

hydrolysate Safety Data Sheet SIA0200.2 Date of issue: 01/13/2015 Version: 1.0

| SECTION 1: Identification of the sub  | ostance/mixture and of the company/undertaking   |
|---|--|
| 1.1. Product identifier   |  |
| Product form  | : Substance  |
| Physical state  | : Liquid   |
| Substance name  | : (3-ACRYLOXYPROPYL)TRIMETHOXYSILANE, oligomeric hydrolysate   |
| Product code  | : SIA0200.2  |
| Synonyms  | : POLY((3-ACRYLOXYPROPYL)METHOXYSILOXANE)  |
| Chemical family   | : ORGANOMETHOXYSILANE  |
| •   |  |
|   | stance or mixture and uses advised against   |
| Use of the substance/mixture  | : Chemical intermediate<br>For research use only   |
| 1.3. Details of the supplier of the safety  | data sheet   |
| <b>GELEST, INC.</b><br>11 East Steel Road<br>Morrisville, PA 19067<br><b>USA</b><br>T 215-547-1015 - F 215-547-2484 - (M-F): 8:00 | AM - 5:30 PM EST   |
| info@gelest.com - www.gelest.com  |  |
| 1.4. Emergency telephone number   |  |
| Emergency number  | : CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)  |
| SECTION 2: Hazards identification   |  |
| 2.1. Classification of the substance or n   | nixture  |
|   |  |
| Classification (GHS-US)   |  |
| Skin Irrit. 2 H315<br>Eye Irrit. 2A H319  |  |
|   |  |
| Full text of H-phrases: see section 16  |  |
|   |  |
| 2.2. Label elements   |  |
| GHS-US labeling   |  |
| Hazard pictograms (GHS-US)  | :<br>GHS07   |
| Signal word (GHS-US)  | : Warning  |
| Hazard statements (GHS-US)  | : H315 - Causes skin irritation  |
|   | H319 - Causes serious eye irritation   |
| Precautionary statements (GHS-US)   | <ul> <li>P280 - Wear protective gloves/protective clothing/eye protection/face protection</li> <li>P264 - Wash hands thoroughly after handling</li> <li>P302+P352 - If on skin: Wash with plenty of water</li> <li>P332+P313 - If skin irritation occurs: Get medical advice/attention</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>P337+P313 - If eye irritation persists: Get medical advice/attention</li> <li>P362 - Take off contaminated clothing and wash before reuse</li> </ul> |
| 2.3. Other hazards  |  |
| No additional information available   |  |
| 2.4. Unknown acute toxicity (GHS-US)  |  |
| No data available   |  |
| <b>SECTION 3: Composition/informatic</b>  | on on ingredients  |
| 3.1. Substance  |  |
| Substance type  | : Mono-constituent   |
| Name  | : (3-ACRYLOXYPROPYL)TRIMETHOXYSILANE, oligomeric hydrolysate   |
| CAS No  | : Not found  |
| <del>_</del>  |  |

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| Name   | Product identifier | %    | Classification (GHS-US)  |
|--|--------------------|------|--|
| (3-Acryloxypropyl)trimethoxysilane, oligomeric hydrolysate | (CAS No) Not found | > 95 | Skin Irrit. 2, H315<br>Eye Irrit. 2A, H319   |
| Methanol   | (CAS No) 67-56-1   |      | Flam. Liq. 2, H225<br>Acute Tox. 3 (Oral), H301<br>Acute Tox. 3 (Dermal), H311<br>Acute Tox. 3 (Inhalation:vapour),<br>H331<br>Skin Irrit. 2, H315<br>Eye Dam. 1, H318<br>STOT SE 1, H370<br>STOT SE 3, H336 |

