



### 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                 |   |  |  |
|-----------------------------------|---|--|--|
|                                   |   |  |  |
| Product identifier                | AMSOIL Passenger Car & Light Truck Antifreeze & Coolant   |  |  |
| Product name                      | ANTPC   |  |  |
| Product number                    |   |  |  |
| Recommended use of the che        | mical and restrictions on use   |  |  |
| Application                       | Coolant.  |  |  |
| Uses advised against              | Avoid the formation of mists.   |  |  |
| Details of the supplier of the sa | afety data sheet  |  |  |
| Supplier                          | AMSOIL INC.<br>Bordner, Ladner, Gervais<br>Scotia Plaza, 40 King St W<br>Toronto, ON, Canada M5H 3Y4<br>T: +1 416-367-6547                        |  |  |
| Manufacturer                      | AMSOIL INC.<br>One AMSOIL Center,<br>Superior, WI 54880, USA.<br>T: +1 715-392-7101<br>compliance@amsoil.com                                      |  |  |
| Emergency telephone number        |   |  |  |
| Emergency telephone               | CHEMTREC: Within USA and Canada: 1-800-424-9300<br>Outside the USA and Canada: +1 703-741-5970<br>(collect calls accepted) 24/7                   |  |  |
| 2. Hazard(s) identification       |   |  |  |
| Classification of the substance   | e or mixture  |  |  |
| OSHA/WHMIS Regulatory<br>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.<br>H315 Causes skin irritation.<br>H319 Causes serious eye irritation.<br>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-l  | benzotriazolide 1 - <2.5%  |  |
|---|--|--|
| CAS number: 64665-57-2  |  |  |
| <b>Classification</b><br>Acute Tox. 4 - H302<br>Skin Corr. 1B - H314<br>Eye Dam. 1 - H318<br>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<br>or milk to drink. Stop if the affected person feels sick as vomiting may be dangerous. Do not<br>induce vomiting unless under the direction of medical personnel. If vomiting occurs, the head<br>should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an<br>unconscious person. Move affected person to fresh air and keep warm and at rest in a<br>position comfortable for breathing. Place unconscious person on their side in the recovery<br>position and ensure breathing can take place. Maintain an open airway. Loosen tight clothing<br>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-<br>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<br>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<br>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<br>A4                           |  |
| ACGIH = American Conference<br>A4 = Not Classifiable as a Hui | e of Governmental Industrial Hygienists.<br>nan Carcinogen.  |
| Exposure controls   |  |
| Appropriate engineering controls                              | Provide adequate ventilation. Personal, workplace environment or biological monitoring may<br>be required to determine the effectiveness of the ventilation or other control measures and/or<br>the necessity to use respiratory protective equipment. Use process enclosures, local exhaust<br>ventilation or other engineering controls as the primary means to minimize worker exposure.<br>Personal protective equipment should only be used if worker exposure cannot be controlled<br>adequately by the engineering control measures. Ensure control measures are regularly<br>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<br>allowed out of the workplace. Wash contaminated clothing before reuse. Clean equipment<br>and the work area every day. Good personal hygiene procedures should be implemented.