



# TRIETHYLSILANE, 98%

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878  
Issue date: 1/9/2015 Revision date: 11/29/2023 Version: 3.3

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

#### 1.1. Product identifier

Product form	: Substance
Substance name	: TRIETHYLSILANE, 98%
EC-No.	: 210-535-3
CAS-No.	: 617-86-7
Product code	: SIT8330.0
Formula	: C <sub>6</sub> H <sub>16</sub> Si
Synonyms	: TRIETHYLSILYL HYDRIDE; TRIETHYLSILICON HYDRIDE
Product group	: Trade product
Chemical family	: ORGANOHYDRIDOSILANE

#### 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.

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##### USA

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#### 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 2	H225
Hazardous to the aquatic environment – Acute Hazard, Category 1	H400
Hazardous to the aquatic environment – Chronic Hazard, Category 1	H410
Full text of H- and EUH-statements: see section 16	

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

No additional information available

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### 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)

: H225 - Highly flammable liquid and vapour.  
H410 - Very toxic to aquatic life with long lasting effects.

Precautionary statements (CLP)

: P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P233 - Keep container tightly closed.  
P240 - Ground and bond container and receiving equipment.  
P241 - Use explosion-proof electrical/ventilating/lighting equipment.  
P273 - Avoid release to the environment.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

### 2.3. Other hazards

Contains no PBT and/or vPvB substances  $\geq 0.1\%$  assessed in accordance with REACH Annex XIII

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Substance type : Mono-constituent  
Name : TRIETHYLSILANE, 98%  
CAS-No. : 617-86-7  
EC-No. : 210-535-3

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Triethylsilane	CAS-No.: 617-86-7 EC-No.: 210-535-3	95 – 100	Flam. Liq. 2, H225 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of H- and EUH-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/....

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 : No information available.  
Symptoms/effects after skin contact : May cause skin irritation.

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Symptoms/effects after eye contact : May cause 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

Suitable extinguishing media : Foam. Carbon dioxide. Dry chemical. Water fog.  
Unsuitable extinguishing media : Do not use a heavy water stream.

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

Fire hazard : Highly flammable liquid and vapour. Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame.  
Explosion hazard : May form flammable/explosive vapour-air mixture.

### 5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. 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.

#### 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.

### 6.4. Reference to other sections

See Section 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.  
Precautions for safe handling : Containers must be properly grounded before beginning transfer. Provide good ventilation in process area to prevent formation of vapour. 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. Ground/bond container and receiving equipment. Use explosion-proof electrical equipment.  
Storage conditions : Keep container tightly closed.  
Incompatible materials : Store away from alkalis, oxidizers, metal salts, precious metals, chlorine, bromine.

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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

#### 8.1.1 National occupational exposure and biological limit values

No additional information available

#### 8.1.2. Recommended monitoring procedures

No additional information available

#### 8.1.3. Air contaminants formed

No additional information available

#### 8.1.4. DNEL and PNEC

No additional information available

#### 8.1.5. Control banding

No additional information available

### 8.2. Exposure controls

#### 8.2.1. Appropriate engineering controls

##### Appropriate engineering controls:

Provide local exhaust or general room ventilation.

#### 8.2.2. Personal protection equipment

##### 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.

##### 8.2.2.1. Eye and face protection

###### Eye protection:

Chemical goggles. Contact lenses should not be worn

##### 8.2.2.2. Skin protection

###### Skin and body protection:

Wear suitable protective clothing

###### Hand protection:

Neoprene or nitrile rubber gloves

##### 8.2.2.3. Respiratory protection

###### Respiratory protection:

Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. NIOSH-certified organic vapor (black cartridge) respirator.

