

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878 Issue date: 08.05.2014 Revision date: 11.10.2023 Supersedes version of: 11.10.2023 Version: 2.3

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Substance

Substance name : TRIS(DIMETHYLAMINO)SILANE

 EC-No.
 : 239-165-0

 CAS-No.
 : 15112-89-7

 Product code
 : SIT8714.0

 Formula
 : C6H19N3Si

Synonyms : TRIS(DIMETHYLAMIDO)SILYLHYDRIDE; N,N,N',N',N'',N''-

HEXAMETHYLSILANETRIAMINE

Product group : Trade product

Chemical family : ORGANOAMINOSILANE

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Use of the substance/mixture : Chemical intermediate

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

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1.4. Emergency telephone number

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

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flammable liquids, Category 3

Acute toxicity (oral), Category 4

Acute toxicity (dermal), Category 3

Acute toxicity (inhalation:vapour) Category 4

Skin corrosion/irritation, Category 1, Sub-Category 1B

Serious eye damage/eye irritation, Category 1

Specific target organ toxicity – Single exposure, Category 3, Respiratory

H326

H327

H337

tract irritation

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



GHS02

GHS05

GHS06

Signal word (CLP) : Danger

Hazard statements (CLP) : H226 - Flammable liquid and vapour.

H302+H332 - Harmful if swallowed or if inhaled.

H311 - Toxic in contact with skin.

H314 - Causes severe skin burns and eye damage.

H335 - May cause respiratory irritation.

Precautionary statements (CLP) : 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.

P260 - Do not breathe vapours.

P264 - Wash hands thoroughly after handling.

2.3. Other hazards

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.

Contains no PBT/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type : Mono-constituent

Name : TRIS(DIMETHYLAMINO)SILANE

CAS-No. : 15112-89-7 EC-No. : 239-165-0

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Tris(dimethylamino)silane	CAS-No.: 15112-89-7 EC-No.: 239-165-0	95 – 100	Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Dermal), H311 Acute Tox. 4 (Inhalation:vapour), H332 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335

Full text of H- and EUH-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.

11.10.2023 (Revision date) EU - en 2/11

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON

CENTER/doctor.

First-aid measures after skin contact : Wash with plenty of 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. Immediately call a POISON

CENTER/doctor.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects : Causes severe skin burns and eye damage.

Symptoms/effects after inhalation : Harmful if inhaled. Danger of serious damage to health by prolonged exposure through inhalation. May cause respiratory irritation. Overexposure may cause: Cough. Headache.

Nausea.

Symptoms/effects after skin contact : Toxic in contact with skin. Repeated exposure to this material can result in absorption

through skin causing significant health hazard. Causes (severe) skin burns.

Symptoms/effects after eye contact : Causes serious eye damage.

Symptoms/effects after ingestion : Harmful if swallowed. Swallowing a small quantity of this material will result in serious health

hazard

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

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

5.2. Special hazards arising from the substance or mixture

Fire hazard : Flammable liquid and vapour. Irritating fumes of dimethylamine and organic acid vapors

may develop when material is exposed to water or open flame.

Explosion hazard : May form flammable/explosive vapour-air mixture.

5.3. Advice for firefighters

Firefighting instructions : Use water spray to cool exposed surfaces. Exercise caution when fighting any chemical fire.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

Avoid all eye and skin contact and do not breathe vapour and mist.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Remove ignition sources. Use special care to avoid static electric charges.

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

old methode and material for contaminant and oldaring ap

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. Use only non-sparking tools.

6.4. Reference to other sections

See Section 8. Exposure controls and personal protection.

11.10.2023 (Revision date) EU - en 3/11

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapours are flammable.

Precautions for safe handling : Containers must be properly grounded before beginning transfer. Provide good ventilation in

process area to prevent formation of vapour. Take precautionary measures against static discharge. Use only non-sparking tools. Use only outdoors or in a well-ventilated area.

Avoid all eye and skin contact and do not breathe vapour and mist.

Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.

Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed. Ground/bond

container and receiving equipment. Use explosion-proof electrical equipment.

Storage conditions : Keep container tightly closed.

Incompatible materials : Acids. alcohols. Oxidizing agent. Moisture. Water : Storage area : Store in a well-ventilated place. Store away from heat.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

No additional information available

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Provide local exhaust or general room ventilation.

