



## SAFETY DATA SHEET AMSOIL Passenger Car & Light Truck Antifreeze & Coolant

According to Appendix D, OSHA Hazard Communication Standard 29 CFR §1910.1200 and WHMIS 2015, in compliance with the Hazardous Product Act (HPA, as amended) and the requirements of the Hazardous Product Regulations (HPR).

1 Identification			
1. Identification			
Product identifier	AMSOIL Passenger Car & Light Truck Antifreeze & Coolant		
Product name			
Product number ANTPC			
Recommended use of the chemical and restrictions on use			
Application	Coolant.		
Uses advised against	Avoid the formation of mists.		
Details of the supplier of the s	afety data sheet		
Supplier	AMSOIL INC. Bordner, Ladner, Gervais Scotia Plaza, 40 King St W Toronto, ON, Canada M5H 3Y4 T: +1 416-367-6547		
Manufacturer	AMSOIL INC. One AMSOIL Center, Superior, WI 54880, USA. T: +1 715-392-7101 compliance@amsoil.com		
Emergency telephone number	•		
Emergency telephone	CHEMTREC: Within USA and Canada: 1-800-424-9300 Outside the USA and Canada: +1 703-741-5970 (collect calls accepted) 24/7		
2. Hazard(s) identification			
Classification of the substance	e or mixture		
OSHA/WHMIS Regulatory Status	This Product is Hazardous under the OSHA Hazard Communication Standard and according to the hazard criteria of the Hazardous Product Regulations.		
Physical hazards	Not Classified		
Health hazards	Acute Tox. 4 - H302 Skin Irrit. 2 - H315 Eye Irrit. 2A - H319 STOT RE 2 - H373		
Environmental hazards	Not Classified		
Label elements			
Pictogram			
Signal word	Warning		

Hazard statements	H302 Harmful if swallowed. H315 Causes skin irritation. H319 Causes serious eye irritation. H373 May cause damage to organs through prolonged or repeated exposure.
Precautionary statements	<ul> <li>P260 Do not breathe vapor/ spray.</li> <li>P264 Wash contaminated skin thoroughly after handling.</li> <li>P270 Do not eat, drink or smoke when using this product.</li> <li>P280 Wear protective gloves, eye and face protection.</li> <li>P301+P312 If swallowed: Call a poison center/ doctor if you feel unwell.</li> <li>P302+P352 If on skin: Wash with plenty of water.</li> <li>P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</li> <li>P314 Get medical advice/ attention if you feel unwell.</li> <li>P330 Rinse mouth.</li> <li>P332+P313 If skin irritation occurs: Get medical advice/ attention.</li> <li>P337+P313 If eye irritation persists: Get medical advice/ attention.</li> <li>P362+P364 Take off contaminated clothing and wash it before reuse.</li> <li>P501 Dispose of contents/ container in accordance with national regulations.</li> </ul>
Contains	Ethanediol, Sodium 4(or 5)-methyl-1H-benzotriazolide

### Other hazards

This product does not contain any substances classified as PBT or vPvB.

3. Composition/information on ingredients		
Mixtures		
Ethanediol	25 - <50%	
CAS number: 107-21-1		
Classification		
Acute Tox. 4 - H302		
STOT RE 2 - H373		
Potassium succinate	2.5 - <3%	
CAS number: 676-47-1		
Classification		
Skin Irrit. 2 - H315		
Eye Irrit. 2A - H319		
Dodecanedioic acid	1 - <2.5%	
CAS number: 693-23-2		
Classification		
Eye Irrit. 2A - H319		

Sodium 4(or 5)-methyl-1H-benzotriazolide 1 - <2.5%			
CAS number: 64665-57-2			
<b>Classification</b> Acute Tox. 4 - H302 Skin Corr. 1B - H314 Eye Dam. 1 - H318 Aquatic Chronic 2 - H411			
The full text for all hazard sta	atements is displayed in Section 16.		
Composition comments	The exact percentage is withheld as a trade secret in accordance with 29 CFR 1910.1200.		
4. First-aid measures			
Description of first aid meas	ures		
General information	Get medical attention immediately. Show this Safety Data Sheet to the medical personnel.		
Inhalation	Remove affected person from source of contamination. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Place unconscious person on their side in the recovery position and ensure breathing can take place.		
Ingestion	Rinse mouth thoroughly with water. Remove any dentures. Give a few small glasses of water or milk to drink. Stop if the affected person feels sick as vomiting may be dangerous. Do not induce vomiting unless under the direction of medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Place unconscious person on their side in the recovery position and ensure breathing can take place. Maintain an open airway. Loosen tight clothing such as collar, tie or belt.		
Skin Contact	Rinse with water.		
Eye contact	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 10 minutes.		
Protection of first aiders	First aid personnel should wear appropriate protective equipment during any rescue. Wash contaminated clothing thoroughly with water before removing it from the affected person, or wear gloves. It may be dangerous for first aid personnel to carry out mouth-to-mouth resuscitation.		
Most important symptoms a	nd effects, both acute and delayed		
General information	See Section 11 for additional information on health hazards. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.		
Inhalation	Prolonged inhalation of high concentrations may damage respiratory system.		
Ingestion	May cause discomfort if swallowed. Stomach pain. Nausea, vomiting.		
Skin contact	Redness. Irritating to skin.		
Eye contact	Irritating to eyes.		
Indication of immediate med	lical attention and special treatment needed		
Notes for the doctor	Treat symptomatically.		
5. Fire-fighting measures			