#### 3.2. **Mixture** Not applicable

| SECTION 4: First aid measures          |      |   |
|--|------|---|
| 4.1. Description of first aid measures |      |   |
| First-aid measures general             | :    | Remove contaminated clothing and shoes. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If possible show this sheet; if not available show packaging or label.                      |
| First-aid measures after inhalation    | :    | Remove victim to fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, seek medical advice.   |
| First-aid measures after skin contact  | :    | Wash with plenty of soap and water. Get medical advice/attention.   |
| First-aid measures after eye contact   | :    | Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.   |
| First-aid measures after ingestion     | :    | Never give anything by mouth to an unconscious person. Get medical advice/attention.  |
| 4.2. Most important symptoms and effe  | cts, | both acute and delayed  |
| Symptoms/injuries after inhalation     | :    | May cause irritation to the respiratory tract. Overexposure may cause: Coughing. Headache. Nausea.  |
| Symptoms/injuries after skin contact   | :    | Causes skin irritation.   |
| Symptoms/injuries after eye contact    | :    | Causes serious eye irritation.  |
| Symptoms/injuries after ingestion      | :    | Oral toxicity is associated with methanol, the solvent and a hydrolysis product which causes nausea, vomiting, headache, visual effects including blindness.  |
| Chronic symptoms                       | :    | On contact with water this compound liberates methanol which is known to have a chronic effect on the central nervous system. Methanol may effect the central nervous system resulting in persistent or recurring headaches or impaired vision. |

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

NOTE TO PHYSICIAN: This product reacts with water in the acid contents of the stomach to form methanol. The combination of visual disturbances, metabolic acidosis and formic acid in urine is evidence of methanol poisoning. The therapeutic intravenous administration of ethanol (10 mls/hour) allows methanol to be preferentially oxidized and reduces production of methanol metabolites. Acidosis must be treated with intravenous administration of sodium bicarbonate and methanol elimination may be increased by hemodialysis, as indicated. Treatment should be based on blood methanol levels and acid-base balance.

| SECT      | ION 5: Firefighting measures        |     |  |
|-----------|-------------------------------------|-----|--|
| 5.1.      | Extinguishing media                 |     |  |
| Suitable  | extinguishing media                 | :   | Water spray. Foam. Carbon dioxide. Dry chemical.   |
| 5.2.      | Special hazards arising from the su | bst | ance or mixture  |
| Fire haz  | ard                                 | :   | Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame.  |
| 5.3.      | Advice for firefighters             |     |  |
| Firefight | ing instructions                    | :   | Use water spray to cool exposed surfaces. Exercise caution when fighting any chemical fire.  |
| Protecti  | on during firefighting              | :   | Do not enter fire area without proper protective equipment, including respiratory protection.<br>Avoid all eye and skin contact and do not breathe vapor and mist. |

| SECTIO    | SECTION 6: Accidental release measures  |  |  |  |
|-----------|---|--|--|--|
| 6.1.      | Personal precautions, protective equipment and emergency procedures                                     |  |  |  |
|           | For non-emergency personnel<br>cy procedures  | : Evacuate unnecessary personnel.            |  |  |
|           | For emergency responders<br>e equipment   | : Equip cleanup crew with proper protection. |  |  |
| 6.2.      | Environmental precautions   |  |  |  |
| Prevent e | Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. |  |  |  |

