



B217-00

SAFETY DATA SHEET

Compliant SDS for GHS: HazCom 2012 / United States; WHMIS 2015 / Canada

| SECTION 1: IDENTIFICATION | | | | | |
|---|-------------------|--|--------------|--|--|
| Supplier/Manufacturer: Huntsman 870 Curé-Boivin Boisbriand, QC, Canada. J7G 2A7 450-437-0123 866-437-0223 infoCanada@huntsmanbuilds.com www.hun | Fax: 450-437-2338 | GHS Product Identifier: B217-00 Chemical Name: Polyurethane Resin B-side. Product type: Liquid. Identified Use: Component B of a Spray-Applied System. | Polyurethane | | |
| Emergency Telephone (24/7): In Canada: CANUTEC 613-996-6 | | | | | |

| SECTION 2: HAZARDS IDENTIFIC | CATION | | | |
|---|--|--|--|--|
| OSHA/HCS Status | This material is classified hazardous under OSHA Hazard Communication Standard (29 CFR 1910.1200). | | | |
| Classification of the Substance or Mixture | SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMMAGE/EYE IRRITATION - Category 2A REPRODUCTIVE TOXICITY (Fertility) - Category 2 REPRODUCTIVE TOXICITY (Unborn child) - Category 2 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (blood system, central nervous system (CNS kidneys) - Category 2 SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE (kidneys, liver) - Category 2 AQUATIC HAZARD (LONG-TERM) - Category 3 | | | |
| GHS label elements | | | | |
| Hazard Pictograms | | | | |
| Signal Word | WARNING | | | |
| Hazard Statements | Causes serious eye irritation. Causes skin irritation. Suspected of damaging fertility or the unborn child. May cause damage to organs (blood system, central nervous system (CNS), kidneys). May cause damage to organs through prolonged or repeated exposure. (kidneys, liver). Harmful to aquatic life with long lasting effects. | | | |
| PRECAUTIONARY STATEMENTS | | | | |
| Prevention | Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Avoid release to the environment. Do not breathe vapour. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. | | | |
| Response | Get medical attention if you feel unwell. IF exposed or concerned: Call a POISON CENTER or physician. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention. | | | |
| Storage | Store locked up. | | | |
| Disposal | Dispose of contents and container in accordance with all local, regional, national and international regulations. | | | |
| OTHER HAZARDS WHICH DO NOT RE | SULT IN CLASSIFICATION | | | |
| None known. | | | | |

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS Substance/Mixture Mixture.

| Chemical Name | Polyurethane Resin B-side. | |
|------------------------------|----------------------------|--|
| CAS NUMBER/OTHER IDENTIFIERS | | |
| CAS Number | Not applicable. | |
| Product Code | B217-00 | |

| INGREDIENTS | CAS# | % |
|--|------------|-----------|
| tris(2-Chloro-1-methylethyl) phosphate | 13674-84-5 | ≥5.0- ≤10 |
| Ethanediol | 107-21-1 | ≥1 - ≤5 |
| 2,2'-Oxibisethanol | 111-46-6 | ≥1 - ≤5 |
| Triethyl phosphate | 78-40-0 | ≥1 - ≤5 |
| 1,1,3,3-Tetramethylguanidine | 80-70-6 | ≥0.1- ≤5 |
| Dibutylbis(dodecylthio)stannane | 1185-81-5 | ≥0.1 - ≤5 |