#### Extinguishing media

Suitable extinguishing media	Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire- extinguishing media suitable for the surrounding fire.		
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.		
Special hazards arising from t	he substance or mixture		
Specific hazards	Containers can burst violently or explode when heated, due to excessive pressure build-up. This product is toxic.		
Hazardous combustion products	Hydrocarbons. Carbon monoxide (CO). Carbon dioxide (CO2). Aldehydes. Alcohols. Ethers.		
Advice for firefighters			
Protective actions during firefighting	Avoid breathing fire gases or vapors. Evacuate area. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. If a leak or spill has not ignited, use water spray to disperse vapors and protect men stopping the leak. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.		
Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Standard Firefighter's clothing including helmets, protective boots and gloves will provide a basic level of protection for chemical incidents.		

#### 6. Accidental release measures

#### Personal precautions, protective equipment and emergency procedures

Personal precautions No action shall be taken without appropriate training or involving any personal risk. Keep unnecessary and unprotected personnel away from the spillage. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Wash thoroughly after dealing with a spillage. Ensure procedures and training for emergency decontamination and disposal are in place. Do not touch or walk into spilled material. Avoid contact with skin and eyes. Use protective equipment appropriate for surrounding materials.

**Environmental precautions** 

**Environmental precautions** Aquatic toxicity is unlikely to occur. However, large or frequent spills may have hazardous effects on the environment. Absorb spillage with non-combustible, absorbent material. Large Spillages: Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air).

#### Methods and material for containment and cleaning up

Methods for cleaning up Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Small Spillages: Absorb spillage with sand or other inert absorbent. Collect and place in suitable waste disposal containers and seal securely. Large Spillages: If leakage cannot be stopped, evacuate area. Flush spilled material into an effluent treatment plant, or proceed as follows. Contain and absorb spillage with sand, earth or other non-combustible material. Place waste in labeled, sealed containers. Clean contaminated objects and areas thoroughly, observing environmental regulations. The contaminated absorbent may pose the same hazard as the spilled material. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

Reference to other sections	For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.	
7. Handling and storage		
Precautions for safe handling		
Usage precautions	Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Handle all packages and containers carefully to minimize spills. Keep container tightly sealed when not in use. Avoid the formation of mists. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers. Avoid contact with used product.	
Advice on general occupational hygiene	Wash promptly if skin becomes contaminated. Take off contaminated clothing and wash before reuse. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet. Change work clothing daily before leaving workplace.	
Conditions for safe storage, in	cluding any incompatibilities	
Storage precautions	Store away from incompatible materials (see Section 10). Store in accordance with local regulations. Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage. Utilize retaining walls to prevent soil and water pollution in the event of spillage. The storage area floor should be leak-tight, jointless and not absorbent.	
Storage class	Chemical storage.	
Specific end uses(s)		
Specific end use(s)	The identified uses for this product are detailed in Section 1.	
8. Exposure Controls/persona	I protection	
Control parameters		
Occupational exposure limits		
Comments	The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.	
Ethanediol		
Ceiling exposure limit: ACGIH 100 mg/m³ Aerosol A4		
ACGIH = American Conference A4 = Not Classifiable as a Hui	e of Governmental Industrial Hygienists. nan Carcinogen.	
Exposure controls		
Appropriate engineering controls	Provide adequate ventilation. Personal, workplace environment or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Use process enclosures, local exhaust ventilation or other engineering controls as the primary means to minimize worker exposure. Personal protective equipment should only be used if worker exposure cannot be controlled adequately by the engineering control measures. Ensure control measures are regularly inspected and maintained. Ensure operatives are trained to minimize exposure.	

Eye/face protection	Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Personal protective equipment for eye and face protection should comply with OSHA 1910.133 and/or the Canadian regulation on health and safety at work, SOR/86-304, Part XII (12.6), and any relevant provincial regulation relating to health and safety at work. Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Tight-fitting safety glasses.	
Hand protection	Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with OSHA 1910.138 and/or the Canadian regulation on health and safety at work, SOR/86-304, Part XII (12.9), and be demonstrated to be impervious to the chemical and resist degradation. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended.	
Other skin and body protection	Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible.	
Hygiene measures	Provide eyewash station and safety shower. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Clean equipment and the work area every day. Good personal hygiene procedures should be implemented. Wash at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke. Preventive industrial medical examinations should be carried out. Warn cleaning personnel of any hazardous properties of the product.	
Respiratory protection	Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and is NIOSH approved. Check that the respirator fits tightly and the filter is changed regularly. Full face mask respirators with replaceable filter cartridges should comply with OSHA 1910.134 and/or the Canadian regulation on health and safety at work, SOR/86-304, Part XII (12.7), and any relevant provincial regulation relating to health and safety at work. Gas and combination filter cartridges should comply with OSHA 1910.134 and/or the Canadian regulation on health and safety at work. SOR/86-304, Part XII (12.7), and any relevant provincial regulation relating to health and safety at work. Half mask and quarter mask respirators with replaceable filter cartridges should comply with OSHA 1910.134 and/or the Canadian regulation on health and safety at work. Half mask and quarter mask respirators with replaceable filter cartridges should comply with OSHA 1910.134 and/or the Canadian regulation on health and safety at work. SOR/86-304, Part XII (12.7), and any relevant provincial regulation relating to health and safety at work. Half mask and quarter mask respirators with replaceable filter cartridges should comply with OSHA 1910.134 and/or the Canadian regulation on health and safety at work, SOR/86-304, Part XII (12.7), and any relevant provincial regulation on health and safety at work. SOR/86-304, Part XII (12.7), and any relevant provincial regulation on health and safety at work. SOR/86-304, Part XII (12.7), and any relevant provincial regulation on health and safety at work. SOR/86-304, Part XII (12.7), and any relevant provincial regulation relating to health and safety at work.	
Environmental exposure controls	Keep container tightly sealed when not in use.	
9. Physical and Chemical Properties		
Information on basic physical and chemical properties		
Appearance	Liquid.	
Color	Yellow.	
Odor	Sweetish.	
Odor threshold	Not available.	
рН	pH (concentrated solution): 8.0 - 8.6	
Melting point	-34°F	