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| 6.3. Methods and material Methods for cleaning up |                           | • •                          | s possible, using an absorbent material to collect it. Sweep or container for disposal.                   |
|---|---------------------------|------------------------------|---|
| 6.4. Reference to other                           | sections                  |                              |   |
| See Heading 8. Exposure contr                     | rols and personal protect | ion.                         |   |
| SECTION 7: Handling a                             | nd storage                |                              |   |
| 7.1. Precautions for safe                         | e handling                |                              |   |
| Precautions for safe handling                     |                           | •                            | and do not breathe vapor and mist.  |
| Hygiene measures                                  |                           |                              | ed areas with mild soap and water before eating, drinking or rk. Wash contaminated clothing before reuse. |
| 7.2. Conditions for safe                          | storage, including any    | 5 5                          | ······································  |
| Storage conditions                                |                           | ep container tightly closed. | Store below 5°C.  |
| ncompatible materials                             |                           | isture. Water.               |   |
| Storage area                                      | : Sto                     | re in a well-ventilated plac | e. Store away from heat.  |
| 7.3. Specific end use(s)                          |                           |                              |   |
| No additional information availa                  | able                      |                              |   |
| SECTION 8: Exposure of                            | controls/personal r       | protection                   |   |
| 8.1. Control parameters                           |                           |                              |   |
| Methanol (67-56-1)                                |                           |                              |   |
| USA ACGIH   | ACGIH TWA (ppm)           |                              | 200 ppm   |
| USA ACGIH   | ACGIH STEL (ppm)          |                              | 250 ppm   |
| USA NIOSH   | NIOSH REL (TWA) (n        | ng/m <sup>3</sup> )          | 260 mg/m <sup>3</sup>   |
| USA NIOSH   | NIOSH REL (TWA) (p        |                              | 200 ppm   |
| USA NIOSH   |                           |                              | 325 mg/m <sup>3</sup>   |
|   | NIOSH REL (STEL) (r       |                              |   |
| USA NIOSH   | NIOSH REL (STEL) (        |                              | 250 ppm   |
| USA OSHA  | OSHA PEL (TWA) (m         |                              | 260 mg/m <sup>3</sup>   |
| USA OSHA  | OSHA PEL (TWA) (pp        | om)                          | 200 ppm   |
| USA IDLH  | US IDLH (ppm)             |                              | 6000 ppm  |
| 8.2. Exposure controls                            |                           |                              |   |
| Appropriate engineering contro                    |                           | vide local exhaust or gene   |   |
| Personal protective equipment                     |                           |                              | re. Emergency eye wash fountains and safety showers should<br>nity of any potential exposure.             |
| Hand protection                                   | · Ne                      | oprene or nitrile rubber glo | 195   |
| Eye protection                                    |                           | emical goggles. Contact le   |   |
| Skin and body protection                          |                           | ar suitable protective cloth |   |
| Respiratory protection                            |                           |                              | (black cartridge) respirator.   |
| SECTION 9: Physical a                             | nd chemical prope         | rties                        |   |
| -   | c physical and chemica    |                              |   |
| Physical state                                    | : Liq                     |                              |   |
| Appearance  |                           | ar liquid.                   |   |
| Volecular mass                                    |                           | ) - 1000 g/mol               |   |
| Color   | : Stra                    | aw.                          |   |
| Odor  | : Mile                    | d.                           |   |
| Odor threshold                                    |                           | data available               |   |
| Refractive index                                  |                           | data available               |   |
| oH<br>Deletive eveneration rate (hytu)            |                           | data available               |   |
| Relative evaporation rate (buty                   | ,                         | data available               |   |
| Melting point                                     | : NO<br>: < 0             | data available               |   |
| Freezing point<br>Boiling point                   | -                         | data available               |   |
| Flash point                                       |                           | 21 °C                        |   |
| ····· F -····                                     | 1                         | -                            |   |

Auto-ignition temperature

: No data available

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| Decomposition temperature       | : No data available  |
|---------------------------------|----------------------|
| Flammability (solid, gas)       | : No data available  |
| Vapor pressure                  | : No data available  |
| Relative vapor density at 20 °C | : No data available  |
| Relative density                | : 1.2                |
| VOC content                     | : <5%                |
| Solubility                      | : Reacts with water. |
| Log Pow                         | : No data available  |
| Log Kow                         | : No data available  |
| Viscosity, kinematic            | : 8 - 12 cSt         |
| Viscosity, dynamic              | : No data available  |
| Explosive properties            | : No data available  |
| Oxidizing properties            | : No data available  |
| Explosive limits                | : No data available  |
|                                 |                      |