8.2.2. Personal protection 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.

8.2.2.1. Eye and face protection

Eye protection:

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

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Neoprene or nitrile rubber gloves

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

8.2.2.3. Respiratory protection

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.

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid Colour : Straw. Appearance : Clear liquid. Molecular mass : 161,32 g/mol Odour : Acrid. Amine-like. Odour threshold : Not available -90 °C Melting point : Not available Freezing point : 145 - 148 °C Boiling point

Flammability : Flammable liquid and vapour.

Explosive limits : Not available : Not available Lower explosion limit Upper explosion limit : Not available Flash point : 25 °C Auto-ignition temperature : Not available Decomposition temperature : Not available : Not available рΗ Viscosity, kinematic : Not available Solubility : Reacts with water. Partition coefficient n-octanol/water (Log Kow) : Not available Vapour pressure : 16 mm Hg @ 4°C Vapour pressure at 50°C : Not available : Not available Density : 0,838 Relative density

Particle characteristics : Not applicable

: >1

9.2. Other information

Relative vapour density at 20°C

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

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.

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

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. Hydrogen. Organic acid vapors.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral) : Harmful if swallowed.

Acute toxicity (dermal) : Toxic in contact with skin.

Acute toxicity (inhalation) : Harmful if inhaled.

LD50 oral rat 594 mg/kg

Tris(dimethylamino)silane (15112-89-7)

ris(dimetnylamino)silane (15112-89-7)	
LD50 oral rat	594 mg/kg
LD50 dermal rabbit	477 mg/kg
LC50 Inhalation - Rat [ppm]	38 ppm (Exposure time: 6 h)

Skin corrosion/irritation : Causes severe skin burns.

Tris(dimethylamino)silane (15112-89-7)

pH ≥

Serious eye damage/irritation : Causes serious eye damage.

Tris(dimethylamino)silane (15112-89-7)

pH ≥

Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified

STOT-single exposure : May cause respiratory irritation.

Additional information : May cause respiratory irritation.

Tris(dimethylamino)silane (15112-89-7)

STOT-single exposure May cause respiratory irritation.

STOT-repeated exposure : Not classified
Aspiration hazard : Not classified

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

No additional information available

11.2.2. Other information

Potential adverse human health effects and

symptoms

: Harmful if swallowed, Harmful if inhaled, Toxic in contact with skin.

11.10.2023 (Revision date) EU - en 6/11

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term : Not classified

(acute)

Hazardous to the aquatic environment, long-term : Not classified

(chronic)

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. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

Other adverse effects : This substance may be hazardous to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : May be incinerated. Dispose in a safe manner in accordance with local/national regulations.

Dispose of contents/container to licensed waste disposal facility...

Additional information : Handle empty containers with care because residual vapours are flammable.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
UN 3384	UN 3384	UN 3384	UN 3384	UN 3384
14.2. UN proper shipping name				
TOXIC BY INHALATION LIQUID, FLAMMABLE, N.O.S.	TOXIC BY INHALATION LIQUID, FLAMMABLE, N.O.S.	Toxic by inhalation liquid, flammable, n.o.s.	TOXIC BY INHALATION LIQUID, FLAMMABLE, N.O.S.	TOXIC BY INHALATION LIQUID, FLAMMABLE, N.O.S.
Transport document description				
UN 3384 TOXIC BY INHALATION LIQUID, FLAMMABLE, N.O.S. (TRIS(DIMETHYLAMINO)S ILANE), 6.1 (3), I, (C/D)	UN 3384 TOXIC BY INHALATION LIQUID, FLAMMABLE, N.O.S. (TRIS(DIMETHYLAMINO)S ILANE), 6.1 (3), I	UN 3384 Toxic by inhalation liquid, flammable, n.o.s. (TRIS(DIMETHYLAMINO)S ILANE), 6.1 (3)	UN 3384 TOXIC BY INHALATION LIQUID, FLAMMABLE, N.O.S. (TRIS(DIMETHYLAMINO)S ILANE), 6.1 (3), I	UN 3384 TOXIC BY INHALATION LIQUID, FLAMMABLE, N.O.S. (TRIS(DIMETHYLAMINO)S ILANE), 6.1 (3), I
14.3. Transport hazard class(es)				
6.1 (3)	6.1 (3)	6.1 (3)	6.1 (3)	6.1 (3)