<br>Wash at the end of each work shift and before eating, smoking and using the toilet. When<br>using do not eat, drink or smoke. Preventive industrial medical examinations should be carried<br>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. 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 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<br>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<br>Notes (dermal LD₅₀)                      | Based on available data the classification criteria are not met.   |  |
| Acute toxicity - inhalation<br>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<br>Serious eye damage/irritation   | Causes serious eye irritation.   |
|--|--|
| Respiratory sensitization<br>Respiratory sensitization   | Based on available data the classification criteria are not met.   |
| Skin sensitization<br>Skin sensitization   | Based on available data the classification criteria are not met.   |
| Germ cell mutagenicity<br>Genotoxicity - in vitro  | Based on available data the classification criteria are not met.   |
| Carcinogenicity<br>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 -<br>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.  |
| STOT - single exposure<br>Specific target organ toxicity -   |  |
|  |  |
| Specific target organ toxicity -   | repeated exposure  |
| Specific target organ toxicity -<br>STOT - repeated exposure<br>Aspiration hazard  | <b>repeated exposure</b><br>STOT RE 2 - H373 May cause damage to organs through prolonged or repeated exposure.  |
| Specific target organ toxicity -<br>STOT - repeated exposure<br>Aspiration hazard<br>Aspiration hazard   | repeated exposure<br>STOT RE 2 - H373 May cause damage to organs through prolonged or repeated exposure.<br>Based on available data the classification criteria are not met.<br>The severity of the symptoms described will vary dependent on the concentration and the  |
| Specific target organ toxicity -<br>STOT - repeated exposure<br>Aspiration hazard<br>Aspiration hazard<br>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 -<br>STOT - repeated exposure<br>Aspiration hazard<br>Aspiration hazard<br>General information<br>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 -<br>STOT - repeated exposure<br>Aspiration hazard<br>Aspiration hazard<br>General information<br>Inhalation<br>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 -<br>STOT - repeated exposure<br>Aspiration hazard<br>Aspiration hazard<br>General information<br>Inhalation<br>Ingestion<br>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 -<br>STOT - repeated exposure<br>Aspiration hazard<br>Aspiration hazard<br>General information<br>Inhalation<br>Ingestion<br>Skin Contact<br>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 -<br>STOT - repeated exposure<br>Aspiration hazard<br>Aspiration hazard<br>General information<br>Inhalation<br>Ingestion<br>Skin Contact<br>Eye contact<br>Route of exposure | repeated exposure<br>STOT RE 2 - H373 May cause damage to organs through prolonged or repeated exposure.<br>Based on available data the classification criteria are not met.<br>The severity of the symptoms described will vary dependent on the concentration and the<br>length of exposure.<br>Prolonged inhalation of high concentrations may damage respiratory system.<br>May cause discomfort if swallowed. Stomach pain. Nausea, vomiting.<br>Redness. Irritating to skin.<br>Irritating to eyes.<br>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<br>mg/kg) | 3,501.0               |