### 9.2. Other information

No additional information available

| ECTION 10: Stability and reactivity                        |  |
|--|--|
| .1. Reactivity   |  |
| additional information available                           |  |
| .2. Chemical stability                                     |  |
| able in sealed containers.                                 |  |
| .3. Possibility of hazardous reactions                     |  |
| eacts with water and moisture in air, liberating methanol. |  |
| .4. Conditions to avoid                                    |  |
| eat. Open flame. Sparks.                                   |  |
| .5. Incompatible materials                                 |  |
| bisture. Water.  |  |
| .6. Hazardous decomposition products                       |  |
| ethanol. Organic acid vapors.                              |  |
| ECTION 11: Toxicological information                       |  |

#### 11.1. Information on toxicological effects

| Acute toxicity                                     | : Not classified   |
|--|--|
| Methanol (67-56-1)                                 |  |
| LD50 oral rat                                      | 6200 mg/kg   |
| LD50 dermal rabbit                                 | 20 g/kg  |
| LC50 inhalation rat (ppm)                          | 22500 ppm (Exposure time: 8 h)   |
| ATE US (oral)                                      | 100.000 mg/kg body weight  |
| ATE US (dermal)                                    | 300.000 mg/kg body weight  |
| ATE US (vapors)                                    | 3.000 mg/l/4h  |
| Skin corrosion/irritation                          | : Causes skin irritation.  |
| Serious eye damage/irritation                      | : Causes serious eye irritation.   |
| Respiratory or skin sensitization                  | : Not classified   |
| Germ cell mutagenicity                             | : Not classified   |
| Carcinogenicity                                    | : Not classified   |
| Reproductive toxicity                              | : Not classified   |
| Specific target organ toxicity (single exposure)   | : Not classified   |
| Specific target organ toxicity (repeated exposure) | : Not classified   |
| Aspiration hazard                                  | : Not classified   |
| Symptoms/injuries after inhalation                 | : May cause irritation to the respiratory tract. Overexposure may cause: Coughing. Headache. Nausea.   |
| Symptoms/injuries after skin contact               | : Causes skin irritation.  |
| Symptoms/injuries after eye contact                | : Causes serious eye irritation.   |
| Symptoms/injuries after ingestion                  | : Oral toxicity is associated with methanol, the solvent and a hydrolysis product which causes nausea, vomiting, headache, visual effects including blindness. |
| 01/13/2015   | EN (English LIS) SDS ID: <b>SIA0200.2</b> 4/9  |

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| Chronic symptoms  | On contact with water this compound liberates methanol which is known to have a chronic effect on the central nervous system. Methanol may effect the central nervous system resulting in persistent or recurring headaches or impaired vision.   |
|---|---|
| Reason for classification   | Expert judgment   |
| SECTION 12: Ecological information  |   |
| 12.1. Toxicity  |   |
| Methanol (67-56-1)  |   |
| LC50 fish 1   | 28200 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])  |
| LC50 fish 2   | > 100 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])  |
| 12.2. Persistence and degradability   |   |
| No additional information available   |   |
| 12.3. Bioaccumulative potential   |   |
| Methanol (67-56-1)  |   |
| BCF fish 1  | < 10  |
| Log Pow   | -0.77   |
| 12.4. Mobility in soil  |   |
| No additional information available   |   |
| 12.5. Other adverse effects   |   |
|   | This substance may be hazardous to the environment.   |
|   | No additional information available   |
|   | No known ecological damage caused by this product.  |
| Effect on the global warming  | . No known ecological damage caused by this product.  |
| <b>SECTION 13: Disposal considerations</b>  |   |
| 13.1. Waste treatment methods   |   |
| Waste disposal recommendations  | May be incinerated. Dispose in a safe manner in accordance with local/national regulations.   |
| Ecology - waste materials   | : Avoid release to the environment.   |
| SECTION 14: Transport information   |   |
| 14.1. UN number   |   |
| Not regulated for transport.  |   |
| 14.2. UN proper shipping name   |   |
| Not applicable  |   |
| 14.3. Additional information  |   |
| Other information   | No supplementary information available.   |
|   |   |
| Transport by sea  |   |
| No additional information available   |   |
|   |   |
| Air transport<br>No additional information available                                  |   |
|   |   |
| SECTION 15: Regulatory information  |   |
| 15.1. US Federal regulations  |   |
| (3-ACRYLOXYPROPYL)TRIMETHOXYSILANE  |   |
| TSCA Exemption/Exclusion  | CAUTION: This material is supplied for research and development purposes subject to the R&D exemption under TSCA, 40 CFR 720.36, and must meet the requirements of the exemption, including supervision by a "technically qualified individual" as defined by 40 CFR 720.3(ee). The use of this material for "commercial purposes" as defined by 40 CFR 720.3(r) is not permitted in the United States. |
| Methanol (67-56-1)  |   |
| Listed on the United States TSCA (Toxic Substan                                       | nces Control Act) inventory   |
| Listed on United States SARA Section 313  | 1.0.%   |
| SARA Section 313 - Emission Reporting<br>(3-Acryloxypropyl)trimethoxysilane, oligomer | 1.0 %   |
| Not listed on the United States TSCA (Toxic Sub                                       |   |
| 15.2. International regulations   |   |
|   |   |