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

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

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

| SECTION 4: FIRST AID ME | ASURES |
|---------------------------|--|
| DESCRIPTION OF NECESSARY | FIRST AID MEASURES |
| Eye Contact | Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Get medical attention. If necessary, call a poison center or physician. |
| Inhalation | Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. |
| Skin Contact | Flush contaminated skin with plenty of water. Continue to rinse for at least 20 minutes. Get medical attention. If necessary, call a poison center or physician. Wash clothing before reuse. Clean shoes thoroughly before reuse. |
| Ingestion | Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. |
| MOST IMPORTANT SYMPTOMS | S/EFFECTS, ACUTE AND DELAYED |
| POTENTIAL ACUTE HEALTH EF | FECTS |
| Eye Contact | Causes serious eye irritation. |
| Inhalation | May cause damage to organs following a single exposure if inhaled. |
| Skin Contact | May cause damage to organs following a single exposure if in contact with with skin. Causes skin irritation. |
| Ingestion | May cause damage to organs following a single exposure if swallowed. |
| SHORT TERM EXPOSURE | |
| Potential delayed effects | No known significant effects or critical hazards. |
| OVER-EXPOSURE SIGNS/SYMI | PTOMS |
| Eye Contact | Adverse symptoms may include the following: pain or irritation, watering, redness. |
| Inhalation | Adverse symptoms may include the following: reduced fetal weight, increase in fetal deaths, skeletal malformations. |

| Skin Contact | Adverse symptoms may include the following: irritation, redness, reduced fetal weight, increase in fetal deaths, skeletal malformations. | | | | |
|---------------------------------|--|--|--|--|--|
| Ingestion | Adverse symptoms may include the following: reduced fetal weight, increase in fetal deaths, skeletal malformations. | | | | |
| INDICATION OF IMMEDIATE MEDICAL | INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED, IF NECESSARY | | | | |
| Protection of First-aiders | No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. | | | | |
| Notes to Physician | In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. | | | | |
| Specific Treatments | No specific treatment. | | | | |

See toxicological information (Section 11)

| SECTION 5: FIRE-FIGHTING MEASURES | | | | |
|--|---|--|--|--|
| Suitable Extinguishing Media | Use an extinguishing agent suitable for the surrounding fire. | | | |
| Unsuitable Extinguishing Media | None known. | | | |
| Specific Hazards Arising from the Chemical | This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain. | | | |
| Hazardous Thermal Decomposition Products | Decomposition products may include the following materials: carbon dioxide, carbon monoxide, nitrogen oxides, phosphorus oxides, halogenated compounds. | | | |
| Special Protective Actions for Fire Fighters | Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. | | | |
| Special Protective Equipment for Fire Fighters | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. | | | |

| SECTION 6: ACCIDENTAL RELEASE MEASURES | | | | |
|--|---|--|--|--|
| PERSONAL PRECAUTIONS, PROTEC | CTIVE EQUIPMENT AND EMERGENCY PROCEDURES | | | |
| For Non-emergency Personnel | No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment. | | | |
| For Emergency Responders | If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel" | | | |
| Environmental Precautions | Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. | | | |
| METHODS AND MATERIALS FO | PR CONTAINMENT AND CLEANING UP | | | |
| Spill | Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal. | | | |

PRECAUTIONS FOR SAFE HANDLING Protective Measures Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. Advice on General Occupational Hygiene Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures.

| Conditions for safe storage including any incompatibilities | Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use. |
|---|---|
| Storage Temperature | 15 – 25°C (59 – 77°F) (minimum – maximum). |
| Storage Life | 6 Months. |