## AMSOIL Passenger Car & Light Truck Antifreeze & Coolant

| ATE dermai (mg/kg)       3,501.0         Acute toxicity - inhalation       Cso > 2.5 mg/l, Inhalation, Aerosol., Rat 4 hours         Notes (inhalation LCoxo)       LCso > 2.5 mg/l, Inhalation, Aerosol., Rat 4 hours         Skin corrosion/irritation       Dose: 0.5 mL, 20 hours, Rabbit Primary dermal irritation index: 0         Skin sensitization       Gose: 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       Gene mutation: Negative.         Genotoxicity - in vitro       Gene mutation: Negative.         Carcinogenicity       OnAEL 1500 mg/kg/day, Oral, Mouse         Reproductive toxicity -       Fertility - NOAEL 1000 mg/kg/day, Oral, Mouse F1 fertility         Reproductive toxicity -       Pertility - NOAEL 1000 mg/kg/day, Oral, Mouse F1 fertility         Reproductive toxicity -       Developmental toxicity: - NOAEC: 150 mg/m³, Inhalation, Mouse development         Specific target organ toxicity : - repeated exposure       STOT - repeated exposure         Target organs       STOT RE 2 - H373 May cause damage to organs through prolonged or repeated exposure.         Target organs       Kidneys |
|--|
| Notes (inhalation LCs)       LCso >2.5 mg/l, Inhalation, Aerosol., Rat 4 hours         Skin corrosion/irritation       Dose: 0.5 mL, 20 hours, Rabbit Primary dermal irritation index: 0         Skin sensitization       Skin sensitization         Skin sensitization       Guinea pig maximization test (GPMT) - Guinea pig: Not sensitizing.         Gern cell mutagenicity       Gene mutation: Negative.         Genotoxicity - in vitro       Gene mutation: Negative.         Genotoxicity - in vitro       Chromosome aberration: Negative.         Carcinogenicity       NOAEL 1500 mg/kg/day, Oral, Mouse         Reproductive toxicity       Fertility - NOAEL 1000 mg/kg/day, Oral, Mouse F1         fertility       Pervelopment         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  |
| Skin corrosion/Irritation       Dose: 0.5 mL, 20 hours, Rabbit Primary dermal irritation index: 0         Skin sensitization       Skin sensitization         Skin sensitization       Guinea pig maximization test (GPMT) - Guinea pig: Not sensitizing.         Germ cell mutagenicity       Gene mutation: Negative.         Genotoxicity - in vitro       Gene mutation: Negative.         Carcinogenicity       Chromosome aberration: Negative.         Carcinogenicity       NOAEL 1500 mg/kg/day, Oral, Mouse         Reproductive toxicity       Ferlility - NOAEL 1000 mg/kg/day, Oral, Mouse F1 ferlility         Reproductive toxicity - geated 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   |
| Animal dataDose: 0.5 mL, 20 hours, Rabbit Primary dermal irritation index: 0Skin sensitizationGuinea pig maximization test (GPMT) - Guinea pig: Not sensitizing.Germ cell mutagenicityGene mutation: Negative.Genotoxicity - in vivoGene mutation: Negative.Genotoxicity - in vivoChromosome aberration: Negative.CarcinogenicityNOAEL 1500 mg/kg/day, Oral, MouseReproductive toxicityFertility - NOAEL 1000 mg/kg/day, Oral, Mouse F1Reproductive toxicity - fertility - NOAEL 1000 mg/kg/day, Oral, Mouse F1Specific target organ toxicity - repeated exposureSTOT - repeated exposureSTOT - repeated exposureTarget organsKidneys  |
| Skin sensitization       Guinea pig maximization test (GPMT) - Guinea pig: Not sensitizing.         Germ cell mutagenicity       Geno nutation: Negative.         Genotoxicity - in vitro       Gene mutation: Negative.         Genotoxicity - in vitro       Chromosome aberration: Negative.         Carcinogenicity       NOAEL 1500 mg/kg/day, Oral, Mouse         Reproductive toxicity -       Ferlility - NOAEL 1000 mg/kg/day, Oral, Mouse F1         fertility       Ferlility - NOAEL 1000 mg/kg/day, Oral, Mouse F1         Reproductive toxicity -       Ferlility - NOAEL 1000 mg/kg/day, Oral, Mouse F1         fertility       Stor repeated exposure         STOT - repeated exposure       STOT F repeated exposure         Target organs       Kidneys  |
| Skin sensitization       Guinea pig maximization test (GPMT) - Guinea pig: Not sensitizing.         Germ cell mutagenicity       Gene mutation: Negative.         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       Perivitity         Reproductive toxicity - gevelopment       Developmental toxicity: - NOAEC: 150 mg/m³, Inhalation, Mouse         Specific target organ toxicity - repeated exposure       STOT - repeated exposure         Target organs       Kidneys         t2. Ecological Information       Kidneys  |
