

Safety Data Sheet SID3395.4

Date of issue: 03/06/2015 Revision date: 01/19/2017 Version: 2.0

#### **SECTION 1: Identification**

#### **Product identifier**

Product name : (N,N-DIETHYLAMINOMETHYL)TRIETHOXYSILANE

: SID3395.4 Product code Product form : Substance Physical state : Liquid

Formula : C11H27NO3Si

(3-(TRIETHOXYSILYL)METHYL)DIETHYLAMINE Synonyms

: ORGANOETHOXYSILANE Chemical family

## Recommended use of the chemical and restrictions on use

: Chemical intermediate Recommended use

For research and industrial use only

## Details of the supplier of the safety data sheet

## **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

#### **Emergency telephone number**

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

## SECTION 2: Hazard(s) identification

## Classification of the substance or mixture

## **GHS-US** classification

Skin corrosion/irritation Category 1C H314 Serious eye damage/eye irritation Category 1 H318

Specific target organ toxicity (single exposure) Category 3 H335

Full text of H statements : see section 16

#### 2.2. Label elements

## **GHS-US** labeling

Hazard pictograms (GHS-US)





GHS05

GHS07

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) H314 - Causes severe skin burns and eye damage

H318 - Causes serious eve damage H335 - May cause respiratory irritation

Precautionary statements (GHS-US) : P280 - Wear protective gloves/protective clothing/eye protection/face protection

P260 - Do not breathe vapors

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

P310 - Immediately call a doctor

P363 - Wash contaminated clothing before reuse

P403+P233 - Store in a well-ventilated place. Keep container tightly closed

P405 - Store locked up

P321 - Specific treatment (see first aid instructions on this label) P501 - Dispose of contents/container to licensed waste disposal facility

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### 2.3. Hazards not otherwise classified (HNOC)

No additional information available

## 2.4. Unknown acute toxicity (GHS US)

No data available

## **SECTION 3: Composition/Information on ingredients**

#### 3.1. Substances

Substance type : Mono-constituent

Name : (N,N-DIETHYLAMINOMETHYL)TRIETHOXYSILANE

CAS No : 15180-47-9

Name	Product identifier	%	GHS-US classification
(N,N-Diethylaminomethyl)triethoxysilane	(CAS No) 15180-47-9	95 - 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

## 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. Get immediate medical

advice/attention.

First-aid measures after ingestion : Never give anything by mouth to an unconscious person. Get medical advice/attention.

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

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

Symptoms/injuries after inhalation : May cause respiratory irritation.

Symptoms/injuries after skin contact : Causes (severe) skin burns.
Symptoms/injuries after eye contact : Causes serious eye damage.

Symptoms/injuries after ingestion : May be harmful if swallowed.

Chronic symptoms : On contact with water this compound liberates ethanol which is known to have a chronic effect on the central nervous system.

## 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.

Unsuitable extinguishing media : Do not use straight streams.

## 5.2. Special hazards arising from the substance or mixture

Fire hazard : Irritating fumes and organic acid vapors may develop when material is exposed to elevated

temperatures or open flame.

## 5.3. Advice for firefighters

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 all eye and skin contact and do not breathe vapor and mist.

## **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".

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#### 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

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.

## 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 all eye and skin contact and do not breathe vapor and mist. Provide good ventilation in

process area to prevent accumulation of vapors.

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.

Incompatible materials : Acids. Alcohols. Moisture. Oxidizing agent. Peroxides. 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. Exposure controls

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

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 : Liquid

Appearance : Clear liquid.

Molecular mass : 249.43 g/mol

Color : Straw.

Odor : Amine. Ammonia-like.
Odor threshold : No data available

Refractive index : 1.4142

pH : No data available

Relative evaporation rate (butyl acetate=1) : < 1

Melting point : No data available

Freezing point : < 0 °C

Boiling point : 74 - 76 °C @ 3 mm Hg

Flash point :  $> 110 \, ^{\circ}\text{C}$ 

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Flammability (solid, gas) : No data available

Vapor pressure : < 1 mm Hg @ 25°C

Relative vapor density at 20 °C : > 1 Relative density : 0.9336 VOC content : < 40 %

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Solubility Reacts with water. Log Pow : No data available Log Kow : No data available Viscosity, kinematic No data available Viscosity, dynamic No data available Explosive properties No data available : No data available Oxidizing properties : No data available **Explosion limits** 

#### 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 when stored in sealed containers.

#### 10.3. Possibility of hazardous reactions

Reacts with water and moisture in air, liberating ethanol.

