

Material Safety Data Sheet

Version 4.5

Revision Date 08/22/2012

Print Date 01/23/2017

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Tris(dimethylamino)silane

Product Number : 570133

Brand : Aldrich

Supplier : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA

Telephone : +1 800-325-5832

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Preparation Information : Sigma-Aldrich Corporation
Product Safety - Americas Region
1-800-521-8956

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards

Flammable liquid, Water Reactive, Target Organ Effect, Highly toxic by inhalation, Harmful by ingestion., Toxic by skin absorption, Corrosive

Target Organs

Heart, Lungs, Central nervous system

GHS Classification

Flammable liquids (Category 2)

Substances, which in contact with water, emit flammable gases (Category 2)

Acute toxicity, Oral (Category 4)

Acute toxicity, Inhalation (Category 1)

Acute toxicity, Dermal (Category 3)

Skin corrosion (Category 1B)

Serious eye damage (Category 1)

Acute aquatic toxicity (Category 3)

GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

H225	Highly flammable liquid and vapour.
H261	In contact with water releases flammable gases.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H330	Fatal if inhaled.
H402	Harmful to aquatic life.

Precautionary statement(s)

P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P231 + P232	Handle under inert gas. Protect from moisture.
P260	Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P284	Wear respiratory 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.
P310	Immediately call a POISON CENTER or doctor/ physician.
P422	Store contents under inert gas.

HMIS Classification

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

NFPA Rating

Health hazard:	3
Fire:	3
Reactivity Hazard:	1
Special hazard.:	W

Potential Health Effects

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

3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula	: C ₆ H ₁₉ N ₃ Si
Molecular Weight	: 161.32 g/mol

Component		Concentration
N,N,N',N',N'',N'''-Hexamethylsilanetriamine		
CAS-No.	15112-89-7	-
EC-No.	239-165-0	

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. Take victim immediately to hospital. Consult a physician.

In case of eye contact

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

If swallowed

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

5. FIREFIGHTING MEASURES**Conditions of flammability**

Flammable in the presence of a source of ignition when the temperature is above the flash point. May burn in presence of air, or emit a flammable gas in the presence of water or water vapour. Keep away from heat/sparks/open flame/hot surface. No smoking. Keep away from heat/sparks/open flame/hot surface/air/water. No smoking.

Suitable extinguishing media

Dry powder

Special protective equipment for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

Hazardous combustion products

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

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Do not flush with water.

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Use explosion-proof equipment. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

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.

Never allow product to get in contact with water during storage.

Air and moisture sensitive. Handle and 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. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	liquid
Colour	colourless

Safety data

pH	no data available
Melting point/freezing point	Melting point/range: -90 °C (-130 °F) - lit.
Boiling point	142 °C (288 °F) - lit.
Flash point	-8.89 - 0.00 °C (16.00 - 32.00 °F) - closed cup
Ignition temperature	no data available
Autoignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Vapour pressure	no data available
Density	0.838 g/cm ³ at 25 °C (77 °F)
Water solubility	no data available
Partition coefficient: n-octanol/water	no data available
Relative vapour density	no data available
Odour	no data available
Odour Threshold	no data available
Evaporation rate	no data available

10. STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

Vapours may form explosive mixture with air.

Reacts violently with water.

Conditions to avoid

Heat, flames and sparks. Extremes of temperature and direct sunlight. Exposure to moisture.

Materials to avoid

Strong oxidizing agents

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NO_x), silicon oxides
Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral LD50

LD50 Oral - rat - 594 mg/kg

Remarks: Lungs, Thorax, or Respiration:Dyspnea. Gastrointestinal:Other changes. Nutritional and Gross Metabolic:Weight loss or decreased weight gain.

Inhalation LC50

LC50 Inhalation - rat - 6 h - 38 ppm

Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Eye:Lacrimation. Behavioral:Ataxia. Gastrointestinal:Changes in structure or function of salivary glands.

Dermal LD50

no data available

Other information on acute toxicity

no data available

Skin corrosion/irritation

Skin - rabbit -

Serious eye damage/eye irritation

Eyes - rabbit -

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.

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.

Reproductive toxicity

no data available

Teratogenicity

no data available

Specific target organ toxicity - single exposure (Globally Harmonized System)

no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)

no data available

Aspiration hazard

no data available

Potential health effects

Inhalation

May be fatal if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

Ingestion

Harmful if swallowed.

Skin

Toxic 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., burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting, spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis

Synergistic effects

no data available

Additional Information

RTECS: VV5800000

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

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Harmful to aquatic life.

13. DISPOSAL CONSIDERATIONS**Product**

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION**DOT (US)**

UN number: 3399 Class: 4.3 (3) Packing group: II

Proper shipping name: Organometallic substance, liquid, water-reactive, flammable (N,N,N',N',N'',N''-Hexamethylsilanetriamine)

Reportable Quantity (RQ):

Marine pollutant: No

Poison Inhalation Hazard: No

IMDG

UN number: 3398 Class: 4.3 Packing group: II EMS-No: F-G, S-N

Proper shipping name: ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE (N,N,N',N',N'',N''-Hexamethylsilanetriamine)

Marine pollutant: No

IATA

UN number: 3398 Class: 4.3 Packing group: II

Proper shipping name: Organometallic substance, liquid, water-reactive (N,N,N',N',N'',N''-Hexamethylsilanetriamine)

15. REGULATORY INFORMATION

OSHA Hazards

Flammable liquid, Water Reactive, Target Organ Effect, Highly toxic by inhalation, Harmful by ingestion., Toxic by skin absorption, Corrosive

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

Fire Hazard, Reactivity Hazard, Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

N,N,N',N',N'',N''-Hexamethylsilanetriamine

CAS-No.
15112-89-7

Revision Date

New Jersey Right To Know Components

N,N,N',N',N'',N''-Hexamethylsilanetriamine

CAS-No.
15112-89-7

Revision Date

California Prop. 65 Components

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

16. OTHER INFORMATION**Further information**

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