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| Methanol (67-56-1)   |  |
|--|--|
| Listed on the AICS (Australian Inventory of Chemical Substances)                                   |  |
| Listed on the Canadian DSL (Domestic Sustances List)   |  |
| Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)          |  |
| Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances) |  |
| Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory                         |  |
| Listed on the Korean ECL (Existing Chemicals List)   |  |
| Listed on NZIoC (New Zealand Inventory of Chemicals)   |  |
| Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)                       |  |
| Japanese Poisonous and Deleterious Substances Control Law  |  |
| Listed on the Canadian IDL (Ingredient Disclosure List)  |  |
| (3-Acryloxypropyl)trimethoxysilane, oligomeric hydrolysate (Not found)                             |  |
|  |  |
| 5.3. US State regulations  |  |

| (3-ACRYLOXYPROPYL)TR  | IMETHOXYSILANE, oligom   | eric hydrolysate(Not found)       |                                 |                            |  |
|---|--|-----------------------------------|---------------------------------|----------------------------|--|
| U.S California - Proposition 65 - Carcinogens List  |  | No                                |                                 |                            |  |
| U.S California - Proposition 65 - Developmental<br>Toxicity   |  | No                                |                                 |                            |  |
| U.S California - Proposition 65 - Reproductive<br>Toxicity - Female   |  | No                                |                                 |                            |  |
| U.S California - Propositio<br>Toxicity - Male  | n 65 - Reproductive  | No                                |                                 |                            |  |
| Methanol (67-56-1)  |  |                                   |                                 |                            |  |
| U.S California -  | U.S California -   | U.S California -                  | U.S California -                | No significance risk level |  |
| Proposition 65 -  | Proposition 65 -   | Proposition 65 -                  | Proposition 65 -                | (NSRL)                     |  |
| Carcinogens List  | Developmental Toxicity   | Reproductive Toxicity -<br>Female | Reproductive Toxicity -<br>Male | ( - )                      |  |
| No  | Yes  | No                                | No                              |                            |  |
| (3-Acryloxypropyl)trimethe  | oxysilane, oligomeric hydro  | lysate (Not found)                |                                 |                            |  |
| U.S California -  | U.S California -   | U.S California -                  | U.S California -                | No significance risk level |  |
| Proposition 65 -  | Proposition 65 -   | Proposition 65 -                  | Proposition 65 -                | (NSRL)                     |  |
| Carcinogens List  | Developmental Toxicity   | Reproductive Toxicity -<br>Female | Reproductive Toxicity -<br>Male |                            |  |
| No  | No   | No                                | No                              |                            |  |
|   |  |                                   |                                 |                            |  |
| Methanol (67-56-1)  | n 65 - Maximum Allowable Do  |                                   |                                 |                            |  |
| U.S California - Fropositio   | - Toxic Air Contaminants - No  | on-Cancer Acute                   |                                 |                            |  |
|   | - Toxic Air Contaminants - No  |                                   |                                 |                            |  |
|   | Contaminant List (AB 1807, A   |                                   |                                 |                            |  |
|   |  | al Products, Off-Specification Sp | pecies, Container and Spill Re  | sidues                     |  |