116°C/241°F Aqueous solution.

Initial boiling point and range 226°F

Flash point

Evaporation rate	Not available.		
Upper/lower flammability or explosive limits	Not available.		
Vapor pressure	10 mm Hg @ 20°C/68°F Component data.		
Vapor density	2.1 Component data.		
Relative density	1.03 - 1.08 @ 60°F		
Solubility(ies)	Soluble in water.		
Partition coefficient	Not available.		
Auto-ignition temperature	Not available.		
Decomposition Temperature	Not available.		
Viscosity	Not applicable.		
Explosive properties	Not considered to be explosive.		
Oxidizing properties	Does not meet the criteria for classification as oxidizing.		
Other information	No information required.		
10. Stability and reactivity			
Reactivity	See the other subsections of this section for further details.		
Stability	Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.		
Possibility of hazardous reactions	No potentially hazardous reactions known.		
Conditions to avoid	There are no known conditions that are likely to result in a hazardous situation.		
Materials to avoid	Oxidizing agents. Acids - oxidizing. Strong acids. Strong alkalis.		
Hazardous decomposition products	Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Harmful gases or vapors. Aldehydes. Alcohols. Ethers.		
11. Toxicological information			
Information on toxicological ef	fects		
Acute toxicity - oral	Acute Tox. 4 - H302 Harmful if swallowed.		
Notes (oral LD₅o)			
ATE oral (mg/kg)	1,226.05		
Acute toxicity - dermal Notes (dermal LD₅₀)	Based on available data the classification criteria are not met.		
Acute toxicity - inhalation Notes (inhalation LC <sub>50</sub> )	Based on available data the classification criteria are not met.		
Skin corrosion/irritation			
Animal data	Irritating.		

Serious eye damage/irritation Serious eye damage/irritation	Causes serious eye irritation.			
Respiratory sensitization Respiratory sensitization	Based on available data the classification criteria are not met.			
Skin sensitization Skin sensitization	Based on available data the classification criteria are not met.			
Germ cell mutagenicity Genotoxicity - in vitro	Based on available data the classification criteria are not met.			
Carcinogenicity Carcinogenicity	Based on available data the classification criteria are not met.			
IARC carcinogenicity	None of the ingredients are listed or exempt.			
Reproductive toxicity				
Reproductive toxicity - fertility	Based on available data the classification criteria are not met.			
Reproductive toxicity - development	Based on available data the classification criteria are not met.			
Specific target organ toxicity -	single exposure			
STOT - single exposure	Not classified as a specific target organ toxicant after a single exposure.			
Specific target organ toxicity -	repeated exposure			
Specific target organ toxicity -	repeated exposure			
Specific target organ toxicity - STOT - repeated exposure Aspiration hazard	<b>repeated exposure</b> STOT RE 2 - H373 May cause damage to organs through prolonged or repeated exposure.			
Specific target organ toxicity - STOT - repeated exposure Aspiration hazard Aspiration hazard	repeated exposure STOT RE 2 - H373 May cause damage to organs through prolonged or repeated exposure. Based on available data the classification criteria are not met. The severity of the symptoms described will vary dependent on the concentration and the			
Specific target organ toxicity - STOT - repeated exposure Aspiration hazard Aspiration hazard General information	repeated exposure         STOT RE 2 - H373 May cause damage to organs through prolonged or repeated exposure.         Based on available data the classification criteria are not met.         The severity of the symptoms described will vary dependent on the concentration and the length of exposure.			
Specific target organ toxicity - STOT - repeated exposure Aspiration hazard Aspiration hazard General information Inhalation	repeated exposure         STOT RE 2 - H373 May cause damage to organs through prolonged or repeated exposure.         Based on available data the classification criteria are not met.         The severity of the symptoms described will vary dependent on the concentration and the length of exposure.         Prolonged inhalation of high concentrations may damage respiratory system.			
Specific target organ toxicity - STOT - repeated exposure Aspiration hazard Aspiration hazard General information Inhalation Ingestion	repeated exposure         STOT RE 2 - H373 May cause damage to organs through prolonged or repeated exposure.         Based on available data the classification criteria are not met.         The severity of the symptoms described will vary dependent on the concentration and the length of exposure.         Prolonged inhalation of high concentrations may damage respiratory system.         May cause discomfort if swallowed. Stomach pain. Nausea, vomiting.			
Specific target organ toxicity - STOT - repeated exposure Aspiration hazard Aspiration hazard General information Inhalation Ingestion Skin Contact	<ul> <li>repeated exposure</li> <li>STOT RE 2 - H373 May cause damage to organs through prolonged or repeated exposure.</li> <li>Based on available data the classification criteria are not met.</li> <li>The severity of the symptoms described will vary dependent on the concentration and the length of exposure.</li> <li>Prolonged inhalation of high concentrations may damage respiratory system.</li> <li>May cause discomfort if swallowed. Stomach pain. Nausea, vomiting.</li> <li>Redness. Irritating to skin.</li> </ul>			
Specific target organ toxicity - STOT - repeated exposure Aspiration hazard Aspiration hazard General information Inhalation Ingestion Skin Contact Eye contact	<ul> <li>repeated exposure</li> <li>STOT RE 2 - H373 May cause damage to organs through prolonged or repeated exposure.</li> <li>Based on available data the classification criteria are not met.</li> <li>The severity of the symptoms described will vary dependent on the concentration and the length of exposure.</li> <li>Prolonged inhalation of high concentrations may damage respiratory system.</li> <li>May cause discomfort if swallowed. Stomach pain. Nausea, vomiting.</li> <li>Redness. Irritating to skin.</li> <li>Irritating to eyes.</li> </ul>			
Specific target organ toxicity - STOT - repeated exposure Aspiration hazard Aspiration hazard General information Inhalation Ingestion Skin Contact Eye contact Route of exposure	repeated exposure STOT RE 2 - H373 May cause damage to organs through prolonged or repeated exposure. Based on available data the classification criteria are not met. The severity of the symptoms described will vary dependent on the concentration and the length of exposure. Prolonged inhalation of high concentrations may damage respiratory system. May cause discomfort if swallowed. Stomach pain. Nausea, vomiting. Redness. Irritating to skin. Irritating to eyes. Ingestion Inhalation Skin and/or eye contact			