| CONTROL PARAMETERS | - UNITED STATES | | | | | | | | | | |
|--|---------------------------------------|------------------|---------------------------------|---|---|--------------------|------------|-----|---------------------------|-------|-------------|
| OCCUPATIONAL EXPOSU | IRE LIMITS | | | | | | | | | | |
| Ingredient Name | | | | Expo | Exposure Limits | | | | | | |
| Ethanediol | | | | | ACGIH TLV (United States, 3/2015). C: 100 mg/m³ Form: Aerosol. | | | | | | |
| Triethyl phosphate | | | | | AIHA WEEL (United States, 10/2011). TWA: 7.45 mg/m³ 8 hours. | | | | | | |
| 2,2' -Oxybisethanol | | | | | A WEEL (U A: 10 mg/m | | es, 10/201 | 1). | | | |
| Dibutylbis(dodecylthio) stannane | | | TWA STE OSH TWA NIO | ACGIH TLV TWA: 0.1 mg/m³ - as tin STEL: 0.2 mg/m³ - as tin OSHA PEL TWA: 0.1 mg/m³ - as tin NIOSH REL REL: 0.1 mg/m³ - as tin | | | | | | | |
| CONTROL PARAMETERS | - CANADA | | | | | | | | | | |
| OCCUPATIONAL EXPOSU | IRE LIMITS | TV | TWA (8 HOURS) | | STEL (15 MINS) | | CEILING | | | | |
| Ingredients Name | List name | ppm | mg/m³ | Other | ppm | mg/m³ | Other | ppm | mg/m³ | Other | Notations |
| Ethanediol | US ACGIH 3/2015 | - | - | - | - | - | - | - | 100 | - | [a] |
| | AB 4/2009 | - | - | - | - | - | - | - | 100 | - | |
| | BC 5/2015 | - | - | - | - | - | - | - | 100 | - | [a] |
| | | | | | | | | | | | |
| | | - | 10 | - | - | 20 | - | | - | - | [b] |
| | | - | 10 | - | - | 20 | - | 50 | - | - | [b] |
| | ON 7/2015 | | | | | | | 50 | | | |
| | ON 7/2015 QC 1/2014 | - | - | - | - | - | - | | - | - | [c] |
| | | - | - | - | - | - | - | - | - | - | [c] |
| 2,2' –Oxybisethanol | QC 1/2014 | | - | - | - - 50 | - - 127 | - | - | 100 | | [c] [a] [d] |
| Dibutylbis | QC 1/2014 SK US AIHA | | | - | - - 50 - | - - 127 - | - | - | 100 | | [c] [a] [d] |
| 2,2' –Oxybisethanol Dibutylbis (dodecylthio) stannane – as Sn | QC 1/2014 SK US AIHA 10/2011 | - - - - | - - - - 10 | | - - 50 - | - - 127 - | | - | - 100 - 100 - | | [c] [a] [d] |

Form: [a] Aerosol. [b] Particulate. [c]Vapor. [d] Vapor and mist. [e] Mist. [f] Respirable mist. [g] Inhalable fraction

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QC 09/2017

| Appropriate Engineering Controls | If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. | | |
|------------------------------------|--|--|--|
| Environmental Exposure Controls | Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. | | |
| INDIVIDUAL PROTECTION MEASURES | | | |
| Hygiene Measures | Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially | | |

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| | contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location. |
|------------------------|---|
| Eye/Face Protection | Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles. |
| Hand Protection | Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are are still retaining their protective properties. It should be note that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. |
| Body Protection | Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. |
| Other Skin Protection | Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. |
| Respiratory protection | Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. |

| SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES | | | | |
|--|------------------------------|--|--|--|
| Physical State | Liquid. | | | |
| Color | Natural. | | | |
| Odor | Not available. | | | |
| Odor Threshold | Not available. | | | |
| рН | Not available. | | | |
| Melting Point | Not available. | | | |
| Boiling Point | Not available. | | | |
| Flash Point | Closed Cup: >93°C (>199.4°F) | | | |
| Evaporation Rate | Not available. | | | |
| Flammability (Solid, Gas) | Not available. | | | |
| Lower and Upper Explosive (Flammable) Limits | Not available. | | | |
| Vapor Pressure | Not available. | | | |
| Vapor Density | Not available. | | | |
| Specific Gravity @ 25°C (77°F) | Not available. | | | |
| Solubility | Moderately soluble in water. | | | |
| Partition Coefficient: N-Octanol/Water | Not available. | | | |
| Auto-Ignition Temperature | Not available. | | | |
| Decomposition Temperature | Not available. | | | |
| Viscosity @ 25°C (77°F) (cps) | 400 – 500 | | | |
| Volatility | Not available. | | | |

| SECTION 10: STABILITY AND REACTIVITY | | | |
|--------------------------------------|--|--|--|
| Reactivity | No specific test data related to reactivity available for this product or its ingredients. | | |
| Chemical Stability | The product is stable. | | |
| Possibility of Hazardous Reactions | Under normal conditions of storage and use, hazardous reactions will not occur. | | |
| Conditions to Avoid | Avoid exposure to moisture and high temperatures to protect product quality. | | |
| Incompatible Materials | Reactive or incompatible with the following materials: oxidizing materials. Avoid unintended contact with isocyanates. | | |
| Hazardous Decomposition Products | Under normal conditions of storage and use, hazardous decomposition products should not be produced. | | |

