

**TRICHLOROSILANE, 99.9+%**

Safety Data Sheet SIT8155.1

Date of issue: 01/09/2015 Version: 1.0

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Product form	: Substance
Physical state	: Liquid
Substance name	: TRICHLOROSILANE, 99.9+%
Product code	: SIT8155.1
Formula	: Cl <sub>3</sub> HSi
Synonyms	: SILICOCHLOROFORM
Chemical family	: CHLOROSILANE

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

Use of the substance/mixture	: Chemical intermediate For research and industrial use only
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**1.3. Details of the supplier of the safety data sheet****GELEST, INC.**11 East Steel Road  
Morrisville, PA 19067**USA**

T 215-547-1015 - F 215-547-2484 - (M-F): 8:00 AM - 5:30 PM EST

[info@gelest.com](mailto:info@gelest.com) - [www.gelest.com](http://www.gelest.com)**1.4. Emergency telephone number**

Emergency number	: CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)
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**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Classification (GHS-US)**

Flam. Liq. 1	H224
Pyr. Liq. 1	H250
Acute Tox. 4 (Oral)	H302
Acute Tox. 4 (Inhalation:vapour)	H332
Skin Corr. 1A	H314
Eye Dam. 1	H318

Full text of H-phrases: see section 16

**2.2. Label elements****GHS-US labeling**

Hazard pictograms (GHS-US)



GHS02

GHS05

GHS07

Signal word (GHS-US)

: Danger

Hazard statements (GHS-US)

: H224 - Extremely flammable liquid and vapor  
 H250 - Catches fire spontaneously if exposed to air  
 H302+H332 - Harmful if swallowed or if inhaled  
 H314 - Causes severe skin burns and eye damage  
 H318 - Causes serious eye damage

Precautionary statements (GHS-US)

: P280 - Wear protective gloves/protective clothing/eye protection/face protection  
 P210 - Keep away from heat, sparks, open flames. - No smoking  
 P222 - Do not allow contact with air  
 P240 - Ground/bond container and receiving equipment  
 P241 - Use explosion-proof electrical equipment  
 P242 - Use only non-sparking tools  
 P243 - Take precautionary measures against static discharge  
 P260 - Do not breathe vapors  
 P264 - Wash hands thoroughly after handling  
 P270 - Do not eat, drink or smoke when using this product  
 P271 - Use only outdoors or in a well-ventilated area  
 P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting  
 P301+P312 - If swallowed: Call a doctor if you feel unwell

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P302+P334 - If on skin: Immerse in cool water/wrap with wet bandages  
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower  
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing  
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P310 - Immediately call a doctor  
P363 - Wash contaminated clothing before reuse  
P370+P378 - In case of fire: Use foam, carbon dioxide, dry chemical to extinguish  
P403+P235 - Keep in a cool place  
P405 - Store locked up  
P422 - Store contents under dry inert atmosphere  
P501 - Dispose of contents/container to licensed waste disposal facility.

### 2.3. Other hazards

Other hazards not contributing to the classification : NOTE: Material may form a siloxane polymer on the skin, eyes or in the lungs.

### 2.4. Unknown acute toxicity (GHS-US)

No data available

## SECTION 3: Composition/information on ingredients

### 3.1. Substance

Substance type : Mono-constituent  
Name : TRICHLOROSILANE, 99.9+%  
CAS No : 10025-78-2  
EC no : 233-042-5  
EC index no : 014-001-00-9

Name	Product identifier	%	Classification (GHS-US)
Trichlorosilane	(CAS No) 10025-78-2	> 99	Flam. Liq. 1, H224 Pyr. Liq. 1, H250 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation:vapour), H332 Skin Corr. 1A, H314 Eye Dam. 1, H318
Hydrogen chloride	(CAS No) 7647-01-0		Skin Corr. 1A, H314 Eye Dam. 1, H318

### 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. Get medical advice/attention if you feel unwell.

First-aid measures after skin contact : Wash with plenty of soap and water. Get immediate 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 if you feel unwell.

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

Symptoms/injuries : Causes severe skin burns and eye damage.

Symptoms/injuries after inhalation : Harmful if inhaled. May cause respiratory irritation. Danger of serious damage to health by prolonged exposure through inhalation.

Symptoms/injuries after skin contact : Causes (severe) skin burns.

Symptoms/injuries after eye contact : Causes serious eye damage.

Symptoms/injuries after ingestion : Harmful if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

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

No additional information available

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### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media : Alcohol-resistant foam. Carbon dioxide. Dry chemical. Use of high expansion foam (100:1) is recommended to cover flames.

Unsuitable extinguishing media : Water.