| Germ cell mutagenicity       Gene mutation: Negative.         Genotoxicity - in vivo       Gene mutation: Negative.         Genotoxicity - in vivo       Chromosome aberration: Negative.         Carcinogenicity       NOAEL 1500 mg/kg/day, Oral, Mouse         Reproductive toxicity - geroductive toxicity - fertility - NOAEL 1000 mg/kg/day, Oral, Mouse F1       Fertility         Reproductive toxicity - fertility - NOAEL 1000 mg/kg/day, Oral, Mouse F1       Developmental toxicity: - NOAEC: 150 mg/m³, Inhalation, Mouse         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  |
| 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       Fertility - NOAEL 1000 mg/kg/day, Oral, Mouse F1         Reproductive toxicity - fertility       Developmental toxicity: - NOAEC: 150 mg/m³, Inhalation, Mouse         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   |
| Genotoxicity - in vivo       Chromosome aberration: Negative.         Carcinogenicity       NOAEL 1500 mg/kg/day, Oral, Mouse         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       Development         Specific target organ toxicity - repeated exposure       Development         STOT - repeated exposure       STOT RE 2 - H373 May cause damage to organs through prolonged or repeated exposure.         Target organs       Kidneys  |
| Carcinogenicity       NOAEL 1500 mg/kg/day, Oral, Mouse         Carcinogenicity       NOAEL 1500 mg/kg/day, Oral, Mouse         Reproductive toxicity       Fertility - NOAEL 1000 mg/kg/day, Oral, Mouse F1 fertility         Reproductive toxicity - fertility       Developmental toxicity: - NOAEC: 150 mg/m³, Inhalation, Mouse         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  |
| 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       Pertility - NOAEL 1000 mg/kg/day, Oral, Mouse F1 fertility         Reproductive toxicity - fertility       Developmental toxicity: - NOAEC: 150 mg/m³, Inhalation, Mouse         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   |
| Reproductive toxicity       Fertility - NOAEL 1000 mg/kg/day, Oral, Mouse F1         Reproductive toxicity - fertility       Fertility - NOAEL 1000 mg/kg/day, Oral, Mouse F1         Reproductive toxicity - development       Developmental toxicity: - NOAEC: 150 mg/m³, Inhalation, Mouse         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   |
| Reproductive toxicity - fertility       Fertility - NOAEL 1000 mg/kg/day, Oral, Mouse F1         Reproductive toxicity - fertility       Developmental toxicity: - NOAEC: 150 mg/m³, Inhalation, Mouse         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   |
| fertility       Reproductive toxicity -<br>development       Developmental toxicity: - NOAEC: 150 mg/m³, Inhalation, Mouse         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<br>exposure.         Target organs       Kidneys         12. Ecological Information       Kidneys  |
| development         Specific target organ toxicity - repeated exposure         STOT - repeated exposure         STOT - repeated exposure         Target organs         Kidneys         12. Ecological Information  |
| STOT - repeated exposure       STOT RE 2 - H373 May cause damage to organs through prolonged or repeated exposure.         Target organs       Kidneys         12. Ecological Information       Kidneys  |
| exposure. Target organs Kidneys 12. Ecological Information   |
| 12. Ecological Information   |
|  |
| Endeddite  |
| Ecotoxicity         Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.  |
| <b>Toxicity</b> Based on available data the classification criteria are not met.   |
| Ecological information on ingredients.   |
| Ethanediol   |
|  |
| ToxicityAquatic toxicity is unlikely to occur. Based on available data the classification<br>criteria are not met.   |
| Acute aquatic toxicity   |
| Acute toxicity - fish LC₅₀, 96 hours: 72860 mg/l, Pimephales promelas (Fat-head Minnow)  |
| Acute toxicity - aquatic EC₅₀, 48 hours: >100 mg/l, Daphnia magna invertebrates  |
| Acute toxicity - aquatic EC₅₀, 96 hours: >6500 mg/l, Selenastrum capricornutum plants  |
| Persistence and degradability  |