| INFORMATION ON TOXICOLOGICAL EFFECT | | | | T | | 1_ |
|--|---|----------|--|---|-------------|-------------|
| Product / Ingredient Name | Endpoint | | Species | Result | | Exposure |
| tris(2-Chloro-1-methylethyl) phosphate | LD50 Oral | | Rat | 1500 mg | | - |
| Ethanediol | LD50 Oral | | Rat | 4700 mg | _ | - |
| 2,2' -Oxybisethanol | LD50 Dermal | | Rabbit | 11890 m | g/kg | - |
| | LD50 Oral | | Rat | 12000 m | g/kg | - |
| Triethyl phosphate | LD50 Oral | | Rat | 1165 mg | /kg | - |
| IRRITATION / CORROSION | | | | T | | |
| Product / Ingredient Name | Result | | Species | Score | Exposure | Observation |
| Ethanediol | Eyes - Mild irritant | t | Rabbit | - | 24 h 500 mg | - |
| | Eyes - Mild irritant | t | Rabbit | - | 1 h 100 mg | - |
| | Eyes - Moderate i | irritant | Rabbit | - | 6 h 1440 mg | - |
| | Skin - Mild irritant | | Rabbit | - | 555 mg | - |
| 2,2' -Oxybisethanol | Eyes - Mild irritant | t | Rabbit | - | 50 mg | - |
| | Skin - Mild irritant | Ī | Rabbit | - | 500 mg | - |
| Triethyl phosphate | Eyes - Moderate i | irritant | Rabbit | - | 100 mg | - |
| SENSITIZATION | | | , | | | - |
| There is no data available. | | | | | | |
| MUTAGENICITY | | | | | | |
| | | | | | | |
| There is no data available. | | | | | | |
| There is no data available. CARCINOGENICITY | | | | | | |
| CARCINOGENICITY | - | - | - | A4 | - | None. |
| | - | - | - | A4 | - | None. |
| CARCINOGENICITY Ethanediol REPRODUCTIVE TOXICITY | - | - | - | A4 | - | None. |
| CARCINOGENICITY Ethanediol | - | - | - | A4 | - | None. |
| CARCINOGENICITY Ethanediol REPRODUCTIVE TOXICITY There is no data available. | - | - | - | A4 | - | None. |
| CARCINOGENICITY Ethanediol REPRODUCTIVE TOXICITY There is no data available. TERATOGENICITY There is no data available. | | - | | A4 | - | None. |
| CARCINOGENICITY Ethanediol REPRODUCTIVE TOXICITY There is no data available. TERATOGENICITY There is no data available. SPECIFIC TARGET ORGAN TOXICITY (SINGL | | - | - Target organs | A4 | - | None. |
| CARCINOGENICITY Ethanediol REPRODUCTIVE TOXICITY There is no data available. TERATOGENICITY | E EXPOSURE) | - | | | | None. |
| CARCINOGENICITY Ethanediol REPRODUCTIVE TOXICITY There is no data available. TERATOGENICITY There is no data available. SPECIFIC TARGET ORGAN TOXICITY (SINGLE) Product / Ingredient Name | E EXPOSURE) Category | - | Target organs | | | None. |
| CARCINOGENICITY Ethanediol REPRODUCTIVE TOXICITY There is no data available. TERATOGENICITY There is no data available. SPECIFIC TARGET ORGAN TOXICITY (SINGLE) Product / Ingredient Name tris(2-Chloro-1-methylethyl) phosphate | E EXPOSURE) Category Category 2 | - | Target organs Central nervous Narcotic effects. | system (CNS | | |
| CARCINOGENICITY Ethanediol REPRODUCTIVE TOXICITY There is no data available. TERATOGENICITY There is no data available. SPECIFIC TARGET ORGAN TOXICITY (SINGLE) Product / Ingredient Name tris(2-Chloro-1-methylethyl) phosphate | E EXPOSURE) Category Category 2 Category 3 | - | Target organs Central nervous Narcotic effects. | system (CNS | 5). | |
| CARCINOGENICITY Ethanediol REPRODUCTIVE TOXICITY There is no data available. TERATOGENICITY There is no data available. SPECIFIC TARGET ORGAN TOXICITY (SINGLE) Product / Ingredient Name | E EXPOSURE) Category Category 2 Category 3 Category 1 | | Target organs Central nervous Narcotic effects. Blood system, C | system (CNS entral nervol | 5). | |
| CARCINOGENICITY Ethanediol REPRODUCTIVE TOXICITY There is no data available. TERATOGENICITY There is no data available. SPECIFIC TARGET ORGAN TOXICITY (SINGLE) Product / Ingredient Name tris(2-Chloro-1-methylethyl) phosphate | E EXPOSURE) Category Category 2 Category 3 Category 1 Category 3 | - | Target organs Central nervous Narcotic effects. Blood system, C Narcotic effects. | system (CNS entral nervol irritation. | 5). | |