##### 8.2.2.4. Thermal hazards

No additional information available

#### 8.2.3. Environmental exposure controls

No additional information available

## SECTION 9: Physical and chemical properties

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

Physical state	: Liquid
Colour	: Colourless.
Appearance	: Clear liquid.
Molecular mass	: 116.28 g/mol

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Odour	: Not available
Odour threshold	: Not available
Melting point	: -157 °C
Freezing point	: Not available
Boiling point	: 107 – 108 °C
Flammability	: Highly flammable liquid and vapour.
Explosive limits	: Not available
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: -3 °C
Auto-ignition temperature	: 250 °C
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: 4.9 mm <sup>2</sup> /s
Solubility	: Insoluble in water.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: 40 mm Hg @ 20 °C
Vapour pressure at 50 °C	: Not available
Density	: Not available
Relative density	: 0.7309
Relative vapour density at 20 °C	: > 1
Particle characteristics	: Not applicable

### 9.2. Other information

#### 9.2.1. Information with regard to physical hazard classes

No additional information available

#### 9.2.2. Other safety characteristics

Relative evaporation rate (butylacetate=1)	: > 1
VOC content	: > 95 %
Refractive index	: 1.4123

## 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

The product can generate small amounts of hydrogen when exposed to alkalis and protic materials such as water and alcohol in combination with metal salts such as aluminum chloride or precious metals such as platinum.

### 10.4. Conditions to avoid

Heat. Open flame. Sparks.

### 10.5. Incompatible materials

Store away from alkalis, oxidizers, metal salts, precious metals, chlorine, bromine.

### 10.6. Hazardous decomposition products

Hydrogen. Formaldehyde. Carbon monoxide. Organic acid vapors. Silicon dioxide.

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified

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Acute toxicity (inhalation) : Not classified

Triethylsilane (617-86-7)	
LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Guideline: other:
LC50 Inhalation - Rat	> 21.3 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity), Guideline: other:
LC50 Inhalation - Rat [ppm]	> 1774 ppm Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity), Remarks on results: other:

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  
Reproductive toxicity : Not classified  
STOT-single exposure : Not classified  
STOT-repeated exposure : Not classified

Triethylsilane (617-86-7)	
NOAEC (inhalation, rat, vapour, 90 days)	≥ 24 mg/l air Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)

Aspiration hazard : Not classified

TRIETHYLSILANE, 98% (617-86-7)	
Viscosity, kinematic	4.9 mm²/s
Triethylsilane (617-86-7)	
Viscosity, kinematic	524.39 mm²/s

### 11.2. Information on other hazards

No additional information available

## SECTION 12: Ecological information

### 12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute) : Very toxic to aquatic life.  
Hazardous to the aquatic environment, long-term (chronic) : Very toxic to aquatic life with long lasting effects.

Triethylsilane (617-86-7)	
LC50 - Fish [1]	2.372 mg/l Source: Ecological Structure Activity Relationships
EC50 - Crustacea [1]	0.577 mg/l Test organisms (species): Daphnia magna
EC50 - Crustacea [2]	52 mg/l Daphnia
EC50 72h - Algae [1]	1.14 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 96h - Algae [1]	1.961 mg/l Source: Ecological Structure Activity Relationships
ErC50 algae	1.14 mg/l
NOEC chronic algae	0.127 mg/l

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### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

#### Triethylsilane (617-86-7)

Partition coefficient n-octanol/water (Log Pow)	3.64 Source: National Library of Medicine
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### 12.4. Mobility in soil

#### Triethylsilane (617-86-7)

Mobility in soil	252.8 Source: Quantitative Structure Activity Relation
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### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Endocrine disrupting properties

No additional information available

### 12.7. Other adverse effects

No additional information available






## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Product/Packaging 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 vapours are flammable.
Ecological information	: Avoid release to the environment.

## SECTION 14: Transport information

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

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number or ID number</b>				
UN 1993	UN 1993	UN 1993	UN 1993	UN 1993
<b>14.2. UN proper shipping name</b>				
FLAMMABLE LIQUID, N.O.S.	FLAMMABLE LIQUID, N.O.S.	Flammable liquid, n.o.s.	FLAMMABLE LIQUID, N.O.S.	FLAMMABLE LIQUID, N.O.S.
<b>Transport document description</b>				
UN 1993 FLAMMABLE LIQUID, N.O.S. (TRIETHYLSILANE), 3, II, (D/E), ENVIRONMENTALLY HAZARDOUS	UN 1993 FLAMMABLE LIQUID, N.O.S. (TRIETHYLSILANE), 3, II, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS	UN 1993 Flammable liquid, n.o.s. (TRIETHYLSILANE), 3, II, ENVIRONMENTALLY HAZARDOUS	UN 1993 FLAMMABLE LIQUID, N.O.S. (TRIETHYLSILANE), 3, II, ENVIRONMENTALLY HAZARDOUS	UN 1993 FLAMMABLE LIQUID, N.O.S. (TRIETHYLSILANE), 3, II, ENVIRONMENTALLY HAZARDOUS
<b>14.3. Transport hazard class(es)</b>				
3	3	3	3	3
				

