

Material Safety Data Sheet

Version 4.0
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1. PRODUCT AND COMPANY IDENTIFICATION

Product name : (3-Aminopropyl)triethoxysilane

Product Number : 440140

Brand : Aldrich

Company : Sigma-Aldrich Canada, Ltd
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2. HAZARDS IDENTIFICATION

Emergency Overview

Target Organs

Nerves., Liver, Kidney

WHMIS Classification

D2B Toxic Material Causing Other Toxic Effects Moderate eye irritant
E Corrosive

GHS Label elements, including precautionary statements

Pictogram



Signal word Danger

Hazard statement(s)

H302 Harmful if swallowed.
H313 May be harmful in contact with skin.
H315 Causes skin irritation.
H318 Causes serious eye damage.

Precautionary statement(s)

P280 Wear protective gloves/eye protection/face protection.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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.

Skin
Eyes
Ingestion

May be harmful if absorbed through skin. Causes skin burns.
Causes eye burns.
Harmful if swallowed. Causes burns.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : 3-Triethoxysilylpropylamine
APTES
Dow Corning® product Z-6011

Formula : $C_9H_{23}NO_3Si$
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	-

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

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 and materials for containment and 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

Precautions for safe handling

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

Conditions for safe 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

Tightly fitting safety goggles. Faceshield (8-inch minimum).

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	217 °C (423 °F) at 1,013 hPa (760 mmHg) - lit.
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) 133 hPa (100 mmHg) at 155 °C (311 °F)
Density	0.946 g/cm ³ at 25 °C (77 °F)
Water solubility	no data available
Relative vapour density	7.64 - (Air = 1.0)

10. STABILITY AND REACTIVITY**Chemical stability**

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

Conditions to avoid

no data available

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

Skin corrosion/irritation

Skin - rabbit - Severe skin irritation - 24 h

Serious eye damage/eye irritation

Eyes - rabbit - Severe eye irritation - 24 h

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

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.

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure (GHS)

no data available

Specific target organ toxicity - repeated exposure (GHS)

no data available

Aspiration hazard

no data available

Potential health effects

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

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

Additional Information

RTECS: TX2100000

12. ECOLOGICAL INFORMATION**Toxicity**

no data available

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

PBT and vPvB assessment

no data available

Other adverse effects

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)
Marine pollutant: No
Poison Inhalation Hazard: No

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**DSL Status**

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

WHMIS Classification

D2B	Toxic Material Causing Other Toxic Effects	Moderate eye irritant
E		Corrosive

16. OTHER INFORMATION**Further information**

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