|   | ous Air Pollutants - HLVs (30  |                                   |                                 |                            |  |
|   | ous Air Pollutants - HLVs (8 h   | r)                                |                                 |                            |  |
| U.S Connecticut - Volatile  |  |                                   |                                 |                            |  |
|   | Discharge Requirements - Re  |                                   |                                 |                            |  |
|   | enic Toxic Air Pollutants - Act  | ceptable Ambient Concentrations   | 5                               |                            |  |
| U.S Idaho - Occupational  |  |                                   |                                 |                            |  |
| U.S Illinois - Toxic Air Con  |  |                                   |                                 |                            |  |
| U.S Louisiana - Reportabl   | e Quantity List for Pollutants   |                                   |                                 |                            |  |
| U.S Maine - Air Pollutants  |  |                                   |                                 |                            |  |
| U.S Maine - Chemicals of  | 0  |                                   |                                 |                            |  |
| U.S Massachusetts - Allow   |  | $nc (\Lambda T C c)$              |                                 |                            |  |
|   | vable Threshold Concentratio   |                                   | ation - Reporting Category 1    |                            |  |
|   | U.S Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 1<br>U.S Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 2 |                                   |                                 |                            |  |
|   | Hazardous Material List - Re   |                                   |                                 |                            |  |
| U.S Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 1        |  |                                   |                                 |                            |  |
| U.S Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 2        |  |                                   |                                 |                            |  |
| U.S Massachusetts - Right To Know List  |  |                                   |                                 |                            |  |
| U.S Massachusetts - Threshold Effects Exposure Limits (TELs)  |  |                                   |                                 |                            |  |
| U.S Massachusetts - Toxics Use Reduction Act<br>U.S Michigan - Occupational Exposure Limits - Skin Designations |  |                                   |                                 |                            |  |
| U.S Michigan - Occupational Exposure Limits - SKII Designations   |  |                                   |                                 |                            |  |
| U.S Michigan - Occupational Exposure Limits - TWAs  |  |                                   |                                 |                            |  |
| U.S Michigan - Polluting M  |  |                                   |                                 |                            |  |
| U.S Minnesota - Chemical  | s of High Concern  |                                   |                                 |                            |  |
| U.S Minnesota - Groundw   |  |                                   |                                 |                            |  |
| U.S Minnesota - Hazardou  |  |                                   |                                 |                            |  |
| U.S Minnesota - Permissit   | U.S Minnesota - Permissible Exposure Limits - Skin Designations  |                                   |                                 |                            |  |