| CARCINOGENICITY Ethanediol REPRODUCTIVE TOXICITY There is no data available. TERATOGENICITY There is no data available. SPECIFIC TARGET ORGAN TOXICITY (SINGLE) Product / Ingredient Name tris(2-Chloro-1-methylethyl) phosphate Ethanediol | E EXPOSURE) Category Category 2 Category 3 Category 1 Category 3 Category 3 | | Target organs Central nervous Narcotic effects. Blood system, C Narcotic effects. Respiratory tract | system (CNS entral nervol irritation. | 5). | |
| CARCINOGENICITY Ethanediol REPRODUCTIVE TOXICITY There is no data available. TERATOGENICITY There is no data available. SPECIFIC TARGET ORGAN TOXICITY (SINGLE) Product / Ingredient Name tris(2-Chloro-1-methylethyl) phosphate Ethanediol Triethyl phosphate | E EXPOSURE) Category Category 2 Category 3 Category 1 Category 3 Category 3 Category 2 Category 2 Category 3 | | Target organs Central nervous Narcotic effects. Blood system, C Narcotic effects. Respiratory tract Nervous system. | system (CNS entral nervol irritation. | 5). | |
| Ethanediol REPRODUCTIVE TOXICITY There is no data available. TERATOGENICITY There is no data available. SPECIFIC TARGET ORGAN TOXICITY (SINGLE) Product / Ingredient Name tris(2-Chloro-1-methylethyl) phosphate Ethanediol Triethyl phosphate SPECIFIC TARGET ORGAN TOXICITY (REPEA | E EXPOSURE) Category Category 2 Category 3 Category 1 Category 3 Category 3 Category 2 Category 2 Category 3 | | Target organs Central nervous Narcotic effects. Blood system, C Narcotic effects. Respiratory tract Nervous system. | system (CNS entral nervol irritation. | 5). | |
| Ethanediol REPRODUCTIVE TOXICITY There is no data available. TERATOGENICITY There is no data available. SPECIFIC TARGET ORGAN TOXICITY (SINGLE) Product / Ingredient Name tris(2-Chloro-1-methylethyl) phosphate Ethanediol Triethyl phosphate SPECIFIC TARGET ORGAN TOXICITY (REPEA | Category 2 Category 3 Category 1 Category 3 Category 3 Category 2 Category 3 Category 2 Category 2 Category 3 | | Target organs Central nervous Narcotic effects. Blood system, C Narcotic effects. Respiratory tract Nervous system. Narcotic effects. | system (CNS entral nervol irritation. | 5). | |
| Ethanediol REPRODUCTIVE TOXICITY There is no data available. TERATOGENICITY There is no data available. SPECIFIC TARGET ORGAN TOXICITY (SINGLE) Product / Ingredient Name tris(2-Chloro-1-methylethyl) phosphate Ethanediol Triethyl phosphate SPECIFIC TARGET ORGAN TOXICITY (REPEATE ORGAN | E EXPOSURE) Category Category 2 Category 3 Category 3 Category 3 Category 2 Category 2 Category 2 Category 5 Category 5 Category 6 Category 7 Category 7 Category 7 Category 7 Category 8 | | Target organs Central nervous Narcotic effects. Blood system, C Narcotic effects. Respiratory tract Nervous system. Narcotic effects. Target organs | system (CNs) entral nervol irritation. | 5). | |
| CARCINOGENICITY Ethanediol REPRODUCTIVE TOXICITY There is no data available. TERATOGENICITY There is no data available. SPECIFIC TARGET ORGAN TOXICITY (SINGLE) Product / Ingredient Name tris(2-Chloro-1-methylethyl) phosphate Ethanediol | E EXPOSURE) Category Category 2 Category 3 Category 3 Category 3 Category 2 Category 1 | | Target organs Central nervous Narcotic effects. Blood system, C Narcotic effects. Respiratory tract Nervous system. Narcotic effects. Target organs Liver and thyroid | system (CNs) entral nervol irritation. | 5). | |
| Ethanediol REPRODUCTIVE TOXICITY There is no data available. TERATOGENICITY There is no data available. SPECIFIC TARGET ORGAN TOXICITY (SINGLE) Product / Ingredient Name tris(2-Chloro-1-methylethyl) phosphate Ethanediol Triethyl phosphate SPECIFIC TARGET ORGAN TOXICITY (REPEATE ORGAN | E EXPOSURE) Category Category 2 Category 3 Category 3 Category 3 Category 2 Category 2 Category 3 ATED EXPOSURE) Category 2 Category 2 Category 2 | | Target organs Central nervous Narcotic effects. Blood system, C Narcotic effects. Respiratory tract Nervous system. Narcotic effects. Target organs Liver and thyroid Kidneys and liver | system (CNs) entral nervol irritation. | 5). | |