#### 5.2. Special hazards arising from the substance or mixture

Fire hazard : Extremely flammable liquid and vapor. Catches fire spontaneously if exposed to air. Irritating fumes of hydrogen chloride and organic acid vapors may develop when material is exposed to water or open flame.

Explosion hazard : May form flammable/explosive vapor-air mixture.

#### 5.3. Advice for firefighters

Firefighting instructions : Use only dry media to extinguish flames. Water spray or fog should only be used to knock down hydrogen chloride vapors in areas downwind from the fire. In case of fire: Stop leak if safe to do so. Exercise caution when fighting any chemical fire.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Avoid all eye and skin contact and do not breathe vapor and mist.

### SECTION 6: Accidental release measures

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

General measures : Eliminate every possible source of ignition. Use special care to avoid static electric charges.

##### 6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

##### 6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Stop release.

#### 6.2. Environmental precautions

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

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

Methods for cleaning up : Clean up any spills as soon as possible, using an absorbent material to collect it. Sweep or shovel spills into appropriate container for disposal. Use only non-sparking tools.

#### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Additional hazards when processed : Catches fire spontaneously if exposed to air. Handle empty containers with care because residual vapors are flammable.

Precautions for safe handling : Avoid all eye and skin contact and do not breathe vapor and mist. Containers must be properly grounded before beginning transfer. Open carefully. Provide good ventilation in process area to prevent accumulation of vapors. Take precautionary measures against static discharge. Use only outdoors or in a well-ventilated area. Use only non-sparking tools.

Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse.

#### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Ground/bond container and receiving equipment. Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof electrical equipment.

Storage conditions : Keep container tightly closed. Store in sealed containers under dry inert atmosphere. Containers can generate pressure during storage.

Incompatible materials : Acids. Alcohols. Oxidizing agent. Moisture. Water.

Storage area : Store in a well-ventilated place. Store away from heat.

#### 7.3. Specific end use(s)

No additional information available

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

Hydrogen chloride (7647-01-0)		
USA ACGIH	ACGIH Ceiling (ppm)	2 ppm
USA NIOSH	NIOSH REL (ceiling) (mg/m <sup>3</sup> )	7 mg/m <sup>3</sup>

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### Hydrogen chloride (7647-01-0)

USA NIOSH	NIOSH REL (ceiling) (ppm)	5 ppm
USA OSHA	OSHA PEL (Ceiling) (mg/m <sup>3</sup> )	7 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (Ceiling) (ppm)	5 ppm
USA IDLH	US IDLH (ppm)	50 ppm

### 8.2. Exposure controls

Appropriate engineering controls	: Provide local exhaust or general room ventilation.
Personal protective equipment	: Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.
Hand protection	: Neoprene or nitrile rubber gloves.
Eye protection	: Chemical goggles or face shield. (Viton recommended). Contact lenses should not be worn.
Skin and body protection	: Wear suitable protective clothing.
Respiratory protection	: NIOSH-certified combination organic vapor/acid gas (yellow cartridge) respirator.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Clear liquid.
Molecular mass	: 135.45 g/mol
Color	: Straw.
Odor	: Acrid. Similar to hydrogen chloride.
Odor threshold	: No data available
Refractive index	: 1.4020
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: 40
Melting point	: No data available
Freezing point	: -128 °C
Boiling point	: 31.9 °C
Flash point	: -13 °C
Critical temperature	: 234 °C
Auto-ignition temperature	: 215 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: Extremely flammable liquid and vapor, Catches fire spontaneously if exposed to air
Vapor pressure	: 400 mm Hg @ 14.5 °C
Critical pressure	: 37 atm
Relative vapor density at 20 °C	: > 1
Relative density	: 1.3417
VOC content	: > 75 %
Solubility	: Reacts violently with water.
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: 0.23 cSt @ 25°C
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: 6.9 - 70 vol % (lower; upper)

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Stable in sealed containers stored under a dry inert atmosphere.

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### 10.3. Possibility of hazardous reactions

Reacts with water and moisture in air, liberating hydrogen chloride. Platinum, platinum and iron salts and other Lewis acids can cause generation of flammable hydrogen gas in the presence of moisture. Forms impact sensitive explosive mixtures with potassium permanganate.

### 10.4. Conditions to avoid

Heat. Open flame. Sparks.

### 10.5. Incompatible materials

Alcohols. Acids. Moisture. Oxidizing agent. Water.

### 10.6. Hazardous decomposition products

Hydrogen chloride. Organic acid vapors.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed. Inhalation:vapour: Harmful if inhaled.

