

ALFAAA10320

## Triethylsilane

### SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

**产品说明:** 三乙基硅烷  
**Product Description:** Triethylsilane

**Cat No. :** A10320  
**CAS No** 617-86-7  
**Molecular Formula** C<sub>6</sub> H<sub>16</sub> Si

**Supplier** Avocado Research Chemicals Ltd.  
(Part of Thermo Fisher Scientific)  
Shore Road, Heysham  
Lancashire, LA3 2XY,  
United Kingdom  
Office Tel: +44 (0) 1524 850506  
Office Fax: +44 (0) 1524 850608

**Emergency Telephone Number** For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11  
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99  
**CHEMTREC** Tel. No. **US**:001-800-424-9300 / **Europe**:001-703-527-3887

**E-mail address** begel.sdsdesk@thermofisher.com

**Recommended Use** Laboratory chemicals.  
**Uses advised against** No Information available

### SECTION 2. HAZARD IDENTIFICATION

**Physical State**  
Liquid

**Appearance**  
Colorless

**Odor**  
aromatic

#### Emergency Overview

Highly flammable liquid and vapor. Very toxic to aquatic life with long lasting effects.

#### Classification of the substance or mixture

|                          |            |
|--------------------------|------------|
| Flammable liquids.       | Category 2 |
| Acute aquatic toxicity   | Category 1 |
| Chronic aquatic toxicity | Category 1 |

#### Label Elements



**Signal Word**

**Danger**

**Hazard Statements**

H225 - Highly flammable liquid and vapor

H410 - Very toxic to aquatic life with long lasting effects

**Precautionary Statements****Prevention**

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

P242 - Use non-sparking tools

P243 - Take action to prevent static discharges

P280 - Wear protective gloves/protective clothing/eye protection/face protection

**Response**

P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower

P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish

**Storage**

P403 + P235 - Store in a well-ventilated place. Keep cool

**Disposal**

P501 - Dispose of contents/ container to an approved waste disposal plant

**Physical and Chemical Hazards**

Highly flammable. Vapors may cause flash fire or explosion.

**Health Hazards**

The product contains no substances which at their given concentration are considered to be hazardous to health.

**Environmental hazards**

Very toxic to aquatic life with long lasting effects. Is not likely mobile in the environment. Decomposes in contact with water.

This product does not contain any known or suspected endocrine disruptors.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

| Component         | CAS No   | Weight % |
|-------------------|----------|----------|
| Silane, triethyl- | 617-86-7 | 99       |

**SECTION 4. FIRST AID MEASURES****General Advice**

If symptoms persist, call a physician.

**Eye Contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

**Skin Contact**

Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.

**Inhalation**

Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.

**Ingestion**

Clean mouth with water and drink afterwards plenty of water.

**Most important symptoms and effects**

None reasonably foreseeable. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting

**Self-Protection of the First Aider**

Use personal protective equipment as required.

**Notes to Physician**

Treat symptomatically.

**SECTION 5. FIRE-FIGHTING MEASURES****Suitable Extinguishing Media**

Water spray, carbon dioxide (CO<sub>2</sub>), dry chemical, alcohol-resistant foam. Water mist may be used to cool closed containers.

**Extinguishing media which must not be used for safety reasons**

Water.

**Specific Hazards Arising from the Chemical**

Flammable. Vapors may travel to source of ignition and flash back. Containers may explode when heated. Vapors may form explosive mixtures with air. Do not allow run-off from fire-fighting to enter drains or water courses.

**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**SECTION 6. ACCIDENTAL RELEASE MEASURES****Personal Precautions**

Use personal protective equipment as required. Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges.

**Environmental Precautions**

Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

**Methods for Containment and Clean Up**

Keep in suitable, closed containers for disposal. Soak up with inert absorbent material. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

Refer to protective measures listed in Sections 8 and 13.

**SECTION 7. HANDLING AND STORAGE****Handling**

Wear personal protective equipment/face protection. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Take precautionary measures against static discharges.

**Storage**

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks and flame.

**Specific Use(s)**

Use in laboratories

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Control Parameters****Monitoring methods**

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of

## Triethylsilane

exposure to chemical and biological agents. MDHS70 General methods for sampling airborne gases and vapours MDHS 88 Volatile organic compounds in air. Laboratory method using diffusive samplers, solvent desorption and gas chromatography MDHS 96 Volatile organic compounds in air - Laboratory method using pumped solid sorbent tubes, solvent desorption and gas chromatography

**Exposure Controls****Engineering Measures**

Use explosion-proof electrical/ventilating/lighting equipment. Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas. Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source.

