TRIISOPROPYLDIMETHYLAMINOSILANE

Safety Data Sheet SIT8384.5

Issue date: 01/22/2016 Revision date: 01/24/2023 Version: 2.0

SECTION 1: Identification

1.1. Identification

Product name	:	TRIISOPROPYLDIMETHYLAMINOSILANE
Product code	:	SIT8384.5
Product form	:	Substance
Physical state	:	Solid
Formula	:	C11H27NSi
Synonyms	:	N,N-DIMETHYLTRIS(1-METHYLETHYL)SILANAMINE
Chemical family	:	ORGANOAMINOSILANE

1.2. Recommended use and restrictions on use

Recommended use	:	Chemical intermediate

1.3. Supplier

GELEST, INC.
11 East Steel Road
Morrisville, PA 19067
USA
T 215-547-1015 - F 215-547-2484 - (M-F): 8:00 AM - 5:30 PM EST
info@gelest.com - www.gelest.com

1.4. Emergency telephone number

Emergency number	:	CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Skin corrosion/irritation Category 1C	H314	Causes severe skin burns and eye damage
Serious eye damage/eye irritation Category 1	H318	Causes serious eye damage
Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation	H335	May cause respiratory irritation

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :

Signal word (GHS US) : Danger

Hazard statements (GHS US) : H314 - Causes severe skin burns and eye damage
H335 - May cause respiratory irritation

Precautionary statements (GHS US) : P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P310 - Immediately call a doctor.
P260 - Do not breathe dust, mist.
P264 - Wash hands thoroughly after handling.
P271 - Use only outdoors or in a well-ventilated area.
P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting.

P303+P361+P353 - If on skin (or hair): take off immediately all contaminated clothing. rinse skin with water/shower
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P312 - Call a doctor if you feel unwell.
P321 - Specific treatment (see first aid instructions on this label).
P363 - Wash contaminated clothing before reuse.
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P405 - Store locked up.
P501 - Dispose of contents/container to licensed waste disposal facility..

2.3. Hazards not otherwise classified (HNOC)

Other hazards which do not result in classification : Additional dimethylamine may be formed by reaction with moisture and water. The US OSHA PEL (TWA) for dimethylamine is 10 ppm.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Substance type : Mono-constituent
Name : TRIISOPROPYLDIMETHYLAMINOSILANE
CAS-No. : 181231-66-3

Name	Product identifier	%	GHS US classification
Triisopropyldimethylaminosilane	CAS-No.: 181231-66-3	97 – 100	Skin Corr. 1C, H314 Eye Dam. 1, H318 STOT SE 3, H335

Full text of hazard classes and H-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 victim to fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, seek medical advice.
First-aid measures after skin contact : Wash with plenty of soap and water. Get immediate medical advice/attention.
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 immediate medical advice/attention.
First-aid measures after ingestion : Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects : Causes severe skin burns and eye damage.
Symptoms/effects after inhalation : May cause respiratory irritation.
Symptoms/effects after skin contact : Causes (severe) skin burns.
Symptoms/effects after eye contact : Causes serious eye damage.
Symptoms/effects after ingestion : May be harmful if swallowed.

4.3. Immediate medical attention and special treatment, if necessary

No additional information available

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Foam. Carbon dioxide. Dry chemical.
Unsuitable extinguishing media : Water.

5.2. Specific hazards arising from the chemical

Fire hazard : Irritating fumes of dimethylamine and organic acid vapors may develop when material is exposed to water or open flame.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Exercise caution when fighting any chemical fire. Use water spray to cool exposed surfaces.
Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Avoid contact with skin and eyes. Do not breathe dust.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment : Wear protective equipment as described in Section 8.
Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
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 Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid contact with skin and eyes. Do not breathe dust. Ground/bond container and receiving equipment. Use only outdoors or in a well-ventilated area.
Hygiene measures : Wash contaminated clothing before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container tightly closed. Store locked up.
Incompatible materials : Acids. Alcohols. Oxidizing agent. Moisture. Water.

Storage area : Store in a well-ventilated place. Store away from heat.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls : Provide local exhaust or general room ventilation.