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ADR	IMDG	IATA	ADN	RID
<b>14.4. Packing group</b>				
II	II	II	II	II
<b>14.5. Environmental hazards</b>				
Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes
No supplementary information available				

### 14.6. Special precautions for user

#### Overland transport

Classification code (ADR)	: F1
Special provisions (ADR)	: 274, 601, 640C
Limited quantities (ADR)	: 1I
Excepted quantities (ADR)	: E2
Packing instructions (ADR)	: P001
Mixed packing provisions (ADR)	: MP19
Portable tank and bulk container instructions (ADR)	: T7
Portable tank and bulk container special provisions (ADR)	: TP1, TP8, TP28
Tank code (ADR)	: L1.5BN
Vehicle for tank carriage	: FL
Transport category (ADR)	: 2
Special provisions for carriage - Operation (ADR)	: S2, S20
Hazard identification number (Kemler No.)	: 33
Orange plates	:



Tunnel restriction code (ADR)	: D/E
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#### Transport by sea

Special provisions (IMDG)	: 274
Limited quantities (IMDG)	: 1 L
Excepted quantities (IMDG)	: E2
Packing instructions (IMDG)	: P001
IBC packing instructions (IMDG)	: IBC02
Tank instructions (IMDG)	: T7
Tank special provisions (IMDG)	: TP1, TP8, TP28
EmS-No. (Fire)	: F-E
EmS-No. (Spillage)	: S-E
Stowage category (IMDG)	: B

#### Air transport

PCA Excepted quantities (IATA)	: E2
PCA Limited quantities (IATA)	: Y341
PCA limited quantity max net quantity (IATA)	: 1L
PCA packing instructions (IATA)	: 353
PCA max net quantity (IATA)	: 5L
CAO packing instructions (IATA)	: 364
CAO max net quantity (IATA)	: 60L
Special provisions (IATA)	: A3
ERG code (IATA)	: 3H

#### Inland waterway transport

Classification code (ADN)	: F1
Special provisions (ADN)	: 274, 601, 640C



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Limited quantities (ADN)	: 1 L
Excepted quantities (ADN)	: E2
Carriage permitted (ADN)	: T
Equipment required (ADN)	: PP, EX, A
Ventilation (ADN)	: VE01
Number of blue cones/lights (ADN)	: 1

### Rail transport

Classification code (RID)	: F1
Special provisions (RID)	: 274, 601, 640C
Limited quantities (RID)	: 1L
Excepted quantities (RID)	: E2
Packing instructions (RID)	: P001
Mixed packing provisions (RID)	: MP19
Portable tank and bulk container instructions (RID)	: T7
Portable tank and bulk container special provisions (RID)	: TP1, TP8, TP28
Tank codes for RID tanks (RID)	: L1.5BN
Transport category (RID)	: 2
Colis express (express parcels) (RID)	: CE7
Hazard identification number (RID)	: 33

### 14.7. Maritime transport in bulk according to IMO instruments

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

##### REACH Annex XVII (Restriction List)

Not listed on REACH Annex XVII

##### REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

##### REACH Candidate List (SVHC)

Not listed on the REACH Candidate List

##### PIC Regulation (Prior Informed Consent)

Not listed on the PIC list (Regulation EU 649/2012)

##### POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

##### Ozone Regulation (1005/2009)

Not listed on the Ozone Depletion list (Regulation EU 1005/2009)

##### VOC Directive (2004/42)

VOC content : > 95 %

##### Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

##### Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

#### 15.1.2. National regulations

No additional information available

### 15.2. Chemical safety assessment

No additional information available

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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; 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:

Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1
Flam. Liq. 2	Flammable liquids, Category 2
H225	Highly flammable liquid and vapour.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

SDS EU (REACH Annex II) - Custom v22

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