

**CHLOROMETHYLTRIETHOXSILANE**

Safety Data Sheet SIC2298.4

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Version: 2.0

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

|                 |   |
|-----------------|---|
| Product form    | : Substance   |
| Physical state  | : Liquid  |
| Substance name  | : CHLOROMETHYLTRIETHOXSILANE                                      |
| Product code    | : SIC2298.4   |
| Formula         | : C7H17ClO3Si   |
| Synonyms        | : TRIETHOXY(CHLOROMETHYL)SILANE; SILANE, (CHLOROMETHYL)TRIETHOXY- |
| Chemical family | : ORGANOETHOXSILANE   |

**1.2. Relevant identified uses of the substance or mixture and uses advised against****1.2.1. Relevant identified uses**

Use of the substance/mixture : Chemical intermediate

**1.2.2. Uses advised against**

No additional information available

**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)**GELEST INC.**Fritz-Klatte-Strasse 8  
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[info@gelestde.com](mailto:info@gelestde.com) - [www.gelestde.com](http://www.gelestde.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 according to Regulation (EC) No. 1272/2008 [CLP]**

Flammable liquids, Category 3

H226

Full text of H statements : see section 16

**Adverse physicochemical, human health and environmental effects**

No additional information available

**2.2. Label elements****Labelling according to Regulation (EC) No. 1272/2008 [CLP]**

Hazard pictograms (CLP) :



GHS02

Signal word (CLP) :

: Warning

Hazard statements (CLP) :

: H226 - Flammable liquid and vapour.

Precautionary statements (CLP) :

: P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P233 - Keep container tightly closed.

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P240 - Ground/bond container and receiving equipment.  
P403+P235 - Keep in a cool place  
P501 - Dispose of contents/container to licensed waste disposal facility.

### 2.3. Other hazards

Other hazards not contributing to the classification : Additional ethanol may be formed by reaction with moisture and water. The hydrolysis product of this compound is ethanol. Overexposure to ethanol by skin absorption, inhalation or ingestion may have a narcotic effect (headache, nausea, drowsiness). Ethanol is metabolized to acetaldehyde and acetic acid which in large quantities result in metabolic acidosis, CNS depression and death due to respiratory arrest. The US OSHA PEL (TWA) for ethanol is 1000 ppm. This product contains ethanol which is classified as a carcinogen by IARC in alcoholic beverages.

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Substance type : Mono-constituent  
Name : CHLOROMETHYLTRIETHOXSILANE  
CAS-No. : 15267-95-5  
EC-No. : 239-311-3

| Name                        | Product identifier                         | %        | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|-----------------------------|--|----------|---|
| Chloromethyltriethoxysilane | (CAS-No.) 15267-95-5<br>(EC-No.) 239-311-3 | 95 - 100 | Flam. Liq. 3, H226  |

Full text of H-statements: see section 16

### 3.2. Mixtures

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 person to fresh air and keep comfortable for breathing. If you feel unwell, seek medical advice.

First-aid measures after skin contact : Wash with plenty of 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 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/effects after inhalation : May cause irritation to the respiratory tract.

Symptoms/effects after skin contact : May cause skin irritation.

Symptoms/effects after eye contact : Causes eye irritation.

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

Chronic symptoms : On contact with water this compound liberates ethanol which is known to have a chronic effect on the central nervous system.

### 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 ethanol.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

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

Unsuitable extinguishing media : Do not use straight streams.

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

Fire hazard : Flammable liquid and vapour. Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame.

### 5.3. Advice for firefighters

Firefighting instructions : Exercise caution when fighting any chemical fire. Use water spray or fog for cooling exposed containers.

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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 vapour and mist.

### SECTION 6: Accidental release measures

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

General measures : Eliminate ignition sources. Use special care to avoid static electric charges.

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

Protective equipment : Wear protective equipment as described in Section 8.

Emergency procedures : Evacuate unnecessary personnel.

##### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".

#### 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

For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

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

Additional hazards when processed : Handle empty containers with care because residual vapours are flammable. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Precautions for safe handling : Avoid all eye and skin contact and do not breathe vapour and mist. Provide good ventilation in process area to prevent formation of vapour. Ground/bond container and receiving equipment. Take precautionary measures against static discharge. 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 : Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof electrical equipment.

Storage conditions : Keep container tightly closed. Keep in a cool place.

Incompatible materials : 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

No additional information available

#### 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. Contact lenses should not be worn

##### Skin and body protection:

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Wear suitable protective clothing

### Respiratory protection:

Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. NIOSH-certified organic vapor (black 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                             | : 212.75 g/mol                                  |
| Colour                                     | : No data available                             |
| Odour                                      | : characteristic.                               |
| Odour threshold                            | : No data available                             |
| Refractive index                           | : 1.4069  |
| pH   | : No data available                             |
| Relative evaporation rate (butylacetate=1) | : < 1   |
| Melting point                              | : No data available                             |
| Freezing point                             | : < 0 °C  |
| Boiling point                              | : 90 - 91 °C @ 25 mm Hg                         |
| Flash point                                | : 47 °C   |
| Auto-ignition temperature                  | : No data available                             |
| Decomposition temperature                  | : No data available                             |
| Flammability (solid, gas)                  | : Flammable liquid and vapour.                  |
| Vapour pressure                            | : < 2 mm Hg @ 25°C                              |
| Relative vapour density at 20 °C           | : > 1   |
| Relative density                           | : 1.048   |
| Solubility                                 | : Insoluble in water. Reacts slowly with water. |
| Log Pow                                    | : No data available                             |
| Log Kow                                    | : No data available                             |
| Viscosity, kinematic                       | : No data available                             |
| Viscosity, dynamic                         | : No data available                             |
| Explosive properties                       | : No data available                             |
| Oxidising properties                       | : No data available                             |
| Explosive limits                           | : No data available                             |

### 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.

### 10.3. Possibility of hazardous reactions

Material decomposes slowly in contact with moist air or with water liberating ethanol.

### 10.4. Conditions to avoid

Heat. Open flame. Sparks.

### 10.5. Incompatible materials

Oxidizing agent.

### 10.6. Hazardous decomposition products

Ethanol. Organic acid vapors. Silicon dioxide.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

#### Chloromethyltriethoxysilane (15267-95-5)

LD50 oral rat

2400 mg/kg

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### Chloromethyltriethoxysilane (15267-95-5)

ATE CLP (oral)

2400 mg/kg bodyweight

|   |   |
|---|---|
| Skin corrosion/irritation                           | : Not classified<br>Skin Irritation - rabbit: 500 mg/24H: mild irritant effect  |
| Serious eye damage/irritation                       | : Not classified<br>Eye Irritation - rabbit: 500 mg/24H: mild irritant effect   |
| Respiratory or skin sensitisation                   | : Not classified  |
| Germ cell mutagenicity                              | : Not classified  |
| Carcinogenicity                                     | : Not classified  |
| Reproductive toxicity                               | : Not classified  |
| STOT-single exposure                                | : Not classified  |
| STOT-repeated exposure                              | : Not classified  |
| Aspiration hazard                                   | : Not classified  |
| Potential adverse human health effects and symptoms | : This material slowly generates ethanol on contact with water and moisture in living tissues. Material generates ethanol on contact with water or moisture in skin, eyes and mucous membranes and has an irritating, dehydrating effect on overexposed tissue. |
| Symptoms/effects after inhalation                   | : May cause irritation to the respiratory tract.  |
| Symptoms/effects after skin contact                 | : May cause skin irritation.  |
| Symptoms/effects after eye contact                  | : Causes eye irritation.  |
| Symptoms/effects after ingestion                    | : May be harmful if swallowed.  |
| Chronic symptoms                                    | : On contact with water this compound liberates ethanol which is known to have a chronic effect on the central nervous system.  |

## SECTION 12: Ecological information

### 12.1. Toxicity

|                          |                  |
|--------------------------|------------------|
| Acute aquatic toxicity   | : Not classified |
| Chronic aquatic toxicity | : Not classified |

### 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. Results of PBT and vPvB assessment

No additional information available

### 12.6. Other adverse effects

Other adverse effects : This substance may be hazardous to the environment.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

|  |  |
|--|--|
| Sewage disposal recommendations            | : Do not dispose of waste into sewer.  |
| Product/Packaging disposal recommendations | : Incinerate. 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 vapours are flammable.  |
| Ecology - waste materials                  | : Avoid release to the environment.  |