8.3. Individual protection measures/Personal protective 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.

Hand protection:
Neoprene or nitrile rubber gloves

Eye protection:
Chemical goggles or face shield. Contact lenses should not be worn

Skin and body protection:
Wear suitable protective clothing

Respiratory protection:
Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. NIOSH-certified combination organic vapor - amine gas (brown cartridge) respirator.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Solid
Appearance	:	Solid / clear liquid when melted.
Molecular mass	:	201.43 g/mol
Color	:	White.
Odor	:	Acrid. Amine-like.
Odor threshold	:	No data available
pH	:	No data available
Relative evaporation rate (butyl acetate=1)	:	No data available
Melting point	:	27 – 30 °C
Freezing point	:	No data available
Boiling point	:	76 – 78 °C @ 8 mm Hg
Flash point	:	67 °C
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	No data available
Vapor pressure	:	No data available
Relative vapor density at 20°C	:	> 1
Relative density	:	0.833
Solubility	:	Reacts with water.
Partition coefficient n-octanol/water (Log Pow)	:	No data available
Partition coefficient n-octanol/water (Log Kow)	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available
Explosion limits	:	No data available

9.2. Other information

No additional information available

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

Reacts with water and moisture in air, liberating dimethylamine.

10.4. Conditions to avoid

Heat. Open flame. Sparks.

10.5. Incompatible materials

Acids. Alcohols. Oxidizing agent. Moisture. Water.

10.6. Hazardous decomposition products

Dimethylamine. Organic acid vapors.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	:	Not classified
Acute toxicity (dermal)	:	Not classified
Acute toxicity (inhalation)	:	Not classified
Skin corrosion/irritation	:	Causes severe skin burns.
Serious eye damage/irritation	:	Causes serious eye damage.
Respiratory or skin sensitization	:	Not classified
Germ cell mutagenicity	:	Not classified
Carcinogenicity	:	Not classified
Reproductive toxicity	:	Not classified
STOT-single exposure	:	May cause respiratory irritation.
STOT-repeated exposure	:	Not classified
Aspiration hazard	:	Not classified
Symptoms/effects after inhalation	:	May cause respiratory irritation.
Symptoms/effects after skin contact	:	Causes (severe) skin burns.
Symptoms/effects after eye contact	:	Causes serious eye damage.
Symptoms/effects after ingestion	:	May be harmful if swallowed.
Reason for classification	:	Expert judgment

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other adverse effects : This substance may be hazardous to the environment.
Effect on the ozone layer : No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Sewage disposal recommendations : Do not dispose of waste into sewer.
Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility..
Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

DOT	TDG	IMDG	IATA
14.1. UN number			
1759	Not applicable	1759	1759
14.2. Proper Shipping Name			
Corrosive solids, n.o.s. ((TRIISOPROPYLDIMETHYLAMINOSILANE))	Not applicable	CORROSIVE SOLID, N.O.S. (TRIISOPROPYLDIMETHYLAMINOSILANE)	Corrosive solid, n.o.s. (TRIISOPROPYLDIMETHYLAMINOSILANE)
Transport document description			
UN1759 Corrosive solids, n.o.s. (TRIISOPROPYLDIMETHYLAMINOSILANE), 8, III	Not applicable	UN 1759 CORROSIVE SOLID, N.O.S. (TRIISOPROPYLDIMETHYLAMINOSILANE), 8, III	UN 1759 Corrosive solid, n.o.s. (TRIISOPROPYLDIMETHYLAMINOSILANE), 8, III
14.3. Transport hazard class(es)			
8	Not applicable	8	8
 Not applicable	Not applicable		
14.4. Packing group			
III	Not applicable	III	III
14.5. Environmental hazards			
Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No
No supplementary information available			