Trichlorosilane (10025-78-2)	
LD50 oral rat	1030 mg/kg
LC50 inhalation rat (ppm)	2767 ppm/1h
LC50 inhalation mouse (2 h)	1500 mg/m <sup>3</sup>
ATE US (oral)	1030.000 mg/kg body weight
ATE US (gases)	1383.500 ppmV/4h
ATE US (vapors)	11.000 mg/l/4h
Hydrogen chloride (7647-01-0)	
LD50 oral rat	238 - 277 mg/kg
LD50 dermal rabbit	> 5010 mg/kg
LC50 inhalation rat (mg/l)	1.68 mg/l (Exposure time: 1 h)
ATE US (oral)	238.000 mg/kg body weight
ATE US (vapors)	1.680 mg/l/4h
ATE US (dust, mist)	1.680 mg/l/4h
Skin corrosion/irritation	: Causes severe skin burns and eye damage.
Serious eye damage/irritation	: Causes serious eye damage.
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified

Hydrogen chloride (7647-01-0)	
IARC group	3 - Not classifiable
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	: Harmful if inhaled. May cause respiratory irritation. Danger of serious damage to health by prolonged exposure through inhalation.
Symptoms/injuries after skin contact	: Causes (severe) skin burns.
Symptoms/injuries after eye contact	: Causes serious eye damage.
Symptoms/injuries after ingestion	: Harmful if swallowed. Swallowing a small quantity of this material will result in serious health hazard.
Reason for classification	: Expert judgment

## SECTION 12: Ecological information

### 12.1. Toxicity

No additional information available

### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

No additional information available

### 12.4. Mobility in soil

No additional information available

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### 12.5. Other adverse effects

Other adverse effects : This substance may be hazardous to the environment.  
Effect on ozone layer : No additional information available  
Effect on the global warming : No known ecological damage caused by this product.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility.  
Additional information : Handle empty containers with care because residual vapors are flammable.  
Ecology - waste materials : Avoid release to the environment.

## SECTION 14: Transport information

### 14.1. UN number

UN-No.(DOT) : 1295  
DOT NA no. : UN1295

### 14.2. UN proper shipping name

Proper Shipping Name (DOT) : Trichlorosilane  
Department of Transportation (DOT) Hazard Classes : 4.3 - Class 4.3 - Dangerous when wet material 49 CFR 173.124  
Hazard labels (DOT) : 4.3 - Dangerous when wet  
3 - Flammable liquid  
8 - Corrosive



Packing group (DOT) : I - Great Danger  
DOT Packaging Exceptions (49 CFR 173.xxx) : None  
DOT Packaging Non Bulk (49 CFR 173.xxx) : 201  
DOT Packaging Bulk (49 CFR 173.xxx) : 244

### 14.3. Additional information

Emergency Response Guide (ERG) Number : 139  
Other information : No supplementary information available.

### Transport by sea

DOT Vessel Stowage Location : D - The material must be stowed "on deck only" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers or one passenger per each 3 m of overall vessel length, but the material is prohibited on passenger vessels in which the limiting number of passengers is exceeded.  
DOT Vessel Stowage Other : 21 - Segregation same as for flammable liquids, 28 - Stow "away from" flammable liquids, 40 - Stow "clear of living quarters", 49 - Stow "away from" corrosives, 100 - Stow "away from" flammable solids

### Air transport

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : Forbidden  
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : Forbidden

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

<b>Trichlorosilane (10025-78-2)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Hydrogen chloride (7647-01-0)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on the United States SARA Section 302 Listed on United States SARA Section 313	
SARA Section 302 Threshold Planning Quantity (TPQ)	500 (gas only)

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### Trichlorosilane (10025-78-2)

SARA Section 313 - Emission Reporting	1.0 % (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size)
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### 15.2. International regulations

#### Trichlorosilane (10025-78-2)

Listed on the AICS (Australian Inventory of Chemical Substances)  
Listed on the Canadian DSL (Domestic Substances 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 ELINCS (European List of Notified 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)

#### Hydrogen chloride (7647-01-0)

Listed on the AICS (Australian Inventory of Chemical Substances)  
Listed on the Canadian DSL (Domestic Substances 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)

### 15.3. US State regulations

#### TRICHLOROSILANE, 99.9+%(10025-78-2)

U.S. - California - Proposition 65 - Carcinogens List	No
U.S. - California - Proposition 65 - Developmental Toxicity	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Female	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No

#### Trichlorosilane (10025-78-2)

U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
No	No	No	No	

#### Hydrogen chloride (7647-01-0)

U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
No	No	No	No	

#### Trichlorosilane (10025-78-2)

U.S. - Delaware - Accidental Release Prevention Regulations - Sufficient Quantities  
U.S. - Delaware - Accidental Release Prevention Regulations - Threshold Quantities  
U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities  
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 1  
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 2  
U.S. - Massachusetts - Oil & Hazardous Material List - Reportable Quantity  
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 - Toxics Use Reduction Act  
U.S. - Michigan - Process Safety Management Highly Hazardous Chemicals  
U.S. - New Jersey - Discharge Prevention - List of Hazardous Substances  
U.S. - New Jersey - Environmental Hazardous Substances List  
U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - New Jersey - Special Health Hazards Substances List  
U.S. - New Jersey - TCPA - Extraordinarily Hazardous Substances (EHS)  
U.S. - Ohio - Accidental Release Prevention - Threshold Quantities

