# Material Safety Data Sheet

Version 3.2
Revision Date 01/11/2008
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## 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : (3-Aminopropyl)triethoxysilane

Product Number : 09324
Brand : Fluka

Company : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA
Telephone : +1 800-325-5832
Fax : +1 800-325-5052
Emergency Phone # : (314) 776-6555

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : 3-Triethoxysilylpropylamine

Formula : C9H23NO3Si
Molecular Weight : 221.37 g/mol

| CAS-No. | EC-No. | Index-No. | Concentration |
|---|---|---|---|
| **3-Aminopropyltriethoxysilane** | | | |
| 919-30-2 | 213-048-4 | 612-108-00-0 | - |

## 3. HAZARDS IDENTIFICATION

**Emergency Overview**

**OSHA Hazards**

Target Organ Effect

Harmful by ingestion.

Corrosive

**Target Organs**

Nerves., Liver, Kidney

**HMIS Classification**

**Health Hazard**: 3
**Chronic Health Hazard**: *
**Flammability**: 1
**Physical hazards**: 1

**NFPA Rating**

**Health Hazard**: 3
**Fire** : 1
**Reactivity Hazard**: 1

**Potential Health Effects**

| | |
|---|---|
| **Inhalation** | May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. May cause respiratory tract irritation. |
| **Skin** | May be harmful if absorbed through skin. Causes skin burns. |
| **Eyes** | May cause eye irritation. Causes eye burns. |
| **Ingestion** | Harmful if swallowed. Causes burns. |

## 4. FIRST AID MEASURES

**General advice**
Consult a physician. Show this safety data sheet to the doctor in attendance.Move out of dangerous area.

**If inhaled**
If breathed in, move person into fresh air. If not breathing give artificial respiration Consult a physician.

**In case of skin contact**
Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact**
Continue rinsing eyes during transport to hospital.Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed**
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

## 5. FIRE-FIGHTING MEASURES

**Flammable properties**

| | |
|---|---|
| Flash point | 98 °C (208 °F) **- closed cup** |
| **Ignition temperature** | **no data available** |

**Suitable extinguishing media**
**Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.**

**Special protective equipment for fire-fighters**
**Wear self contained breathing apparatus for fire fighting if necessary.**

**Further information**
**Under fire conditions, material may decompose to form flammable and/or explosive mixtures in air.**

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions**
**Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.**

**Environmental precautions**
**Do not let product enter drains.**

**Methods for cleaning up**
**Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.**

## 7. HANDLING AND STORAGE

**Handling**
**Avoid inhalation of vapour or mist.**
**Normal measures for preventive fire protection.**

**Storage**
**Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.**

**Moisture sensitive. Store under inert gas.**

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Contains no substances with occupational exposure limit values.**

**Personal protective equipment**

**Respiratory protection**
**Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).**

**Hand protection**
**Handle with gloves.**

**Eye protection**
**Safety glasses**

**Skin and body protection**
**Choose body protection according to the amount and concentration of the dangerous substance at the work place.**

**Hygiene measures**
**Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.**

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance**

| | |
|---|---|
| **Form** | **liquid, clear** |
| **Colour** | **colourless** |

**Safety data**

| | |
|---|---|
| **pH** | **no data available** |
| **Melting point** | **no data available** |
| **Boiling point** | **213 - 216 °C (415 - 421 °F)** |
| Flash point | 98 °C (208 °F) **- closed cup** |
| **Ignition temperature** | **no data available** |
| **Lower explosion limit** | **0.8 %(V)** |
| **Upper explosion limit** | **4.5 %(V)** |
| **Vapour pressure** | **< 13 hPa (< 10 mmHg) at 100 °C (212 °F)**<br>**133 hPa (100 mmHg) at 155 °C (311 °F)** |
| Density | 0.949 g/cm3 |
| Water solubility | no data available |
| Relative vapour density | 7.64<br>- (Air = 1.0) |

## 10. STABILITY AND REACTIVITY

**Storage stability**
Stable under recommended storage conditions. May decompose on exposure to moist air or water.

**Materials to avoid**
Strong oxidizing agents, Acids

**Hazardous decomposition products**
Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx), silicon oxides

## 11. TOXICOLOGICAL INFORMATION

**Acute toxicity**

LD50 Oral - rat - 1,780 mg/kg

LD50 Dermal - rabbit - 3.8 g/kg

**Irritation and corrosion**

Skin - rabbit - Severe skin irritation - 24 h

Eyes - rabbit - Severe eye irritation - 24 h

**Sensitisation**

no data available

**Chronic exposure**

| | |
|---|---|
| IARC: | No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. |
| ACGIH: | No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH. |
| NTP: | No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. |
| OSHA: | No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. |

**Signs and Symptoms of Exposure**

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting

**Potential Health Effects**

| | |
|---|---|
| **Inhalation** | May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. May cause respiratory tract irritation. |
| **Skin** | May be harmful if absorbed through skin. Causes skin burns. |
| **Eyes** | May cause eye irritation. Causes eye burns. |
| **Ingestion** | Harmful if swallowed. Causes burns. |
| **Target Organs** | Nerves., Liver, Kidney, |

## 12. ECOLOGICAL INFORMATION

**Elimination information (persistence and degradability)**

no data available

**Ecotoxicity effects**

no data available

**Further information on ecology**

no data available

## 13. DISPOSAL CONSIDERATIONS

**Product**
Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

**Contaminated packaging**
Dispose of as unused product.

## 14. TRANSPORT INFORMATION

**DOT (US)**
UN-Number: 2735 Class: 8 Packing group: II
Proper shipping name: Amines, liquid, corrosive, n.o.s. (3-Aminopropyltriethoxysilane)

**IMDG**
UN-Number: 2735 Class: 8 Packing group: II EMS-No: F-A, S-B
Proper shipping name: AMINES, LIQUID, CORROSIVE, N.O.S. (3-Aminopropyltriethoxysilane)
Marine pollutant: No

**IATA**
UN-Number: 2735 Class: 8 Packing group: II
Proper shipping name: Amines, liquid, corrosive n.o.s. (3-Aminopropyltriethoxysilane)

## 15. REGULATORY INFORMATION

**OSHA Hazards**
Target Organ Effect, Harmful by ingestion., Corrosive

**TSCA Status**
On TSCA Inventory

**DSL Status**
All components of this product are on the Canadian DSL list.

**SARA 302 Components**
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components**
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 Hazards**
Acute Health Hazard, Chronic Health Hazard

**Massachusetts Right To Know Components**
No Components Listed

**Pennsylvania Right To Know Components**

| | CAS-No. | Revision Date |
|---|---|---|
| 3-Aminopropyltriethoxysilane | 919-30-2 | |

**New Jersey Right To Know Components**

| | CAS-No. | Revision Date |
|---|---|---|
| 3-Aminopropyltriethoxysilane | 919-30-2 | |

**California Prop. 65 Components**
This product does not contain any chemicals known to State of California to cause cancer, birth, or any other reproductive defects.

## 16. OTHER INFORMATION

**Further information**

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Co., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.