Toxicological information on ingredients.

### Ethanediol

Acute toxicity - oral	
Notes (oral LD₅₀)	Harmful if swallowed.
ATE oral (mg/kg)	500.0
Acute toxicity - dermal	
Acute toxicity dermal (LD₅₀ mg/kg)	3,501.0

## AMSOIL Passenger Car & Light Truck Antifreeze & Coolant

Ecological information on ingredients. Ethanediol		Species	Mouse	
Notes (inhalation LCsee)       LCsee >2.5 mg/l, Inhalation, Aerosol., Rat 4 hours         Skin corrosion/initiation       Dose: 0.5 ml, 20 hours, Rabbit Primary dermal irritation index: 0         Skin sensitization       Solaria of the sensitization         Skin sensitization       Guinea pig maximization test (GPMT) - Guinea pig: Not sensitizing.         Germ cell mutagenicity       Gene mutation: Negative.         Genotoxicity - in vitro       Gene mutation: Negative.         Garcinogenicity       Konoseme aberration: Negative.         Garcinogenicity       NoAEL 1500 mg/kg/day, Oral, Mouse         Reproductive toxicity -       Perility - NOAEL 1000 mg/kg/day, Oral, Mouse F1         Fertility       Fertility - NOAEL 1000 mg/kg/day, Oral, Mouse F1         Specific target organs       Stor T repeated exposure         STOT - repeated exposure       Stor T repeated exposure         STOT - repeated exposure       Stor RE 2 - H373 May cause damage to organs through prolonged or repeated exposure.         Target organs       Kidneys         12. Ecological Information       Stor Reproductive toxicity - expeated exposure.         Stor T - repeated exposure       Stor RE 2 - H373 May cause damage to organs through prolonged or repeated exposure.         Toxicity       Store - valable data the classification criteria are not met.         Toxicity       Stor we available data the classification cr		ATE dermal (mg/kg)	3,501.0	
Skin corrosion/invitation         Animal data       Does: 0.5 mL, 20 hours, Rabbit Primary dermal irritation index: 0         Skin sensitization       Guinea pig maximization test (GPMT) - Guinea pig: Not sensitizing.         Gern cell mutagenicity       Genotoxicity - in viro       Gene mutation: Negative.         Genotoxicity - in viro       Gene mutation: Negative.       Genotoxicity - in viro         Genotoxicity - in viro       Gene mutation: Negative.       Genotoxicity - in viro         Genotoxicity - in viro       Khonomosome aberration: Negative.         Carcinogenicity       OAEL 1500 mg/kg/day, Oral, Mouse         Reproductive toxicity       NOAEL 1000 mg/kg/day, Oral, Mouse F1         fertility       Fertility - NOAEL 1000 mg/kg/day, Oral, Mouse F1         fertility       Reproductive toxicity - repeated exposure         Specific target organ toxicity - repeated exposure       Stor T - repeated exposure         Target organs       Kidneys         12. Ecological Information       Kidneys         Toxicity       Not regarder as dangerous for the environment. However, large or frequent spills may have have havend as dangerous for the environment.         Toxicity       Not regarder as the classification criteria are not met.         Ecological Information       Start = start as the classification criteria are not met.		Acute toxicity - inhalation		
Animal data       Dose: 0.5 mL, 20 hours, Rabbit Primary dermal irritation index: 0         Skin sensitization       Guinea pig maximization test (GPMT) - Guinea pig: Not sensitizing.         Germ cell mutagenicity       Genotoxicity - in vitro       Gene mutation: Negative.         Genotoxicity - in vitro       Gene mutation: Negative.       Genotoxicity - in vitro         Genotoxicity - in vitro       Gene mutation: Negative.       Garcinogenicity         Carcinogenicity       NOAEL 1500 mg/kg/day, Oral, Mouse       Genotoxicity - in vitro         Reproductive toxicity       NoAEL 1500 mg/kg/day, Oral, Mouse F1       Ferlility - NOAEL 1000 mg/kg/day, Oral, Mouse F1         Reproductive toxicity - ferlility - NOAEL 1000 mg/kg/day, Oral, Mouse F1       Ferlility - NOAEL 1000 mg/kg/day, Oral, Mouse F1         Specific target organ toxicity - repeated exposure       Stort - repeated exposure         Specific target organ toxicity - repeated exposure.       Tort RE 2 - H373 May cause damage to organs through prolonged or repeated exposure.         Target organs       Kidneys         t2. Ecotoxicity       Beset - wailable data the classification criteria are not met.         Toxicity       Beset - wailable data the classification criteria are not met.		Notes (inhalation LC₅₀)	LC₅₀ >2.5 mg/l, Inhalation, Aerosol., Rat 4 hours	
Skin sensitization       Guinea pig maximization test (GPMT) - Guinea pig: Not sensitizing.         Gem cell mutagenicity       Gene mutation: Negative.         Genotoxicity - In vivo       Gene mutation: Negative.         Genotoxicity - In vivo       Chromosome aberration: Negative.         Carcinogenicity       Carcinogenicity         Carcinogenicity       NOAEL 1500 mg/kg/day, Oral, Mouse         Reproductive toxicity -       Fertility - NOAEL 1000 mg/kg/day, Oral, Mouse F1 fertility         Reproductive toxicity -       Fertility - NOAEL 1000 mg/kg/day, Oral, Mouse F1 fertility         Reproductive toxicity -       Developmental toxicity: - NOAEC: 150 mg/m³, Inhalation, Mouse development         Specific target organs       STOT FE 2 - H373 May cause damage to organs through prolonged or repeated exposure.         Target organs       Kidneys         t2. Ecologicative       STOT AE 2 - H373 May cause damage to organs through prolonged or repeated exposure.         Target organs       Kidneys         t2. Ecologicative       Stora RE 2 - H373 May cause damage to organs through prolonged or repeated exposure.         Toxicity       Mascardure classification criteria are not met.         t2. Ecologicative       Stora RE 2 - H373 May cause famage to organs through prolonged or repeated hacardure classification criteria are not met.         t3. Store       Stora RE 2 - H373 May cause famage to organs through prolonget prolon		Skin corrosion/irritation		