14.6. Special precautions for user

DOT

UN-No.(DOT)	:	UN1759
DOT Special Provisions (49 CFR 172.102)	:	128 - Regardless of the provisions of §172.101(c)(12), aluminum smelting by-products and aluminum remelting by-products described under this entry, meeting the definition of Class 8, Packing Group II and III may be classed as a Division 4.3 material and transported under this entry. The presence of a Class 8 hazard must be communicated as required by this Part for subsidiary hazards IB8 - Authorized IBCs: Metal (11A, 11B, 11N, 21A, 21B, 21N, 31A, 31B and 31N); Rigid plastics (11H1, 11H2, 21H1, 21H2, 31H1 and 31H2); Composite (11HZ1, 11HZ2, 21HZ1, 21HZ2, 31HZ1 and 31HZ2); Fiberboard (11G); Wooden (11C, 11D and 11F); Flexible (13H1, 13H2, 13H3, 13H4, 13H5, 13L1, 13L2, 13L3, 13L4, 13M1 or 13M2). IP3 - Flexible IBCs must be sift-proof and water-resistant or must be fitted with a sift-proof and water-resistant liner. T1 - 1.5 178.274(d)(2) Normal..... 178.275(d)(2) TP33 - The portable tank instruction assigned for this substance applies for granular and powdered solids and for solids which are filled and discharged at temperatures above their melting point which are cooled and transported as a solid mass. Solid substances transported or offered for transport above their melting point are authorized for transportation in portable tanks conforming to the provisions of portable tank instruction T4 for solid substances of packing group III or T7 for solid substances of packing group II, unless a tank with more stringent requirements for minimum shell thickness, maximum allowable working pressure, pressure-relief devices or bottom outlets are assigned in which case the more stringent tank instruction and special provisions shall apply. Filling limits must be in accordance with portable tank special provision TP3. Solids meeting the definition of an elevated temperature material must be transported in accordance with the applicable requirements of this subchapter.
DOT Packaging Exceptions (49 CFR 173.xxx)	:	154
DOT Packaging Non Bulk (49 CFR 173.xxx)	:	213
DOT Packaging Bulk (49 CFR 173.xxx)	:	240
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	:	25 kg
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	:	100 kg
DOT Vessel Stowage Location	:	A - The material may be stowed ‘‘on deck’’ or ‘‘under deck’’ on a cargo vessel and on a passenger vessel.

TDG

Emergency Response Guide (ERG) Number	:	154

IMDG

Special provision (IMDG)	:	223, 274
Limited quantities (IMDG)	:	5 kg
Excepted quantities (IMDG)	:	E1
Packing instructions (IMDG)	:	P002, LP02
IBC packing instructions (IMDG)	:	IBC08
IBC special provisions (IMDG)	:	B3
Tank instructions (IMDG)	:	T1
Tank special provisions (IMDG)	:	TP33
EmS-No. (Fire)	:	F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE
EmS-No. (Spillage)	:	S-B - SPILLAGE SCHEDULE Bravo - CORROSIVE SUBSTANCES
Stowage category (IMDG)	:	A
Properties and observations (IMDG)	:	Causes burns to skin, eyes and mucous membranes.

IATA

PCA Excepted quantities (IATA)	:	E1
PCA Limited quantities (IATA)	:	Y845
PCA limited quantity max net quantity (IATA)	:	5kg
PCA packing instructions (IATA)	:	860

PCA max net quantity (IATA)	:	25kg
CAO packing instructions (IATA)	:	864
CAO max net quantity (IATA)	:	100kg
Special provision (IATA)	:	A3
ERG code (IATA)	:	8L

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

TRIISOPROPYLDIMETHYLAMINOSILANE (181231-66-3)	
TSCA Exemption/Exclusion	CAUTION: This material is supplied for research and development purposes subject to the RD exemption under TSCA, 40 CFR 720.36, and must meet the requirements of the exemption, including supervision by a "technically qualified individual" as defined by 40 CFR 720.3(ee). The use of this material for "commercial purposes" as defined by 40 CFR 720.3(r) is not permitted in the United States.

Commercial status of components according to the United States Environmental Protection Agency's Toxic Substances Control Act (TSCA):

Name	CAS-No.	Listing	Commercial status	Flags
Triisopropyldimethylaminosilane	181231-66-3	Not present	-	

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

Full text of H-phrases::

H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H335	May cause respiratory irritation

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.: Chemcial 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.

Hazard Rating

Health	:	3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given
Flammability	:	2 Moderate Hazard - Materials which must be moderately heated or exposed to high ambient temperatures before ignition will occur. Includes liquids having a flash point at or above 100 F but below 200 F. (Classes II & IIIA)
Physical	:	1 Slight Hazard - Materials that are normally stable but can become unstable (self-react) at high temperatures and pressures. Materials may react non-violently with water or undergo hazardous polymerization in the absence of inhibitors.

Prepared by safety and environmental affairs.

Issue date: 01/22/2016 Revision date: 01/24/2023 Version: 2.0

SDS US (GHS HazCom 2012) - Custom

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations