SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Substance
Physical state : Liquid
Substance name : TRIS(TRIMETHYLSILYL)SILANE
Product code : SIT8724.0
Formula : C9H28Si4
Synonyms : 1,1,1,3,3,3-HEXAMETHYL-2-TRIMETHYLSILYLTRISILANE; TTMS
Chemical family : ORGANOSILANE

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 - www.gelest.com

GELEST INC.
Fritz-Klatte-Strasse 8
65933 Frankfurt
Germany
T +49 (0) 69 3535106-500 - F +49 (0) 69 3535106-501 - (M-F): 8:00 AM - 4:00 PM
info@gelestde.com - 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
- Serious eye damage/eye irritation, Category 2: H319

Adverse physicochemical, human health and environmental effects

No additional information available

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

Hazard pictograms (CLP):

- GHS02
- GHS07

Signal word (CLP): Warning

Hazard statements (CLP): H226 - Flammable liquid and vapour.
H319 - Causes serious eye irritation.

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.
- P211 - Keep container tightly closed.
- P213 - Do not吸入.
- P256 - Avoid contact with eyes, skin, and clothing.
- P405 - Store in a cool place.
- P621 - Do not incinerate from contaminated pack.

Full text of H statements : see section 16
TRIS(TRIMETHYLSILYL)SILANE
Safety Data Sheet

smoking.
P240 - Ground/bond container and receiving equipment.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P501 - Dispose of contents/container to licensed waste disposal facility.

2.3. Other hazards
No additional information available

SECTION 3: Composition/Information on ingredients

3.1. Substances
Substance type : Mono-constituent
Name : TRIS(TRIMETHYLSILYL)SILANE
CAS-No. : 1873-77-4

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
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</thead>
<tbody>
<tr>
<td>Tris(trimethylsilyl)silane</td>
<td>(CAS-No.) 1873-77-4</td>
<td>&gt; 95</td>
<td>Flam. Liq. 3, H226 Eye Irrit. 2, H319</td>
</tr>
</tbody>
</table>

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. Overexposure may cause: Cough. Headache. Nausea.
Symptoms/effects after skin contact : May cause skin irritation.
Symptoms/effects after eye contact : Causes serious eye irritation.
Symptoms/effects after ingestion : No information available.

4.3. Indication of any immediate medical attention and special treatment needed
No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

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 : 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 vapour and mist.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
General measures : Remove ignition sources. Use special care to avoid static electric charges.
# TRIS(TRIMETHYLSILYL)SILANE
## Safety Data Sheet

### SECTION 6: 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.

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
- 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
- Storage conditions: Keep container tightly closed. Store cold.
- 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: 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: 248.67 g/mol
- Colour: Straw.
- Odour threshold: No data available
- Refractive index: 1.489
- pH: No data available
Relative evaporation rate (butylacetate=1) : No data available
Melting point : No data available
Freezing point : No data available
Boiling point : 82 - 84 °C @ 12 mm Hg
Flash point : 55 °C
Auto-ignition temperature : No data available
Decomposition temperature : No data available
Flammability (solid, gas) : Flammable liquid and vapour.
Vapour pressure : < 1 mm Hg @ 20°C
Relative vapour density at 20 °C : No data available
Relative density : 0.806
% Volatiles : 100 %
Solubility : Insoluble in 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 in sealed containers stored under a dry inert atmosphere. Will oxidize on exposure to air.

10.3. Possibility of hazardous reactions
Exothermic decomposition has been reported at temperatures exceeding 100°C. Vapors will ignite if heated above 60°C in air. May generate small amounts of hydrogen gas on contact with base.

10.4. Conditions to avoid
Heat. Open flame. Sparks.

10.5. Incompatible materials
Base. Oxidizing agent.

10.6. Hazardous decomposition products

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute toxicity : Not classified
Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Causes serious eye irritation.
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
Symptoms/effects after inhalation : May cause irritation to the respiratory tract. Overexposure may cause: Cough. Headache. Nausea.
Symptoms/effects after skin contact : May cause skin irritation.
Symptoms/effects after eye contact : Causes serious eye irritation.
Symptoms/effects after ingestion : No information available.
**Reason for classification** : Expert judgment

### SECTION 12: Ecological information

**12.1. Toxicity**

<table>
<thead>
<tr>
<th>Type</th>
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<tbody>
<tr>
<td>Acute aquatic toxicity</td>
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<tr>
<td>Chronic aquatic toxicity</td>
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**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**