## SECTION 14: Transport information

### 14.1. UN number

In accordance with ADR / RID / IMDG / IATA / ADN

### 14.1. UN number

|               |        |
|---------------|--------|
| UN-No. (ADR)  | : 1993 |
| UN-No. (IMDG) | : 1993 |
| UN-No. (IATA) | : 1993 |
| UN-No. (ADN)  | : 1993 |
| UN-No. (RID)  | : 1993 |

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### 14.2. UN proper shipping name

|                                       |  |
|---------------------------------------|--|
| Proper Shipping Name (ADR)            | : FLAMMABLE LIQUID, N.O.S.   |
| Proper Shipping Name (IMDG)           | : FLAMMABLE LIQUID, N.O.S.   |
| Proper Shipping Name (IATA)           | : Flammable liquid, n.o.s.   |
| Proper Shipping Name (ADN)            | : FLAMMABLE LIQUID, N.O.S.   |
| Proper Shipping Name (RID)            | : FLAMMABLE LIQUID, N.O.S.   |
| Transport document description (ADR)  | : UN 1993 FLAMMABLE LIQUID, N.O.S. (CHLOROMETHYLTRIETHOXSILANE), 3, III, (D/E) |
| Transport document description (IMDG) | : UN 1993 FLAMMABLE LIQUID, N.O.S. (CHLOROMETHYLTRIETHOXSILANE), 3, III        |
| Transport document description (IATA) | : UN 1993 Flammable liquid, n.o.s. (CHLOROMETHYLTRIETHOXSILANE), 3, III        |
| Transport document description (ADN)  | : UN 1993 FLAMMABLE LIQUID, N.O.S. (CHLOROMETHYLTRIETHOXSILANE), 3, III        |
| Transport document description (RID)  | : UN 1993 FLAMMABLE LIQUID, N.O.S. (CHLOROMETHYLTRIETHOXSILANE), 3, III        |

### 14.3. Transport hazard class(es)

#### ADR

|                                  |     |
|----------------------------------|-----|
| Transport hazard class(es) (ADR) | : 3 |
| Danger labels (ADR)              | : 3 |



#### IMDG

|                                   |     |
|-----------------------------------|-----|
| Transport hazard class(es) (IMDG) | : 3 |
| Danger labels (IMDG)              | : 3 |



#### IATA

|                                   |     |
|-----------------------------------|-----|
| Transport hazard class(es) (IATA) | : 3 |
| Hazard labels (IATA)              | : 3 |



#### ADN

|                                  |     |
|----------------------------------|-----|
| Transport hazard class(es) (ADN) | : 3 |
| Danger labels (ADN)              | : 3 |



#### RID

|                                  |     |
|----------------------------------|-----|
| Transport hazard class(es) (RID) | : 3 |
| Danger labels (RID)              | : 3 |



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### 14.4. Packing group

|                      |       |
|----------------------|-------|
| Packing group (ADR)  | : III |
| Packing group (IMDG) | : III |
| Packing group (IATA) | : III |
| Packing group (ADN)  | : III |
| Packing group (RID)  | : III |

### 14.5. Environmental hazards

|                               |  |
|-------------------------------|--|
| Dangerous for the environment | : No                                     |
| Marine pollutant              | : No                                     |
| Other information             | : No supplementary information available |

### 14.6. Special precautions for user

#### - Overland transport

|   |                           |
|---|---------------------------|
| Classification code (ADR)                                 | : F1                      |
| Special provisions (ADR)                                  | : 274, 601, 640E          |
| Limited quantities (ADR)                                  | : 5I                      |
| Excepted quantities (ADR)                                 | : E1                      |
| Packing instructions (ADR)                                | : P001, IBC03, LP01, R001 |
| Mixed packing provisions (ADR)                            | : MP19                    |
| Portable tank and bulk container instructions (ADR)       | : T4                      |
| Portable tank and bulk container special provisions (ADR) | : TP1, TP29               |
| Tank code (ADR)   | : LGBF                    |
| Vehicle for tank carriage                                 | : FL                      |
| Transport category (ADR)                                  | : 3                       |
| Special provisions for carriage - Packages (ADR)          | : V12                     |
| Special provisions for carriage - Operation (ADR)         | : S2                      |
| Hazard identification number (Kemler No.)                 | : 30                      |
| Orange plates   | :                         |



|                               |       |
|-------------------------------|-------|
| Tunnel restriction code (ADR) | : D/E |
|-------------------------------|-------|