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### Trichlorosilane (10025-78-2)

U.S. - Pennsylvania - RTK (Right to Know) List  
U.S. - Texas - Effects Screening Levels - Long Term  
U.S. - Texas - Effects Screening Levels - Short Term  
U.S. - Wyoming - Process Safety Management - Highly Hazardous Chemicals

### Hydrogen chloride (7647-01-0)

U.S. - California - SCAQMD - Toxic Air Contaminants - Non-Cancer Acute  
U.S. - California - SCAQMD - Toxic Air Contaminants - Non-Cancer Chronic  
U.S. - California - Toxic Air Contaminant List (AB 1807, AB 2728)  
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (30 min)  
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (8 hr)  
U.S. - Delaware - Accidental Release Prevention Regulations - Sufficient Quantities  
U.S. - Delaware - Accidental Release Prevention Regulations - Threshold Quantities  
U.S. - Delaware - Accidental Release Prevention Regulations - Toxic Endpoints  
U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities  
U.S. - Florida - Essential Chemicals List  
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations  
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Emission Levels (ELs)  
U.S. - Idaho - Occupational Exposure Limits - Ceilings  
U.S. - Illinois - Toxic Air Contaminants  
U.S. - Louisiana - Reportable Quantity List for Pollutants  
U.S. - Maine - Air Pollutants - Hazardous Air Pollutants  
U.S. - Massachusetts - Allowable Ambient Limits (AALs)  
U.S. - Massachusetts - Allowable Threshold Concentrations (ATCs)  
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 1  
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 2  
U.S. - Massachusetts - Oil & Hazardous Material List - Reportable Quantity  
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 (TEELs)  
U.S. - Massachusetts - Toxics Use Reduction Act  
U.S. - Michigan - Occupational Exposure Limits - Ceilings  
U.S. - Michigan - Polluting Materials List  
U.S. - Michigan - Process Safety Management Highly Hazardous Chemicals  
U.S. - Minnesota - Chemicals of High Concern  
U.S. - Minnesota - Hazardous Substance List  
U.S. - Minnesota - Permissible Exposure Limits - Ceilings  
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - 24-Hour  
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - Annual  
U.S. - New Jersey - Discharge Prevention - List of Hazardous Substances  
U.S. - New Jersey - Environmental Hazardous Substances List  
U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - New Jersey - Special Health Hazards Substances List  
U.S. - New Jersey - TCPA - Extraordinarily Hazardous Substances (EHS)  
U.S. - New York - Occupational Exposure Limits - Ceilings  
U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances  
U.S. - North Carolina - Control of Toxic Air Pollutants  
U.S. - North Dakota - Air Pollutants - Guideline Concentrations - 1-Hour  
U.S. - Ohio - Accidental Release Prevention - Threshold Quantities  
U.S. - Ohio - Extremely Hazardous Substances - Threshold Quantities  
U.S. - Oregon - Permissible Exposure Limits - Ceilings  
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List  
U.S. - 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  
U.S. - Tennessee - Occupational Exposure Limits - Ceilings  
U.S. - Texas - Effects Screening Levels - Long Term  
U.S. - Texas - Effects Screening Levels - Short Term  
U.S. - Vermont - Permissible Exposure Limits - Ceilings  
U.S. - Washington - Permissible Exposure Limits - Ceilings  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 25 Feet to Less Than 40 Feet  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 40 Feet to Less Than 75 Feet  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 75 Feet or Greater  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights Less Than 25 Feet  
U.S. - Wyoming - Process Safety Management - Highly Hazardous Chemicals

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### 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.: Chemical 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. 4 (Inhalation:vapour)	Acute toxicity (inhalation:vapor) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Flam. Liq. 1	Flammable liquids Category 1
Pyr. Liq. 1	Pyrophoric liquids Category 1
Skin Corr. 1A	Skin corrosion/irritation Category 1A
H224	Extremely flammable liquid and vapor
H250	Catches fire spontaneously if exposed to air
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H332	Harmful if inhaled

#### HMIS III Rating

Health : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given  
Flammability : 4 Severe Hazard  
Physical : 2 Moderate Hazard

Prepared by safety and environmental affairs.

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SDS US (GHS HazCom 2012) - Custom

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