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

ADR	IMDG	IATA	ADN	RID
6 3	6 3	Not applicable	6 3	6
14.4. Packing group				
I	I	Not applicable	I	I
14.5. Environmental hazards				
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No
No supplementary information available				

14.6. Special precautions for user

Overland transport

: TF1 Classification code (ADR) Special provisions (ADR) 274 Limited quantities (ADR) 0 Excepted quantities (ADR) : E0 Packing instructions (ADR) : P602 Mixed packing provisions (ADR) MP8, MP17 Portable tank and bulk container instructions (ADR) : T20 Portable tank and bulk container special provisions : TP2

(ADR)

Tank code (ADR) : L10CH

Tank special provisions (ADR) : TU14, TU15, TE19, TE21

Vehicle for tank carriage : FL Transport category (ADR) : 1

Special provisions for carriage - Loading, unloading : CV1, CV13, CV28

and handling (ADR)

Special provisions for carriage - Operation (ADR) : S2, S9, S14

Hazard identification number (Kemler No.) : 663
Orange plates :

3384

Tunnel restriction code (ADR) : C/D

Transport by sea

Special provisions (IMDG) : 274 Limited quantities (IMDG) 0 Excepted quantities (IMDG) E0 Packing instructions (IMDG) P602 Tank instructions (IMDG) T20 Tank special provisions (IMDG) TP2, TP13 EmS-No. (Fire) : F-E EmS-No. (Spillage) : S-D Stowage category (IMDG) : D Stowage and handling (IMDG) : SW2

Properties and observations (IMDG) : A variety of toxic liquids which present a highly toxic inhalation hazard as well as being

flammable. Highly toxic if swallowed, by skin contact or by inhalation.

Air transport

PCA Limited quantities (IATA) : Forbidden
PCA limited quantity max net quantity (IATA) : Forbidden
PCA packing instructions (IATA) : Forbidden
PCA max net quantity (IATA) : Forbidden

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

CAO packing instructions (IATA) : Forbidden CAO max net quantity (IATA) : Forbidden ERG code (IATA)

Inland waterway transport

: TF1 Classification code (ADN) : 274, 802 Special provisions (ADN) Limited quantities (ADN) : 0 : E0 Excepted quantities (ADN)

Equipment required (ADN) : PP, EP, EX, TOX, A Ventilation (ADN) : VE01, VE02

Number of blue cones/lights (ADN) : 2

Rail transport

Classification code (RID) : TF1 Special provisions (RID) : 274 Limited quantities (RID) : 0 Excepted quantities (RID) : E0 Packing instructions (RID) : P602 Mixed packing provisions (RID) : MP8, MP17 Portable tank and bulk container instructions (RID) : T20

Portable tank and bulk container special provisions : TP2

(RID)

Tank codes for RID tanks (RID) : L10CH

Special provisions for RID tanks (RID) : TU14, TU15, TU38, TE21, TE22

Transport category (RID) : 1

Special provisions for carriage - Loading, unloading : CW13, CW28, CW31

and handling (RID)

Hazard identification number (RID) : 663

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)		
Reference code	Applicable on	Entry title or description
3(a)	TRIS(DIMETHYLAMINO) SILANE; Tris(dimethylamino)silane	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F
3(b)	TRIS(DIMETHYLAMINO) SILANE; Tris(dimethylamino)silane	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10
40.	TRIS(DIMETHYLAMINO) SILANE; Tris(dimethylamino)silane	Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or not.

REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

REACH Candidate List (SVHC)

Not listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Not listed on the PIC list (Regulation EU 649/2012)

POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

Ozone Regulation (1005/2009)

Not listed on the Ozone Depletion list (Regulation EU 1005/2009)

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

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

Other information

: Prepared by safety and environmental affairs.

Full text of H- and EUH-statements:		
Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3	
Acute Tox. 4 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) Category 4	
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4	
Eye Dam. 1	Serious eye damage/eye irritation, Category 1	
Flam. Liq. 3	Flammable liquids, Category 3	
H226	Flammable liquid and vapour.	
H302	Harmful if swallowed.	
H311	Toxic in contact with skin.	
H314	Causes severe skin burns and eye damage.	
H318	Causes serious eye damage.	
H332	Harmful if inhaled.	
H335	May cause respiratory irritation.	
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B	
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation	

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

SDS EU (REACH Annex II) - Custom v22

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