| Dermal contact. Eye contact. Inhala | ation. Ingestion. | |
|-------------------------------------|--|--|
| POTENTIAL ACUTE HEALTH EFFECTS | S | |
| Eye Contact | Causes serious eye irritation. | |
| Inhalation | May cause damage to organs following a single exposure if inhaled. | |
| Skin Contact | May cause damage to organs following a single exposure if in contact with skin. Causes skin irritation. | |
| Ingestion | May cause damage to organs following a single exposure if swallowed. | |
| SYMPTOMS RELATED TO THE PHYS | ICAL, CHEMICAL AND TOXICOLOGICAL CHARACTERISTICS | |
| Eye Contact | Adverse symptoms may include the following: pain or irritation, watering, redness. | |
| Inhalation | Adverse symptoms may include the following: reduced fetal weight, increase in fetal deaths, skeletal malformations. | |
| Skin Contact | Adverse symptoms may include the following: irritation, redness, reduced fetal weight, increase in fetal deaths, skeletal malformations. | |
| Ingestion | Adverse symptoms may include the following: reduced fetal weight, increase in fetal deaths, skeletal malformations. | |
| DELAYED AND IMMEDIATE EFFECTS | AND ALSO CHRONIC EFFECTS FROM SHORT AND LONG TERM EXPOSURE | |
| SHORT TERM EXPOSURE | | |
| Potential Immediate Effects | No known significant effects or critical hazards. | |
| Potential Delayed Effects | No known significant effects or critical hazards. | |
| LONG TERM EXPOSURE | | |
| Potential Immediate Effects | No known significant effects or critical hazards. | |
| Potential Delayed Effects | No known significant effects or critical hazards. | |
| POTENTIAL CHRONIC HEALTH EFFE | ств | |
| General | May cause damage to organs through prolonged or repeated exposure. | |
| Carcinogenicity | No known significant effects or critical hazards. | |
| Mutagenicity | No known significant effects or critical hazards. | |
| Teratogenicity | Suspected of damaging the unborn child. | |
| Developmental Effects | No known significant effects or critical hazards. | |
| Fertility Effects | Suspected of damaging fertility. | |
| NUMERICAL MEASURES OF TOXICIT | Y - ACUTE TOXICITY ESTIMATES | |
| Route | ATE value | |
| Oral | 6825.51 mg/kg | |
| Inhalation (dusts and mists) | 39.95 mg/l | |