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| hanol (67-56-1)  |                                    |  |
|--|------------------------------------|--|
| Minnesota - Permissible Exposure Limits - STELs  |                                    |  |
| Minnesota - Permissible Exposure Limits - TWAs   |                                    |  |
| New Hampshire - Regulated Toxic Air Pollutants - Am  | ibient Air Levels (AALs) - 24-Hour |  |
| New Hampshire - Regulated Toxic Air Pollutants - Am  |                                    |  |
| New Jersey - Discharge Prevention - List of Hazardou   | us Substances                      |  |
| New Jersey - Environmental Hazardous Substances I  | List                               |  |
| New Jersey - Right to Know Hazardous Substance List  | st                                 |  |
| New Jersey - Special Health Hazards Substances Lis   | t                                  |  |
| U.S New Jersey - Water Quality - Ground Water Quality Criteria   |                                    |  |
| U.S New Jersey - Water Quality - Practical Quantitation Levels (PQLs)  |                                    |  |
| New York - Occupational Exposure Limits - Skin Desi  | gnations                           |  |
| New York - Occupational Exposure Limits - TWAs   |                                    |  |
| U.S New York - Reporting of Releases Part 597 - List of Hazardous Substances   |                                    |  |
| U.S North Dakota - Air Pollutants - Guideline Concentrations - 1-Hour  |                                    |  |
| U.S North Dakota - Air Pollutants - Guideline Concentrations - 8-Hour  |                                    |  |
| U.S North Dakota - Hazardous Wastes - Discarded Chemical Products, Off-Specification Species, Container and Spill Residues |                                    |  |
| U.S Oregon - Permissible Exposure Limits - TWAs  |                                    |  |
| U.S Pennsylvania - RTK (Right to Know) - Environmental Hazard List   |                                    |  |
| Pennsylvania - RTK (Right to Know) List  |                                    |  |
| U.S Rhode Island - Air Toxics - Acceptable Ambient Levels - 1-Hour   |                                    |  |
| U.S Rhode Island - Air Toxics - Acceptable Ambient Levels - Annual   |                                    |  |
| U.S South Carolina - Toxic Air Pollutants - Maximum Allowable Concentrations   |                                    |  |
| U.S South Carolina - Toxic Air Pollutants - Pollutant Categories   |                                    |  |
| Tennessee - Occupational Exposure Limits - Skin Des  | signations                         |  |
| - Tennessee - Occupational Exposure Limits - STELs   |                                    |  |
| - Tennessee - Occupational Exposure Limits - TWAs  |                                    |  |
| - Texas - Effects Screening Levels - Long Term   |                                    |  |
| - Texas - Effects Screening Levels - Short Term  |                                    |  |
| Vermont - Permissible Exposure Limits - Skin Designa   | ations                             |  |
| - Vermont - Permissible Exposure Limits - STELs  |                                    |  |
| Vermont - Permissible Exposure Limits - TWAs   | I Draduate List                    |  |
| - Washington - Dangerous Waste - Discarded Chemica   |                                    |  |
| - Washington - Permissible Exposure Limits - Skin Des  | ignations                          |  |
| - Washington - Permissible Exposure Limits - STELs   |                                    |  |
| Washington - Permissible Exposure Limits - TWAs  |                                    |  |

### SECTION 16: Other information

Abbreviations and acronyms

Abbreviations: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal Concentration; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: millimeters Hg, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: threshold limit value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety and Health; IARC: International Agency for Research on Cancer; NTP: National Toxicology Program; HMIS: Hazardous Material Information System; CAS No.: Chemcial Abstract Service Registration Number; EC No.: European Commission Registration Number; EC Index No.: European Commission Index Number; OECD: The Organisation for Economic Co-operation and Development.

#### Full text of H-phrases::

| Acute Tox. 3 (Dermal)            | Acute toxicity (dermal) Category 3                          |
|----------------------------------|---|
| Acute Tox. 3 (Inhalation:vapour) | Acute toxicity (inhalation:vapor) Category 3                |
| Acute Tox. 3 (Oral)              | Acute toxicity (oral) Category 3                            |
| Eye Dam. 1                       | Serious eye damage/eye irritation Category 1                |
| Eye Irrit. 2A                    | Serious eye damage/eye irritation Category 2A               |
| Flam. Liq. 2                     | Flammable liquids Category 2                                |
| Skin Irrit. 2                    | Skin corrosion/irritation Category 2                        |
| STOT SE 1                        | Specific target organ toxicity (single exposure) Category 1 |
| STOT SE 3                        | Specific target organ toxicity (single exposure) Category 3 |
| H225                             | Highly flammable liquid and vapor                           |
| H301                             | Toxic if swallowed  |
| H311                             | Toxic in contact with skin                                  |
| H315                             | Causes skin irritation                                      |
| H318                             | Causes serious eye damage                                   |
| H319                             | Causes serious eye irritation                               |
| H331                             | Toxic if inhaled  |
| H336                             | May cause drowsiness or dizziness                           |
| H370                             | Causes damage to organs                                     |
|                                  |   |

Safety Data Sheet

| HMIS III Rating |   |
|-----------------|---|
| Health          | : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given |
| Flammability    | : 2 Moderate Hazard   |
| Physical        | : 1 Slight Hazard   |

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