Skin sensitization       Guinea pig maximization test (GPMT) - Guinea pig: Not sensitizing.         Gern cell mutagenicity       Gene mutation: Negative.         Genotoxicity - in vivo       Gene mutation: Negative.         Genotoxicity - in vivo       Chromosome aberration: Negative.         Carcinogenicity       Carcinogenicity         Carcinogenicity       NOAEL 1500 mg/kg/day, Oral, Mouse         Reproductive toxicity - fertility - NOAEL 1000 mg/kg/day, Oral, Mouse F1 fertility       Reproductive toxicity - fertility - NOAEL 1000 mg/kg/day, Oral, Mouse F1 fertility         Reproductive toxicity - fertility - NOAEL 1000 mg/kg/day, Oral, Mouse F1 fertility       Developmental toxicity: - NOAEC: 150 mg/m³, Inhalation, Mouse f1 fertility         Specific target organ toxicity - repeated exposure       STOT - repeated exposure       STOT RE 2 - H373 May cause damage to organs through prolonged or repeated exposure.         Target organs       Kidneys       Kidneys       Stort RE 2 - H373 May cause damage to organs through prolonged or repeated exposure.         Toxicity       Not regerted as dangerous for the environment. However, large or frequent spills may have hazarous effects on the environment.         Toxicity       Based - vauiable data the classification criteria are not met.         Ecological Information       Ethanedioi		Animal data	Dose: 0.5 mL, 20 hours, Rabbit Primary dermal irritation index: 0	
Germ cell mutagenicity         Genotoxicity - in vitro       Gene mutation: Negative.         Genotoxicity - in vitro       Chromosome aberration: Negative.         Carcinogenicity       Chromosome aberration: Negative.         Carcinogenicity       NOAEL 1500 mg/kg/day, Oral, Mouse         Reproductive toxicity       Reproductive toxicity         Reproductive toxicity - fertility - NOAEL 1000 mg/kg/day, Oral, Mouse F1       Fertility         Reproductive toxicity - generated exposure       Developmental toxicity: - NOAEC: 150 mg/m³, Inhalation, Mouse development         Specific target organ toxicity - repeated exposure       STOT - repeated exposure         Stot - repeated exposure       STOT RE 2 - H373 May cause damage to organs through prolonged or repeated exposure.         Target organs       Kidneys         Ecotoxicity       Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.         Toxicity       Based available data the classification criteria are not met.         Ecological Information on Ingretures/       Lifemedio/		Skin sensitization		
Genotoxicity - in vitro       Gene mutation: Negative.         Genotoxicity - in vitro       Chromosome aberration: Negative.         Carcinogenicity       NOAEL 1500 mg/kg/day, Oral, Mouse         Reproductive toxicity       NOAEL 1500 mg/kg/day, Oral, Mouse F1         Reproductive toxicity - fertility - NOAEL 1000 mg/kg/day, Oral, Mouse F1       Fertility         Reproductive toxicity - fertility - NOAEL 1000 mg/kg/day, Oral, Mouse F1       Fertility         Reproductive toxicity - copeated exposure       Specific target organ toxicity - repeated exposure         StoT - repeated exposure       STOT RE 2 - H373 May cause damage to organs through prolonged or repeated exposure.         Target organs       Kidneys         Ecotoxicity       Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous         factory       Based on available data the classification criteria are not met.         Ecological Information on Ingretients.       Ethanediol		Skin sensitization	Guinea pig maximization test (GPMT) - Guinea pig: Not sensitizing.	
Genotoxicity - in vivo       Chromosome aberration: Negative.         Carcinogenicity       NOAEL 1500 mg/kg/day, Oral, Mouse         Reproductive toxicity       Reproductive toxicity         Reproductive toxicity - repeated exposure       Fertility - NOAEL 1000 mg/kg/day, Oral, Mouse F1         Reproductive toxicity - repeated exposure       Developmental toxicity: - NOAEC: 150 mg/m³, Inhalation, Mouse         Specific target organ toxic/ty - repeated exposure       STOT - repeated exposure         STOT - repeated exposure       STOT RE 2 - H373 May cause damage to organs through prolonged or repeated exposure.         Target organs       Kidneys         12. Ecological Information       Not regarded as dangerous for the environment. However, large or frequent spills may have hazardouse effects on the environment.         Toxicity       Based or available data the classification criteria are not met.         Ecological information on ingredients.       Ethanediol		Germ cell mutagenicity		
Carcinogenicity       NOAEL 1500 mg/kg/day, Oral, Mouse         Reproductive toxicity       Reproductive toxicity         Reproductive toxicity-       Fertility - NOAEL 1000 mg/kg/day, Oral, Mouse F1         fertility       Reproductive toxicity -         Reproductive toxicity -       Fertility - NOAEL 1000 mg/kg/day, Oral, Mouse F1         fertility       Reproductive toxicity -         Reproductive toxicity -       Developmental toxicity: - NOAEC: 150 mg/m³, Inhalation, Mouse         development       STOT - repeated exposure         STOT - repeated organs toxicity - repeated exposure.       STOT - repeated exposure.         Target organs       Kidneys         12. Ecological Information       Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.         Toxicity       Based - available data the classification criteria are not met.         Ecological Information on Ingree/Jerus       Ethanediol		Genotoxicity - in vitro	Gene mutation: Negative.	