| SECTION 12: ECOLOGICAL INFORMATION | | | | | | |
|------------------------------------|--|--|----------|--|--|--|
| TOXICITY | TOXICITY | | | | | |
| Product / Ingredient Name | Result | Species | Exposure | | | |
| Ethanediol | Acute LC50 6900000 µg/l Fresh water | Crustaceans - ceriodaphnia dubia - neonate | 48 hours | | | |
| | Acute LC50 41000000 μg/l Fresh water | Daphnia - Daphnia magna - Neonate | 48 hours | | | |
| | Acute LC50 8050000 µg/l Fresh water | Fish - Pimephales promelas | 96 hours | | | |
| 2,2' -Oxybisethanol | Acute LC50 75200000 μg/l Marine water | Fish - Pimephales promelas | 96 hours | | | |
| Triethyl phosphate | Acute LC50 2100000 μg/l to 2400000 μg/l Marine water | Fish – Alburnus - alburnus | 96 hours | | | |
| PERSISTENCE AND DEGRADABILITY | | | | | | |
| There is no data available. | | | | | | |
| BIOACCUMULATIVE POTENTIAL | | | | | | |

| Product / Ingredient Name | LogPow | BCF | Potential | |
|--|---|------------|-----------|--|
| tris(2-Chloro-1-methylethyl) phosphate | 2.68 | 0.8 to 2.8 | low | |
| Ethanediol | -1.36 | - | low | |
| 2,2' -Oxybisethanol | -1.98 | 100 | low | |
| Triethyl phosphate | 1.11 | < 1.3 | low | |
| 1,1,3,3-Tetramethylguanidine | 0.41 | - | low | |
| Dibutylbis(dodecylthio)stannane | 3.11 | - | low | |
| MOBILITY IN SOIL | | | | |
| Soil/Water Partition Coefficient (Koc) | Not available. | | | |
| Mobility | Not available. | | | |
| Hazardous to the ozone layer | Not applicable. | | | |
| Other Adverse Effects | No known significant effects or critical hazards. | | | |

SECTION 13: DISPOSAL CONSIDERATIONS

Disposal Methods

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

| SECTION 14: TRANSPORTATION INFORMATION | | | | |
|--|----------------|--|--|--|
| рот | | | | |
| UN Number | Not regulated. | | | |
| UN Proper Shipping Name | - | | | |
| Transport Hazard Class(es) | - | | | |
| Packing Group | - | | | |
| Environmental Hazard | No. | | | |
| Additional Information | - | | | |
| TDG | | | | |
| UN Number | Not regulated. | | | |
| UN Proper Shipping Name | - | | | |
| Transport Hazard Class(es) | - | | | |
| Packing group | - | | | |
| Environmental hazard | No. | | | |
| Additional information | - | | | |
| IMDG | | | | |
| UN Number | Not regulated. | | | |
| UN Proper Shipping Name | - | | | |
| Transport Hazard Class(es) | - | | | |
| Packing Group | - | | | |
| Environmental Hazard | No. | | | |
| Additional Information | - | | | |
| IATA | | | | |

| UN Number | Not regulated. |
|----------------------------|----------------|
| UN Proper Shipping Name | - |
| Transport Hazard Class(es) | - |
| Packing Group | - |
| Environmental Hazard | No. |
| Additional Information | - |

AERG: Not applicable.