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

Ecological information on ingredients.

#### Ethanediol

| Persistence<br>degradability |   | The product is readily biodegradable.  |  |
|------------------------------|---|--|--|
| Phototransfo                 | ormation  | Water - DT₅₀ : 46.3 hours  |  |
| Biodegradat                  | ion   | Water - Degradation >90%: 10 days  |  |
| Bioaccumulative potential    |   |  |  |
| Bio-Accumulative Potentia    | al No dat   | a available on bioaccumulation.  |  |
| Partition coefficient        | Not av  | ailable.   |  |
| Ecological information on    | ingredients.  |  |  |
|                              |   | Ethanediol   |  |
| Bio-Accumu                   | lative Potenti  | al No data available on bioaccumulation.   |  |
| Partition coe                | fficient  | log Pow: -1.93   |  |
| Mobility in soil             |   |  |  |
| Mobility                     | No dat  | a available.   |  |
| Ecological information on    | ingredients.  |  |  |
|                              |   | Ethanediol   |  |
| Mobility                     |   | The product is miscible with water and may spread in water systems.  |  |
| Adsorption/c<br>coefficient  | lesorption  | 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 consideration   | ns  |  |  |
| Waste treatment methods      | 5   |  |  |
| General information          | produc<br>way. D<br>comply<br>any loc<br>handlir<br>contair | eneration of waste should be minimized or avoided wherever possible. Reuse or recycle<br>ets wherever possible. This material and its container must be disposed of in a safe<br>Disposal of this product, process solutions, residues and by-products should at all times<br>y with the requirements of environmental protection and waste disposal legislation and<br>cal authority requirements. When handling waste, the safety precautions applying to<br>ng of the product should be considered. Care should be taken when handling emptied<br>hers that have not been thoroughly cleaned or rinsed out. Empty containers or liners<br>etain some product residues and hence be potentially hazardous. |  |
| Disposal methods             | license<br>clothes  | Do not empty into drains. Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers,  |  |

not feasible.

labeled with their contents. Incineration or landfill should only be considered when recycling is

### 14. Transport information

| The transport internation  |   |  |
|--|---|--|
| 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)   |   |  |
| <b>Transport labels</b><br>No transport warning sign required.   |   |  |
| Packing group  |   |  |
| Not applicable.  |   |  |
| Environmental hazards  |   |  |
| Environmentally Hazardous Su<br>No.  | ubstance  |  |
| Special precautions for user   |   |  |
| Not applicable.  |   |  |
| DOT TIH Zone   | Not applicable.   |  |
| Transport in bulk according to<br>Annex II of MARPOL 73/78<br>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<br>None of the ingredients are listed or exempt. |   |  |
| CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)<br>The following ingredients are listed or exempt:                  |   |  |
| <i>Acetaldehyde</i><br>Final CERCLA RQ: 1000(454) pounds (Kilograms)   |   |  |
| <i>1,4-dioxane</i><br>Final CERCLA RQ: 100(45.4) pounds (Kilograms)  |   |  |
| <i>Ethanediol</i><br>Final CERCLA RQ: 5000(2270) pounds (Kilograms)  |   |  |
| SARA Extremely Hazardous Substances EPCRA Reportable Quantities<br>None of the ingredients are listed or exempt.                       |   |  |
| SARA 313 Emission Reporting<br>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<br>used in the safety data sheet | C.A.S. = Chemical Abstracts Service; E.C. No = European Commission number; GHS =<br>Globally Harmonised System; OSHA = Occupational Safety and Health Administration;<br>WHMIS = Workplace Hazardous Materials Information System; DOT = Department of<br>Transport; TDG = Transport of Dangerous Goods Regulations; IMDG = International Maritime<br>Dangerous Goods; IATA = International Air Transport Association; SARA = Superfund<br>Amendments and Reauthorization Act; CERCLA = Comprehensive Environmental; EPCRA =<br>Emergency Planning and Community Right-to-Know Act; TSCA = Toxic Substances Control<br>Act; LD/LC/EC = Lethal Dose,Lethal Concentration/Effect Concentration for 50% of<br>population; NOEC = No Overall Effect Concentration; NOEL = No Overall Effect Level;<br>REACH = Registration, Evaluation, Authorisation & Restriction of Chemicals; STOT-RE =<br>Single Target Organ Toxicity - Repeat Exposure; STOT-SE= Specific Target Organ Toxicity -<br>Single Exposure; PBT = Persistent, Bioaccumulative, Toxic; vPvB = Very Persistent, Very<br>Bioaccumulative. |
|---|---|
| Classification abbreviations<br>and acronyms                | Acute Tox. = Acute toxicity<br>Eye Irrit. = Eye irritation<br>Skin Irrit. = Skin irritation<br>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.