substances Control Act (TSCA) Status: All of the components of this product are listed on the TSCA inventory.

VOC Regulations: This product complies with the consumer product VOC limits of the US EPA and states adopting the OTC VOC rules but does not comply with CARB.

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65): This product does not contain chemicals regulated under California Proposition 65.

Canadian Environmental Protection Act: One of the components is listed on the NDSL. All of the other ingredients are listed on the Canadian Domestic Substances List or exempt from notification.

Canadian WHMIS Classification: Class A (Compressed gas), Class B-5 (Flammable Aerosol)

This MSDS has been prepared according to the criteria of the Controlled Products Regulation (CPR) and the MSDS contains all of the information required by the CPR.

16 – Other Information:

HMIS Hazard Rating:

Health – 1 (slight hazard), Fire Hazard – 4 (severe hazard), Reactivity – 0 (minimal hazard)

Revision Date: July 20, 2014

Supersedes: May 23, 2014

Revision Summary: Convert to Hazcom 2012. Changes in all sections.

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