Carcinogenicity       NOAEL 1500 mg/kg/day, Oral, Mouse         Reproductive toxicity       Reproductive toxicity - fertility - NOAEL 1000 mg/kg/day, Oral, Mouse F1 fertility         Reproductive toxicity - fertility       Pevelopmental toxicity: - NOAEC: 150 mg/m³, Inhalation, Mouse development         Specific target organ toxicity - repeated exposure       STOT - repeated exposure         STOT - repeated exposure       STOT RE 2 - H373 May cause damage to organs through prolonged or repeated exposure.         Target organs       Kidneys         Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.         Toxicity       Based on available data the classification criteria are not met.         Ecological Information on Ingredients.       Ethanediol		Genotoxicity - in vivo	Chromosome aberration: Negative.	
Reproductive toxicity       Fertility - NOAEL 1000 mg/kg/day, Oral, Mouse F1         Reproductive toxicity - fertility       Developmental toxicity: - NOAEC: 150 mg/m³, Inhalation, Mouse development         Specific target organ toxicity - repeated exposure       STOT - repeated exposure         STOT - repeated exposure       STOT RE 2 - H373 May cause damage to organs through prolonged or repeated exposure.         Target organs       Kidneys         12. Ecological Information       Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.         Toxicity       Based or available data the classification criteria are not met.         Ecological information on ingredients.       Ethanediol		Carcinogenicity		
Reproductive toxicity - fertility       Fertility - NOAEL 1000 mg/kg/day, Oral, Mouse F1         Reproductive toxicity - development       Developmental toxicity: - NOAEC: 150 mg/m³, Inhalation, Mouse development         Specific target organ toxicity - repeated exposure       STOT - repeated exposure         STOT - repeated exposure.       STOT RE 2 - H373 May cause damage to organs through prolonged or repeated exposure.         Target organs       Kidneys         Kidneys         Not regearded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.         Toxicity         Based or available data the classification criteria are not met.         Etological Information         Etological information on ingretients.		Carcinogenicity	NOAEL 1500 mg/kg/day, Oral, Mouse	
fertility       Reproductive toxicity - Developmental toxicity: - NOAEC: 150 mg/m³, Inhalation, Mouse development         Specific target organ toxicity - repeated exposure       STOT - repeated exposure         STOT - repeated exposure       STOT RE 2 - H373 May cause damage to organs through prolonged or repeated exposure.         Target organs       Kidneys         12. Ecological Information       Kidneys         Ecotoxicity       Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.         Toxicity       Based on available data the classification criteria are not met.         Ecological information on ingretients.       Ethanediol		Reproductive toxicity		
development       Specific target organ toxicity - repeated exposure         STOT - repeated exposure       STOT RE 2 - H373 May cause damage to organs through prolonged or repeated exposure.         Target organs       Kidneys         12. Ecological Information       Kot regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.         Toxicity       Based on available data the classification criteria are not met.         Ecological information on ingredients.       Ethanediol			Fertility - NOAEL 1000 mg/kg/day, Oral, Mouse F1	
STOT - repeated exposure       STOT RE 2 - H373 May cause damage to organs through prolonged or repeated exposure.         Target organs       Kidneys         12. Ecological Information       Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.         Toxicity       Based on available data the classification criteria are not met.         Ecological information on ingredients.       Ethanediol			Developmental toxicity: - NOAEC: 150 mg/m³, Inhalation, Mouse	
Target organs       Kidneys         12. Ecological Information       Ecotoxicity         Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.         Toxicity       Based on available data the classification criteria are not met.         Ecological Information on ingredients.       Ethanediol		Specific target organ toxici	ty - repeated exposure	
12. Ecological Information         Ecotoxicity       Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.         Toxicity       Based on available data the classification criteria are not met.         Ecological information on ingredients.       Ethanediol		STOT - repeated exposure		
Ecotoxicity       Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.         Toxicity       Based on available data the classification criteria are not met.         Ecological information on ingredients.       Ethanediol		Target organs	Kidneys	
hazardous effects on the environment.         Toxicity       Based on available data the classification criteria are not met.         Ecological information on ingredients.         Ethanediol	12. Ecologie	cal Information		
Ecological information on ingredients. Ethanediol	Ecotoxicity			
Ethanediol	Toxicity	Based o	on available data the classification criteria are not met.	
Ethanediol	Ecological i	-		
			Ethanediol	
ToxicityAquatic toxicity is unlikely to occur. Based on available data the classification criteria are not met.				
Acute aquatic toxicity		Toxicity		
Acute toxicity - fish LC₅₀, 96 hours: 72860 mg/l, Pimephales promelas (Fat-head Minnow)		-		
<b>Acute toxicity - aquatic</b> EC₅₀, 48 hours: >100 mg/l, Daphnia magna <b>invertebrates</b>		Acute aquatic toxicity	criteria are not met.	
Acute toxicity - aquatic EC₅₀, 96 hours: >6500 mg/l, Selenastrum capricornutum plants		Acute aquatic toxicity Acute toxicity - fish Acute toxicity - aquatic	criteria are not met. LC₅₀, 96 hours: 72860 mg/l, Pimephales promelas (Fat-head Minnow)	
Persistence and degradability		Acute aquatic toxicity Acute toxicity - fish Acute toxicity - aquatic invertebrates Acute toxicity - aquatic	criteria are not met. LC₅₀, 96 hours: 72860 mg/l, Pimephales promelas (Fat-head Minnow) EC₅₀, 48 hours: >100 mg/l, Daphnia magna	

