

Safety Data Sheet SIC2295.3
Date of issue: 11/21/2014 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 : ((CHLOROMETHYL)PHENYLETHYL)TRICHLOROSILANE

Product code : SIC2295.3
Formula : C9H10Cl4Si

Synonyms : (TRICHLOROSILYLETHYL)BENZYL CHLORIDE; TRICHLORO[2-

[(CHLOROMETHYL)PHENYL]ETHYL]SILANE

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 use only

#### 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 - 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 mixture

#### **Classification (GHS-US)**

Skin Corr. 1B H314 Eye Dam. 1 H318

Full text of H-phrases: see section 16

## 2.2. Label elements

## **GHS-US** labeling

Hazard pictograms (GHS-US)



GHS05

Signal word (GHS-US) : Dange

Hazard statements (GHS-US) : 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

P260 - Do not breathe vapors

P264 - Wash hands thoroughly after handling

P310 - Immediately call a doctor

P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting

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

P363 - Wash contaminated clothing before reuse

P405 - Store locked up

P501 - Dispose of contents/container to licensed waste disposal facility.

#### 2.3. Other hazards

No additional information available

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

No data available

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### **SECTION 3: Composition/information on ingredients**

#### 3.1. Substance

Substance type : Multi-constituent

Name : ((CHLOROMETHYL)PHENYLETHYL)TRICHLOROSILANE

CAS No : 58274-32-1 EC no : 261-196-3

Name	Product identifier	%	Classification (GHS-US)
Trichloro[2-[(chloromethyl)phenyl]ethyl]silane	(CAS No) 58274-32-1	> 95	Skin Corr. 1B, H314 Eye Dam. 1, H318
Other Organosilanes		< 5	Not classified
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 to fresh air and keep at rest in a position comfortable for breathing. Get medical

advice/attention.

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.

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

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

Symptoms/injuries after inhalation : May cause irritation to the respiratory tract. Overexposure may cause: Coughing. Headache.

Nausea.

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

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

Symptoms/injuries after ingestion : May be harmful if swallowed.

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

No additional information available

### SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Water spray. Foam. Carbon dioxide. Dry chemical.

Unsuitable extinguishing media : Water.

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

Fire hazard : Irritating fumes of hydrochloric acid and organic acid vapors may develop when material is

exposed to water or open flame.

#### 5.3. Advice for firefighters

Firefighting instructions : Use water spray to cool exposed surfaces. 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

### 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.

## 6.2. Environmental precautions

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 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.

#### 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

Precautions for safe handling : Avoid all eye and skin contact and do not breathe vapor and mist. Provide good ventilation in

process area to prevent accumulation of vapors.

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

Storage conditions : Keep container tightly closed.

Incompatible materials : Alcohols. Amines. Oxidizing agent.

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/m³)	7 mg/m³	
USA NIOSH	NIOSH REL (ceiling) (ppm)	5 ppm	
USA OSHA	OSHA PEL (Ceiling) (mg/m³)	7 mg/m³	
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. 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: LiquidAppearance: Clear liquid.Molecular mass: 288.08 g/molColor: Straw.Odor: Acrid.

Odor threshold : No data available
Refractive index : No data available
pH : No data available
Relative evaporation rate (butyl acetate=1) : No data available
Melting point : No data available

Freezing point : < 0 °C

Boiling point :  $111 - 112 \,^{\circ}\text{C} \,^{\circ}\text{Q} \,^{\circ}\text{1.5 mm Hg}$ 

Flash point : > 100 °C

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Flammability (solid, gas) : No data available

Vapor pressure : < 0.5 mm Hg @ 25°C

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Relative vapor density at 20 °C : No data available

Relative density : 1.32

Solubility : Reacts with water. Log Pow : No data available Log Kow No data available Viscosity, kinematic No data available Viscosity, dynamic : No data available : No data available Explosive properties Oxidizing properties : No data available : No data available Explosive limits

#### Other information

No additional information available

### **SECTION 10: Stability and reactivity**

#### Reactivity

No additional information available

#### 10.2. **Chemical stability**

Stable in sealed containers stored under a dry inert atmosphere.

#### Possibility of hazardous reactions

Reacts with water and moisture in air, liberating hydrogen chloride.

#### **Conditions to avoid**

Heat. Open flame. Sparks.

#### Incompatible materials

Alcohols. Amines. Oxidizing agent.

### **Hazardous decomposition products**

Chlorinated hydrocarbons. Organic acid vapors. Silicon dioxide.

## SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

: Not classified Acute toxicity

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)

3 - Not classifiable IARC group

: Not classified Reproductive toxicity Specific target organ toxicity (single exposure) : Not classified Specific target organ toxicity (repeated : Not classified exposure)

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 (severe) skin burns. Symptoms/injuries after eye contact : Causes serious eye damage. Symptoms/injuries after ingestion : May be harmful if swallowed.

Reason for classification : Expert judgment

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## **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

#### 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 : May be incinerated. Dispose in a safe manner in accordance with local/national regulations.

Dispose of contents/container to licensed waste disposal facility.

Ecology - waste materials : Avoid release to the environment.

## **SECTION 14: Transport information**

#### 14.1. UN number

UN-No.(DOT) : 2987 DOT NA no. UN2987

## 14.2. UN proper shipping name

Proper Shipping Name (DOT) : Chlorosilanes, corrosive, n.o.s.

(((CHLOROMETHYL)PHENYLETHYL)TRICHLOROSILANE)

8 - Class 8 - Corrosive material 49 CFR 173.136

Department of Transportation (DOT) Hazard

Classes

Hazard labels (DOT) : 8 - Corrosive



Packing group (DOT) : II - Medium Danger

DOT Packaging Exceptions (49 CFR 173.xxx) : None DOT Packaging Non Bulk (49 CFR 173.xxx) : 206 DOT Packaging Bulk (49 CFR 173.xxx) : 242

#### 14.3. Additional information

Other information : No supplementary information available.

## Transport by sea

DOT Vessel Stowage Location : C - The material must be stowed "on deck only" on a cargo vessel and on a passenger vessel.

DOT Vessel Stowage Other : 40 - Stow "clear of living quarters"

Air transport

DOT Quantity Limitations Passenger aircraft/rail : Forbidden

(49 CFR 173.27)

DOT Quantity Limitations Cargo aircraft only (49 : 30 L

CFR 175.75)

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<b>SECTION 15: Regulatory information</b>		
15.1. US Federal regulations		
((CHLOROMETHYL)PHENYLETHYL)TRICHLO	PROSILANE (58274-32-1)	
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.	
Hydrogen chloride (7647-01-0)		
Listed on the United States TSCA (Toxic Substa Listed on the United States SARA Section 302 Listed on United States SARA Section 313	nces Control Act) inventory	
SARA Section 302 Threshold Planning Quantity (TPQ)	500 (gas only)	
SARA Section 313 - Emission Reporting	1.0 % (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size)	

## Trichloro[2-[(chloromethyl)phenyl]ethyl]silane (58274-32-1)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

#### 15.2. International regulations

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

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)

## Trichloro[2-[(chloromethyl)phenyl]ethyl]silane (58274-32-1)

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

#### 15.3. US State regulations

((CHLOROMETHYL)PHENYLETHYL)TRICHLOROSILANE(58274-32-1)					
U.S California - Proposition	n 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			
Hydrogen chloride (7647-0	1-0)				
U.S California - Proposition 65 - Carcinogens List	U.S California - Proposition 65 - Developmental Toxicity	Pi R	.S California - roposition 65 - eproductive Toxicity - emale	U.S California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
No	No	N	0	No	
Other Organosilanes				<u> </u>	
U.S California - Proposition 65 - Carcinogens List	U.S California - Proposition 65 - Developmental Toxicity	Pi R	.S California - roposition 65 - eproductive Toxicity - emale	U.S California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
No	No	N	0	No	
Trichloro[2-[(chloromethyl)phenyl]ethyl]silane (58274-32-1)					
U.S California - Proposition 65 - Carcinogens List	U.S California - Proposition 65 - Developmental Toxicity	Pi R	.S California - roposition 65 - eproductive Toxicity - emale	U.S California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
No	No	N	0	No	
Hydrogen chloride (7647-01-0)					
U.S California - SCAQMD	- Toxic Air Contaminants - N	Ion-Ca	ancer Acute		

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

#### **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.

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Full text of H-phrases::

Eye Dam. 1	Serious eye damage/eye irritation Category 1
Skin Corr. 1A	Skin corrosion/irritation Category 1A
Skin Corr. 1B	Skin corrosion/irritation Category 1B
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage

#### **HMIS III Rating**

Health : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is

given

Flammability : 1 Slight Hazard
Physical : 1 Slight Hazard

Prepared by safety and environmental affairs.

Date of issue: 11/21/2014 Version: 1.0

SDS US (GHS HazCom 2012) - Custom

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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