| Special Precautions for User | Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage. |
|--|--|
| Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code | Not available. |

| United States | | | | | | |
|--|--|---|-----|----------|------------------------------------|---------|
| U.S. Federal Regulations | TSCA 8(a) PAIR: Octamethylcyclotetrasiloxane, Triethyl phosphate. TSCA 8(a) CDR Exempt/Partial exemption: Not determined. TSCA 8(c) calls for record of SAR: Triethyl phosphate. United States inventory (TSCA 8b): All components are listed or exempted. | | | | | |
| Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) | Listed. | | | | | |
| Clean Air Act Section 602 Class I Substances | Not listed. | | | | | |
| Clean Air Act Section 602 Class II Substances | Not listed. | | | | | |
| DEA List I Chemicals (Precursor Chemicals) | Not listed. | | | | | |
| DEA List II Chemicals (Essential Chemicals) | Not listed. | | | | | |
| SARA 302/304 | No products | s were found. | | | | |
| SARA 304 RQ | Not applical | ole. | | | | |
| SARA 311/312 | | | | | | |
| Classification | | Immediate (acute) health hazard. Delayed (chronic) health hazard. | | | | |
| COMPOSITION/INFORMATION ON INGREDI | ENTS | | | | | |
| Product / Ingredient Name | | | | | Delayed (Chronic) Health Hazard | |
| tris(2-Chloro-1-methylethyl) phosphate | ≥5.0- ≤10 | No. | No. | No. | Yes. | No. |
| Ethanediol | ≥1 - ≤5 | No. | No. | No. | Yes. | No. |
| Triethyl phosphate | ≥1 - ≤5 | No. | No. | No. | Yes. | No. |
| 2,2' -Oxybisethanol | ≥1 - ≤5 | No. | No. | No. | Yes. | No. |
| 1,1,3,3-Tetramethylguanidine | ≥0.1 - ≤5 | Yes | No. | No. | Yes. | No. |
| Dibutylbis(dodecylthio)stannane | ≥0.1 - ≤5 | No. | No. | No. | Yes. | Yes. |
| SARA 313 | | _ ' | | | | |
| | Product Na | me | | CAS# | | % |
| Form R - Reporting requirements | Ethanediol | | | 107-21-1 | | ≥1 - ≤5 |
| Supplier notification | Ethanediol 107-21-1 ≥1 - ≤5 | | | | | |

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

| STATE REGULATIONS | | | | |
|-----------------------|--|--|--|--|
| Massachusetts | The following components are listed: Ethanediol. | | | |
| New York | The following components are listed: Ethanediol, Triethyl phosphate. | | | |
| New Jersey | The following components are listed: Ethanediol, Triethyl phosphate. | | | |
| Pennsylvania | The following components are listed: Ethanediol; 2,2' –Oxybisethanol, Triethyl phosphate. | | | |
| California Prop. 65 | | | | |
| | n expose you to chemicals including Ethanediol, which are known to the state of California to cause birth defects nore information go to www.P65Warnings.ca.gov. | | | |
| CANADA | | | | |
| CANADIAN LISTS | | | | |
| Canadian NPRI | The following components are listed: Ethanediol. | | | |
| CEPA Toxic Substances | The following component are listed: trans-1-Chloro-3,3,3-trifluoropropene. | | | |
| Canada Inventory | All components are listed or exempted. | | | |

| SECTION 16: OTHER INFORMATI | ON | | | |
|---------------------------------|--|---|--|--|
| PROCEDURE USED TO DERIVE THE CL | ASSIFICATION | | | |
| Classification Justification | | | | |
| kidneys) – Category 2 | FATION - Category 2A - Category 2 child) - Category 2 Y - SINGLE EXPOSURE (blood system, central nervous system (CNS), Y - REPEATED EXPOSURE (kidneys, liver) - Category 2 | Calculation method. | | |
| HISTORY | | | | |
| Prepared by | Huntsman Building Solutions – EHS Dept. | | | |
| Preparation Date (y-m-d) | 2021-03-17 | | | |
| Current Issue Date (y-m-d) | 2021-03-17 | | | |
| KEY TO ABBREVIATIONS | | | | |
| ATE | Acute Toxicity Estimate | | | |
| BCF | Bioconcentration Factor | | | |
| GHS | Globally Harmonized System of Classification and Labelling of Chemicals | | | |
| IATA | International Air Transport Association | | | |
| IBC | Intermediate Bulk Container | | | |
| IMDG | International Maritime Dangerous Goods | | | |
| LogPow | Logarithm of the octanol/water partition coefficient | | | |
| MARPOL 73/78 | International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) | | | |
| UN | United Nations | | | |

Notice to reader:

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