Persistence and degradability The degradability of the product is not known.

Ecological information on ingredients.

#### Ethanediol

Persistence ar degradability	nd	The product is readily biodegradable.
Phototransform	nation	Water - DT₅₀ : 46.3 hours
Biodegradatio	n	Water - Degradation >90%: 10 days
Bioaccumulative potential		
Bio-Accumulative Potential	No dat	a available on bioaccumulation.
Partition coefficient	Not av	ailable.
Ecological information on in	gredients.	
		Ethanediol
Bio-Accumula	ive Potenti	al No data available on bioaccumulation.
Partition coeffi	cient	log Pow: -1.93
Mobility in soil		
Mobility	No dat	a available.
Ecological information on in	gredients.	
		Ethanediol
Mobility		The product is miscible with water and may spread in water systems.
Adsorption/de coefficient	sorption	Water - log Koc: 0 @ °C Estimated value.
Henry's law constant		0.1327 Pa m³/mol @ 25°C Estimated value.
Other adverse effects		
Other adverse effects	None k	known.
13. Disposal considerations	;	
Waste treatment methods		
General information	The generation of waste should be minimized or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.	
Disposal methods	license clothes	empty into drains. Dispose of surplus products and those that cannot be recycled via a ed waste disposal contractor. Waste, residues, empty containers, discarded work and contaminated cleaning materials should be collected in designated containers, d with their contents. Incineration or landfill about a physical action of the second states and the second states and the second states and the second states are second states and states are second states are seco

ntainers, labeled with their contents. Incineration or landfill should only be considered when recycling is not feasible.