**Personal protective equipment**

**Eye Protection** Goggles (European standard - EN 166)

**Hand Protection** Protective gloves

| Glove material | Breakthrough time | Glove thickness | EU standard | Glove comments        |
|----------------|-------------------|-----------------|-------------|-----------------------|
| Natural rubber | See manufacturers | -               | EN 374      | (minimum requirement) |
| Nitrile rubber | recommendations   |                 |             |                       |
| Neoprene       |                   |                 |             |                       |
| PVC            |                   |                 |             |                       |

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatibility, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

**Skin and body protection** Long sleeved clothing

**Respiratory Protection** When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

**Large scale/emergency use** Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced  
**Recommended Filter type:** Organic gases and vapours filter Type A Brown conforming to EN14387

**Small scale/Laboratory use** Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.  
**Recommended half mask:-** Valve filtering: EN405; or; Half mask: EN140; plus filter, EN 141  
When RPE is used a face piece Fit Test should be conducted

**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice.

**Environmental exposure controls** Prevent product from entering drains. Do not allow material to contaminate ground water system. Local authorities should be advised if significant spillages cannot be contained.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance** Colorless  
**Physical State** Liquid

**Odor** aromatic  
**Odor Threshold** No data available

## Triethylsilane

|   |                                  |   |
|---|----------------------------------|---|
| pH                                      | Not applicable                   | 0.3 g/L (20°C)                              |
| Melting Point/Range                     | No data available                |   |
| Softening Point                         | No data available                |   |
| Boiling Point/Range                     | 107 - 108 °C / 224.6 - 226.4 °F  | @ 760 mmHg                                  |
| Flash Point                             | -3 °C / 26.6 °F                  | <b>Method</b> - No information available    |
| Evaporation Rate                        | No data available                |   |
| Flammability (solid,gas)                | Not applicable                   | Liquid                                      |
| Explosion Limits                        | <b>Lower</b> 1.03 Vol%           |   |
| Vapor Pressure                          | 31 hPa (20°C)                    |   |
| Vapor Density                           | No data available                | (Air = 1.0)                                 |
| Specific Gravity / Density              | 0.720                            |   |
| Bulk Density                            | Not applicable                   | Liquid                                      |
| Water Solubility                        | Decomposes in contact with water |   |
| Solubility in other solvents            | No information available         |   |
| Partition Coefficient (n-octanol/water) |                                  |   |
| Component                               | <b>log Pow</b>                   |   |
| Silane, triethyl-                       | 3.64                             |   |
| Autoignition Temperature                | 245 - °C / 473 - °F              |   |
| Decomposition Temperature               | No data available                |   |
| Viscosity                               | No data available                |   |
| Explosive Properties                    |                                  | Vapors may form explosive mixtures with air |
| Oxidizing Properties                    | No information available         |   |
| Molecular Formula                       | C6 H16 Si                        |   |
| Molecular Weight                        | 116.28                           |   |

## SECTION 10. STABILITY AND REACTIVITY

|                          |   |
|--------------------------|---|
| Stability                | Stable under normal conditions. Decomposes in contact with water.                                     |
| Hazardous Reactions      | None under normal processing.   |
| Hazardous Polymerization | Hazardous polymerization does not occur.  |
| Conditions to Avoid      | Incompatible products. Excess heat. Keep away from open flames, hot surfaces and sources of ignition. |
| Materials to avoid       | Acids. Bases. Strong oxidizing agents.  |

**Hazardous Decomposition Products** Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Silicon dioxide. Hydrogen.

## SECTION 11. TOXICOLOGICAL INFORMATION

## Product Information

## (a) acute toxicity;

| Component         | LD50 Oral         | LD50 Dermal | LC50 Inhalation |
|-------------------|-------------------|-------------|-----------------|
| Silane, triethyl- | >2000 mg/kg (Rat) |             |                 |

(b) skin corrosion/irritation; No data available

(c) serious eye damage/irritation; No data available

## (d) respiratory or skin sensitization;

|             |                   |
|-------------|-------------------|
| Respiratory | No data available |
| Skin        | No data available |

|   |   |
|---|---|
| <b>(e) germ cell mutagenicity;</b>                | No data available   |
| <b>(f) carcinogenicity;</b>                       | No data available<br>There are no known carcinogenic chemicals in this product                                      |
| <b>(g) reproductive toxicity;</b>                 | No data available   |
| <b>(h) STOT-single exposure;</b>                  | No data available   |
| <b>(i) STOT-repeated exposure;</b>                | No data available   |
| <b>Target Organs</b>                              | None known.   |
| <b>(j) aspiration hazard;</b>                     | No data available   |
| <b>Other Adverse Effects</b>                      | The toxicological properties have not been fully investigated.  |
| <b>Symptoms / effects, both acute and delayed</b> | Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting |

## SECTION 12. ECOLOGICAL INFORMATION

| Ecotoxicity effects  | Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains following substances which are hazardous for the environment. Reacts with water so no ecotoxicity data for the substance is available. |                               |           |         |                               |                   |      |                   |
|--|--|-------------------------------|-----------|---------|-------------------------------|-------------------|------|-------------------|
| Persistence and Degradability  | No information available   |                               |           |         |                               |                   |      |                   |
| Persistence  | Persistence is unlikely.   |                               |           |         |                               |                   |      |                   |
| Degradability  | Decomposes in contact with water.  |                               |           |         |                               |                   |      |                   |
| Degradation in sewage treatment plant  | Contains substances known to be hazardous to the environment or not degradable in waste water treatment plants. Decomposes in contact with water.  |                               |           |         |                               |                   |      |                   |
| Bioaccumulative Potential  | Bioaccumulation is unlikely  |                               |           |         |                               |                   |      |                   |
| <table><tr><th>Component</th><th>log Pow</th><th>Bioconcentration factor (BCF)</th></tr><tr><td>Silane, triethyl-</td><td>3.64</td><td>No data available</td></tr></table> |  |                               | Component | log Pow | Bioconcentration factor (BCF) | Silane, triethyl- | 3.64 | No data available |
| Component  | log Pow  | Bioconcentration factor (BCF) |           |         |                               |                   |      |                   |
| Silane, triethyl-  | 3.64   | No data available             |           |         |                               |                   |      |                   |
| Mobility in soil   | Decomposes in contact with water    Is not likely mobile in the environment  |                               |           |         |                               |                   |      |                   |
| Endocrine Disruptor Information  | This product does not contain any known or suspected endocrine disruptors  |                               |           |         |                               |                   |      |                   |
| Persistent Organic Pollutant   | This product does not contain any known or suspected substance   |                               |           |         |                               |                   |      |                   |
| Ozone Depletion Potential  | This product does not contain any known or suspected substance   |                               |           |         |                               |                   |      |                   |

## SECTION 13. DISPOSAL CONSIDERATIONS

|  |  |
|--|--|
| <b>Waste from Residues/Unused Products</b> | Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.   |
| <b>Contaminated Packaging</b>              | Dispose of this container to hazardous or special waste collection point. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep product and empty container away from heat and sources of ignition. |

## Triethylsilane

## Other Information

Do not flush to sewer. Waste codes should be assigned by the user based on the application for which the product was used. Can be landfilled or incinerated, when in compliance with local regulations. Do not let this chemical enter the environment. Do not empty into drains.

## SECTION 14. TRANSPORT INFORMATION

## Road and Rail Transport

UN-No UN1993  
Proper Shipping Name Flammable liquid, n.o.s.  
Technical Shipping Name Triethylsilane  
Hazard Class 3  
Packing Group II

## IMDG/IMO

UN-No UN1993  
Proper Shipping Name Flammable liquid, n.o.s.  
Technical Shipping Name Triethylsilane  
Hazard Class 3  
Packing Group II

## IATA

UN-No UN1993  
Proper Shipping Name FLAMMABLE LIQUID, N.O.S.\*  
Technical Shipping Name Triethylsilane  
Hazard Class 3  
Packing Group II

Special Precautions for User No special precautions required

## SECTION 15. REGULATORY INFORMATION

## International Inventories

China, X = listed, Australia, U.S.A. (TSCA), Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Australia (AICS), Korea (KECL), China (IECSC), Japan (ENCS), Philippines (PICCS), Taiwan (TCSI), Japan (ISHL), New Zealand (NZIoC), Japan (ISHL).

| Component         | The Inventory of Hazardous Chemicals (2015 Edition) | List of dangerous goods GB 12268 - 2012 | TCSI | IECSC | EINECS    | TSCA | DSL | PICCS | ENCS | ISHL | AICS | KECL     |
|-------------------|---|---|------|-------|-----------|------|-----|-------|------|------|------|----------|
| Silane, triethyl- | -   | -                                       | X    | X     | 210-535-3 | X    | -   | X     | -    | X    | X    | KE-34232 |

## National Regulations

## SECTION 16. OTHER INFORMATION

Prepared By Health, Safety and Environmental Department  
Creation Date 20-Jul-2009  
Revision Date 22-Apr-2024

## Triethylsilane

**Revision Summary**

New emergency telephone response service provider.

**Training Advice**

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

Chemical incident response training.

**Legend**

**CAS** - Chemical Abstracts Service

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**IECSC** - Chinese Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List

**ENCS** - Japanese Existing and New Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**NZIoC** - New Zealand Inventory of Chemicals

**WEL** - Workplace Exposure Limit

**ACGIH** - American Conference of Governmental Industrial Hygienists

**DNEL** - Derived No Effect Level

**RPE** - Respiratory Protective Equipment

**LC50** - Lethal Concentration 50%

**NOEC** - No Observed Effect Concentration

**PBT** - Persistent, Bioaccumulative, Toxic

**TWA** - Time Weighted Average

**IARC** - International Agency for Research on Cancer

**PNEC** - Predicted No Effect Concentration

**LD50** - Lethal Dose 50%

**EC50** - Effective Concentration 50%

**POW** - Partition coefficient Octanol:Water

**vPvB** - very Persistent, very Bioaccumulative

**ICAO/IATA** - International Civil Aviation Organization/International Air Transport Association

**ADR** - European Agreement Concerning the International Carriage of Dangerous Goods by Road

**OECD** - Organisation for Economic Co-operation and Development

**BCF** - Bioconcentration factor

**IMO/IMDG** - International Maritime Organization/International Maritime Dangerous Goods Code

**MARPOL** - International Convention for the Prevention of Pollution from Ships

**ATE** - Acute Toxicity Estimate

**VOC** - (Volatile Organic Compound)

**Key literature references and sources for data**

<https://echa.europa.eu/information-on-chemicals>

Suppliers safety data sheet, Chemadviser - LOLI, Merck index, RTECS

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of Safety Data Sheet**