

**TETRAMETHYLSILANE, 99.9+%****Safety Data Sheet SIT7555.1**

Issue date: 23/10/2014

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Version: 2.1

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

Product form	: Substance
Physical state	: Liquid
Substance name	: TETRAMETHYLSILANE, 99.9+%
Product code	: SIT7555.1
Formula	: C <sub>4</sub> H <sub>12</sub> Si
Synonyms	: TMS; SILANE, TETRAMETHYL-
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](mailto:info@gelest.com) - [www.gelest.com](http://www.gelest.com)**GELEST INC.**Fritz-Klatte-Strasse 8  
65933 Frankfurt**Germany**

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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 1 H224

Hazardous to the aquatic environment — Chronic Hazard, Category 2 H411

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



GHS09

Signal word (CLP) :

: Danger

Hazard statements (CLP) :

: H224 - Extremely flammable liquid and vapour.  
H411 - Toxic to aquatic life with long lasting effects.

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

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smoking.  
P240 - Ground/bond container and receiving equipment.  
P273 - Avoid release to the environment.  
P403+P235 - Store in a well-ventilated place. Keep cool.  
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 : TETRAMETHYLSILANE, 99.9+%  
CAS-No. : 75-76-3  
EC-No. : 200-899-1

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Tetramethylsilane	(CAS-No.) 75-76-3 (EC-No.) 200-899-1	99.9 – 100	Flam. Liq. 1, H224 Aquatic Chronic 2, H411

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 be harmful if inhaled. 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 : May cause eye irritation.

Symptoms/effects 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 : None known.

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

Fire hazard : Extremely flammable liquid and vapour. Irritating fumes and organic acid vapors may develop when material is exposed to water or open flame.

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

### 5.3. Advice for firefighters

Firefighting instructions : Exercise caution when fighting any chemical fire. Use water spray to cool exposed surfaces.

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.

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### 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

Avoid release to the environment. 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. 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 : 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. Ground/bond container and receiving equipment. Provide good ventilation in process area to prevent formation of vapour. Take precautionary measures against static discharge. Use only non-sparking tools.

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

#### 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/ventilating/lighting 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:

Wear suitable protective clothing

##### Respiratory protection:

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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	: 88.22 g/mol
Colour	: Straw.
Odour	: Slight. Mild.
Odour threshold	: No data available
Refractive index	: 1.3588
pH	: No data available
Relative evaporation rate (butylacetate=1)	: > 1
Melting point	: -99 °C
Freezing point	: No data available
Boiling point	: 26.6 – 26.7 °C
Flash point	: -27 °C
Critical temperature	: 185 °C
Auto-ignition temperature	: 330 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: Extremely flammable liquid and vapour.
Vapour pressure	: 589 mm Hg @ 20°C
Critical pressure	: 33 atm
Relative vapour density at 20 °C	: 3
Relative density	: 0.641
% Volatiles	: 100 %
Solubility	: Insoluble in water. Water: 19.6 mg/l @ 25°C
Partition coefficient n-octanol/water (Log Pow)	: No data available
Partition coefficient n-octanol/water (Log Kow)	: No data available
Viscosity, kinematic	: 0.4 cSt
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: 1 – 37.9 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.

#### 10.3. Possibility of hazardous reactions

No additional information available

#### 10.4. Conditions to avoid

Heat. Open flame. Sparks.

#### 10.5. Incompatible materials

Oxidizing agent.

#### 10.6. Hazardous decomposition products

Organic acid vapors.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity : Not classified

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### Tetramethylsilane (75-76-3)

LC50 inhalation rat	> 5000 ppm/4h
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Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
None of the components in this product at concentrations >0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.	
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Symptoms/effects after inhalation	: May be harmful if inhaled. 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	: May cause eye irritation.
Symptoms/effects after ingestion	: May be harmful if swallowed.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - water	: Toxic to aquatic life.
Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Toxic to aquatic life with long lasting effects.