#### - Transport by sea

|                                 |                 |
|---------------------------------|-----------------|
| Special provisions (IMDG)       | : 223, 274, 955 |
| Limited quantities (IMDG)       | : 5 L           |
| Excepted quantities (IMDG)      | : E1            |
| Packing instructions (IMDG)     | : P001, LP01    |
| IBC packing instructions (IMDG) | : IBC03         |
| Tank instructions (IMDG)        | : T4            |
| Tank special provisions (IMDG)  | : TP1, TP29     |
| EmS-No. (Fire)                  | : F-E           |
| EmS-No. (Spillage)              | : S-E           |
| Stowage category (IMDG)         | : A             |

#### - Air transport

|  |        |
|--|--------|
| PCA Excepted quantities (IATA)               | : E1   |
| PCA Limited quantities (IATA)                | : Y344 |
| PCA limited quantity max net quantity (IATA) | : 10L  |
| PCA packing instructions (IATA)              | : 355  |

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|                                 |        |
|---------------------------------|--------|
| PCA max net quantity (IATA)     | : 60L  |
| CAO packing instructions (IATA) | : 366  |
| CAO max net quantity (IATA)     | : 220L |
| Special provisions (IATA)       | : A3   |
| ERG code (IATA)                 | : 3L   |

### - Inland waterway transport

|                                   |                  |
|-----------------------------------|------------------|
| Classification code (ADN)         | : F1             |
| Special provisions (ADN)          | : 274, 601, 640E |
| Limited quantities (ADN)          | : 5 L            |
| Excepted quantities (ADN)         | : E1             |
| Carriage permitted (ADN)          | : T              |
| Equipment required (ADN)          | : PP, EX, A      |
| Ventilation (ADN)                 | : VE01           |
| Number of blue cones/lights (ADN) | : 0              |

### - Rail transport

|   |                           |
|---|---------------------------|
| Classification code (RID)                                 | : F1                      |
| Special provisions (RID)                                  | : 274, 601, 640E          |
| Limited quantities (RID)                                  | : 5L                      |
| Excepted quantities (RID)                                 | : E1                      |
| Packing instructions (RID)                                | : P001, IBC03, LP01, R001 |
| Mixed packing provisions (RID)                            | : MP19                    |
| Portable tank and bulk container instructions (RID)       | : T4                      |
| Portable tank and bulk container special provisions (RID) | : TP1, TP29               |
| Tank codes for RID tanks (RID)                            | : LGBF                    |
| Transport category (RID)                                  | : 3                       |
| Special provisions for carriage – Packages (RID)          | : W12                     |
| Colis express (express parcels) (RID)                     | : CE4                     |
| Hazard identification number (RID)                        | : 30                      |

### 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### 15.1.1. EU-Regulations

No REACH Annex XVII restrictions

CHLOROMETHYLTRIETHOXYSILANE is not on the REACH Candidate List

CHLOROMETHYLTRIETHOXYSILANE is not on the REACH Annex XIV List

CHLOROMETHYLTRIETHOXYSILANE is not subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

CHLOROMETHYLTRIETHOXYSILANE is not subject to Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC

#### 15.1.2. National regulations

##### Germany

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

##### Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed

SZW-lijst van mutagene stoffen : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed



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NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not listed

### Denmark

Class for fire hazard : Class II-1

Store unit : 5 liter

Classification remarks : R10 <H226>; Emergency management guidelines for the storage of flammable liquids must be followed

### 15.2. Chemical safety assessment

No additional information available

## 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; GHS: The Globally Harmonized System of Classification and Labelling; APF: Assigned Protection Factor

Other information : Prepared by safety and environmental affairs.

Full text of H- and EUH-statements:

|              |                               |
|--------------|-------------------------------|
| Flam. Liq. 3 | Flammable liquids, Category 3 |
| H226         | Flammable liquid and vapour.  |

SDS EU (REACH Annex II) - Custom

*The information contained in this document has been gathered from reference materials and/or Gelest, Inc. test data and is to the best knowledge and belief of Gelest, Inc. accurate and reliable. Such information is offered solely for your consideration, investigation and verification. It is not suggested or guaranteed that the hazard precautions or procedures described are the only ones which exist. Gelest, Inc. makes no warranties, express or implied, with respect to the use of such information and assumes no responsibility therefore. Information on this safety data sheet is not intended to constitute a basis for product specifications.*

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