## 14. Transport information

14. Hanoport information		
General	The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, DOT, TDG).	
UN Number		
Not applicable.		
UN proper shipping name		
Not applicable.		
Transport hazard class(es)		
Transport labels		
No transport warning sign required.		
Packing group		
Not applicable.		
Environmental hazards		
Environmentally Hazardous Su No.	ubstance	
Special precautions for user		
Not applicable.		
DOT TIH Zone	Not applicable.	
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.	
15. Regulatory information		
Regulatory References	OSHA Hazard Communication Standard 29 CFR §1910.1200 Hazardous Products Regulation (SOR/2015-17) Transportation of Dangerous Goods Regulations -SOR/2015-100.	
US Federal Regulations		
SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities None of the ingredients are listed or exempt.		
CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA) The following ingredients are listed or exempt:		
<i>Acetaldehyde</i> Final CERCLA RQ: 1000(454) pounds (Kilograms)		
<i>1,4-dioxane</i> Final CERCLA RQ: 100(45.4) pounds (Kilograms)		
<i>Ethanediol</i> Final CERCLA RQ: 5000(2270) pounds (Kilograms)		
SARA Extremely Hazardous Substances EPCRA Reportable Quantities None of the ingredients are listed or exempt.		
SARA 313 Emission Reporting The following ingredients are listed or exempt:		

Acetaldehyde 0.1 % 1,4-dioxane 0.1 % Ethanediol 1.0 %

#### CAA Accidental Release Prevention

The following ingredients are listed or exempt:

Acetaldehyde Threshold Quantity: 10000 lbs

SARA (311/312) Hazard Categories None of the ingredients are listed or exempt.

### OSHA Highly Hazardous Chemicals

The following ingredients are listed or exempt:

Acetaldehyde Threshold Quantity: 2500 lbs

#### US State Regulations

### California Proposition 65 Carcinogens and Reproductive Toxins

The following ingredients are listed or exempt:

Acetaldehyde Known to the State of California to cause cancer.

### 1,4-dioxane

Known to the State of California to cause cancer.

Ethanediol

Known to the State of California to cause developmental and reproductive toxicity.

### California Air Toxics "Hot Spots" (A-I)

The following ingredients are listed or exempt:

Acetaldehyde

1,4-dioxane

Ethanediol

California Air Toxics "Hot Spots" (A-II) None of the ingredients are listed or exempt.

### California Directors List of Hazardous Substances

The following ingredients are listed or exempt:

Acetaldehyde

Ethanol

1,4-dioxane

Ethanediol

Massachusetts "Right To Know" List

The following ingredients are listed or exempt:

Acetaldehyde

Ethanol

1,4-dioxane

Ethanediol

### Rhode Island "Right To Know" List

The following ingredients are listed or exempt:

Acetaldehyde

Ethanol

1,4-dioxane

Ethanediol

### Minnesota "Right To Know" List

The following ingredients are listed or exempt:

Acetaldehyde

Ethanol

1,4-dioxane

Ethanediol

### New Jersey "Right To Know" List

The following ingredients are listed or exempt:

Acetaldehyde

Ethanol

1,4-dioxane

Ethanediol

### Pennsylvania "Right To Know" List

The following ingredients are listed or exempt:

Acetaldehyde

Ethanol

1,4-dioxane

Ethanediol

Inventories

Canada - DSL/NDSL All the ingredients are listed or exempt.

US - TSCA All the ingredients are listed or exempt.

### US - TSCA 12(b) Export Notification

The following ingredients are listed or exempt:

Acetaldehyde

16. Other information

Abbreviations and acronyms used in the safety data sheet	C.A.S. = Chemical Abstracts Service; E.C. No = European Commission number; GHS = Globally Harmonised System; OSHA = Occupational Safety and Health Administration; WHMIS = Workplace Hazardous Materials Information System; DOT = Department of Transport; TDG = Transport of Dangerous Goods Regulations; IMDG = International Maritime Dangerous Goods; IATA = International Air Transport Association; SARA = Superfund Amendments and Reauthorization Act; CERCLA = Comprehensive Environmental; EPCRA = Emergency Planning and Community Right-to-Know Act; TSCA = Toxic Substances Control Act; LD/LC/EC = Lethal Dose,Lethal Concentration/Effect Concentration for 50% of population; NOEC = No Overall Effect Concentration; NOEL = No Overall Effect Level; REACH = Registration, Evaluation, Authorisation & Restriction of Chemicals; STOT-RE = Single Target Organ Toxicity - Repeat Exposure; STOT-SE= Specific Target Organ Toxicity - Single Exposure; PBT = Persistent, Bioaccumulative, Toxic; vPvB = Very Persistent, Very Bioaccumulative.
Classification abbreviations and acronyms	Acute Tox. = Acute toxicity Eye Irrit. = Eye irritation Skin Irrit. = Skin irritation STOT RE = Specific target organ toxicity-repeated exposure
Key literature references and sources for data	Source: European Chemicals Agency, http://echa.europa.eu/
Training advice	Read and follow manufacturer's recommendations. Only trained personnel should use this material.
Revision comments	This is the first issue.
Revision date	5/18/2018
SDS No.	7610
Hazard statements in full	<ul> <li>H302 Harmful if swallowed.</li> <li>H314 Causes severe skin burns and eye damage.</li> <li>H315 Causes skin irritation.</li> <li>H318 Causes serious eye damage.</li> <li>H319 Causes serious eye irritation.</li> <li>H373 May cause damage to organs through prolonged or repeated exposure.</li> <li>H411 Toxic to aquatic life with long lasting effects.</li> </ul>

This 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. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.