### Tetramethylsilane (75-76-3)

LC50 fish 1	1.9 mg/l Fish [Oncorhynchus mykiss]
EC50 Daphnia 1	> 103 mg/l Invertebrate [Daphnia magna]
ErC50 (algae)	> 0.0079 mg/l Algae [Scenedesmus subspicatus]

### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

### Tetramethylsilane (75-76-3)

Partition coefficient n-octanol/water (Log Kow)	3.24
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### 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.
Additional information	: OECD TG 201. OECD TG 202. OECD TG 203

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Sewage disposal recommendations	: Do not dispose of waste into sewer.
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.
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)	: 2749
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UN-No. (IMDG)	: 2749
UN-No. (IATA)	: 2749
UN-No. (ADN)	: 2749
UN-No. (RID)	: 2749

### 14.2. UN proper shipping name

Proper Shipping Name (ADR)	: TETRAMETHYLSILANE
Proper Shipping Name (IMDG)	: TETRAMETHYLSILANE
Proper Shipping Name (IATA)	: Tetramethylsilane
Proper Shipping Name (ADN)	: TETRAMETHYLSILANE
Proper Shipping Name (RID)	: TETRAMETHYLSILANE
Transport document description (ADR)	: UN 2749 TETRAMETHYLSILANE, 3, I, (D/E), ENVIRONMENTALLY HAZARDOUS
Transport document description (IMDG)	: UN 2749 TETRAMETHYLSILANE, 3, I, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS (< -18°C c.c.)
Transport document description (IATA)	: UN 2749 Tetramethylsilane, 3, I, ENVIRONMENTALLY HAZARDOUS
Transport document description (ADN)	: UN 2749 TETRAMETHYLSILANE, 3, I, ENVIRONMENTALLY HAZARDOUS
Transport document description (RID)	: UN 2749 TETRAMETHYLSILANE, 3, I, ENVIRONMENTALLY HAZARDOUS

### 14.3. Transport hazard class(es)

<b>ADR</b>	
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
Danger labels (IATA)	: 3

:



**ADN**

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

:



**RID**

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



### 14.4. Packing group

Packing group (ADR) : I  
Packing group (IMDG) : I  
Packing group (IATA) : I  
Packing group (ADN) : I  
Packing group (RID) : I

### 14.5. Environmental hazards

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

### 14.6. Special precautions for user

#### - Overland transport

Classification code (ADR) : F1  
Limited quantities (ADR) : 0  
Excepted quantities (ADR) : E0  
Vehicle for tank carriage : FL  
Transport category (ADR) : 1  
Hazard identification number (Kemler No.) : 33  
Orange plates :



Tunnel restriction code (ADR) : D/E  
EAC code : 3YE

#### - Transport by sea

Limited quantities (IMDG) : 0  
Excepted quantities (IMDG) : E0  
Packing instructions (IMDG) : P001  
Tank instructions (IMDG) : T14  
Tank special provisions (IMDG) : TP2  
EmS-No. (Fire) : F-E  
EmS-No. (Spillage) : S-D  
Stowage category (IMDG) : D  
Flash point (IMDG) : below -18°C c.c.  
Properties and observations (IMDG) : Colourless, volatile liquid. Flashpoint: below -18°C c.c. Boiling point: 27°C. Immiscible with water. Harmful if swallowed or by inhalation. Irritating to skin, eyes and mucous membranes.

#### - Air transport

PCA Excepted quantities (IATA) : E0  
PCA Limited quantities (IATA) : Forbidden  
PCA limited quantity max net quantity (IATA) : Forbidden  
PCA packing instructions (IATA) : Forbidden  
PCA max net quantity (IATA) : Forbidden  
CAO packing instructions (IATA) : 361  
CAO max net quantity (IATA) : 30L  
Special provisions (IATA) : A1  
ERG code (IATA) : 3H

#### - Inland waterway transport

Classification code (ADN) : F1

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Limited quantities (ADN)	: 0
Excepted quantities (ADN)	: E0
Equipment required (ADN)	: PP, EX, A
Ventilation (ADN)	: VE01
Number of blue cones/lights (ADN)	: 1

### - Rail transport

No data available

### 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

TETRAMETHYLSILANE, 99.9+% is not on the REACH Candidate List

TETRAMETHYLSILANE, 99.9+% is not on the REACH Annex XIV List

TETRAMETHYLSILANE, 99.9+% 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.

TETRAMETHYLSILANE, 99.9+% is not subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

% Volatiles : 100 %

#### 15.1.2. National regulations

##### Germany

Regulatory reference : WGK 2, Significantly hazardous to water (Classification according to AwSV; ID No. 9626)  
Hazardous Incident Ordinance (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  
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not listed

##### Denmark

Class for fire hazard : Class I-1  
Store unit : 1 liter  
Classification remarks : F+ <Flam. Liq. 1>; Emergency management guidelines for the storage of flammable liquids must be followed  
Danish National Regulations : Young people below the age of 18 years are not allowed to use the product

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## 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:



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Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Flam. Liq. 1	Flammable liquids, Category 1
H224	Extremely flammable liquid and vapour.
H411	Toxic to aquatic life with long lasting effects.

SDS EU (REACH Annex II) - Custom

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