- Product/Packaging 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**

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

<table>
<thead>
<tr>
<th>UN-No. (ADR)</th>
<th>UN-No. (IMDG)</th>
<th>UN-No. (IATA)</th>
<th>UN-No. (ADN)</th>
<th>UN-No. (RID)</th>
</tr>
</thead>
</table>

**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. (TRIS(TRIMETHYLSILYL)SILANE), 3, III, (D/E) |
| Transport document description (IMDG) | UN 1993 FLAMMABLE LIQUID, N.O.S. (TRIS(TRIMETHYLSILYL)SILANE), 3, III |
| Transport document description (IATA) | UN 1993 Flammable liquid, n.o.s. (TRIS(TRIMETHYLSILYL)SILANE), 3, III |
| Transport document description (ADN) | UN 1993 FLAMMABLE LIQUID, N.O.S. (TRIS(TRIMETHYLSILYL)SILANE), 3, III |
| Transport document description (RID)  | UN 1993 FLAMMABLE LIQUID, N.O.S. (TRIS(TRIMETHYLSILYL)SILANE), 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)

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### RID

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<td>Danger labels (RID)</td>
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### 14.4. Packing group

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<td>III</td>
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<td>Packing group (RID)</td>
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### 14.5. Environmental hazards

<table>
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<tr>
<th>Hazard</th>
<th>Value</th>
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<tbody>
<tr>
<td>Dangerous for the environment</td>
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<tr>
<td>Marine pollutant</td>
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<tr>
<td>Other information</td>
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### 14.6. Special precautions for user

#### - Overland transport

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<tr>
<th>Provision</th>
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<tr>
<td>Classification code (ADR)</td>
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<tr>
<td>Special provisions (ADR)</td>
<td>274, 601, 640E</td>
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<tr>
<td>Limited quantities (ADR)</td>
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<tr>
<td>Excepted quantities (ADR)</td>
<td>E1</td>
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<tr>
<td>Packing instructions (ADR)</td>
<td>P001, IBC03, LP01, R001</td>
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<tr>
<td>Mixed packing provisions (ADR)</td>
<td>MP19</td>
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<tr>
<td>Portable tank and bulk container instructions (ADR)</td>
<td>T4</td>
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</table>
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<table>
<thead>
<tr>
<th>Portable tank and bulk container special provisions (ADR)</th>
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<td>Special provisions for carriage - Packages (ADR)</td>
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<td>Special provisions for carriage - Operation (ADR)</td>
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<td>Hazard identification number (Keimler No.)</td>
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<td>Orange plates</td>
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**Tunnel restriction code (ADR)**: D/E

**- Transport by sea**

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<td>Limited quantities (IMDG)</td>
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<td>Packing instructions (IMDG)</td>
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<td>EmS-No. (Fire)</td>
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<td>EmS-No. (Spillage)</td>
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**- Air transport**

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<td>PCA max net quantity (IATA)</td>
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<td>CAO packing instructions (IATA)</td>
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<td>CAO max net quantity (IATA)</td>
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**- Inland waterway transport**

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<tr>
<td>Limited quantities (ADN)</td>
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<tr>
<td>Excepted quantities (ADN)</td>
<td>: E1</td>
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<tr>
<td>Carriage permitted (ADN)</td>
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<tr>
<td>Equipment required (ADN)</td>
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<td>Ventilation (ADN)</td>
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**- Rail transport**

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<tbody>
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<td>Limited quantities (RID)</td>
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<tr>
<td>Excepted quantities (RID)</td>
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<tr>
<td>Packing instructions (RID)</td>
<td>: P001, IBC03, LP01, R001</td>
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<td>Mixed packing provisions (RID)</td>
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<td>Portable tank and bulk container instructions (RID)</td>
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<tr>
<td>Portable tank and bulk container special provisions (RID)</td>
<td>: TP1, TP29</td>
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<tr>
<td>Tank codes for RID tanks (RID)</td>
<td>: LGBF</td>
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</tbody>
</table>
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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
TRIS(TRIMETHYLSILYL)SILANE is not on the REACH Candidate List
TRIS(TRIMETHYLSILYL)SILANE is not on the REACH Annex XIV List
TRIS(TRIMETHYLSILYL)SILANE 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.

% Volatiles : 100 %

15.1.2. National regulations

Germany
12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BlmSchV (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
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;H319>; 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:
Eye Irrit. 2 Serious eye damage/eye irritation, Category 2
Flam. Liq. 3 Flammable liquids, Category 3
H226 Flammable liquid and vapour.
H319 Causes serious eye irritation.
TRIS(TRIMETHYLSILYL)SILANE
Safety Data Sheet

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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