#### 10.4. Conditions to avoid

Heat. Sparks. Open flame.

#### 10.5. Incompatible materials

Acids. Alcohols. Moisture. Oxidizing agent. Peroxides. Water.

#### 10.6. Hazardous decomposition products

Ethanol. Organic amine vapors.

## **SECTION 11: Toxicological information**

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

## (N,N-Diethylaminomethyl)triethoxysilane (15180-47-9)

LD50 oral rat > 3000 mg/kg

Skin corrosion/irritation : Causes severe skin burns and eye damage.

Serious eye damage/irritation : Causes serious eye damage.

Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

None of the components in this product at concentrations >0.1% are listed by IARC, NTP,

OSHA or ACGIH as a carcinogen

Reproductive toxicity : Not classified

Specific target organ toxicity – single exposure : May cause respiratory irritation.

Specific target organ toxicity - repeated

exposure

: Not classified

Aspiration hazard : Not classified

Potential Adverse human health effects and

symptoms

The hydrolysis product of this compound is ethanol. Material generates ethanol on contact with water or moisture in skin, eyes and mucous membranes and has an irritating, dehydrating

effect on overexposed tissue.

Symptoms/injuries after inhalation : May cause respiratory irritation.

Symptoms/injuries after skin contact : Causes (severe) skin burns.

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

Symptoms/injuries after ingestion : May be harmful if swallowed.

Chronic symptoms : On contact with water this compound liberates ethanol which is known to have a chronic effect

on the central nervous system.

Reason for classification : Expert judgment

## **SECTION 12: Ecological information**

### 12.1. Toxicity

No additional information available

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## 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 ozone layer : No additional information available

Effect on the global warming : No known effects from this product.

GWPmix comment : No known effects from this product.

## **SECTION 13: Disposal considerations**

#### 13.1. Waste treatment methods

Sewage disposal recommendations : Do not dispose of waste into sewer.

Waste disposal recommendations : May be incinerated. Dispose of contents/container to licensed waste disposal facility. Dispose

in a safe manner in accordance with local/national regulations.

Ecology - waste materials : Avoid release to the environment.

## **SECTION 14: Transport information**

#### 14.1. UN number

UN-No.(DOT) : 3267 DOT NA no. UN3267

## 14.2. UN proper shipping name

Transport document description : UN3267 Corrosive liquid, basic, organic, n.o.s. ((N,N-

DIETHYLAMINOMETHYL)TRIETHOXYSILANE), 8, III

Proper Shipping Name (DOT) : Corrosive liquid, basic, organic, n.o.s.

((N,N-DIETHYLAMINOMETHYL)TRIETHOXYSILANE)

Class (DOT) : 8 - Class 8 - Corrosive material 49 CFR 173.136

Packing group (DOT) : III - Minor Danger Hazard labels (DOT) : 8 - Corrosive



DOT Packaging Non Bulk (49 CFR 173.xxx) : 203
DOT Packaging Bulk (49 CFR 173.xxx) : 241
DOT Packaging Exceptions (49 CFR 173.xxx) : 154

DOT Symbols : G - Identifies PSN requiring a technical name

## 14.3. Additional information

Emergency Response Guide (ERG) Number : 153

Other information : No supplementary information available.

## Transport by sea

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a

passenger vessel

DOT Vessel Stowage Other : 40 - Stow "clear of living quarters",52 - Stow "separated from" acids

### Air transport

DOT Quantity Limitations Passenger aircraft/rail : 5 L

(49 CFR 173.27)

DOT Quantity Limitations Cargo aircraft only (49 : 60 L

CFR 175.75)

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## **SECTION 15: Regulatory information**

## 15.1. US Federal regulations

#### (N,N-DIETHYLAMINOMETHYL)TRIETHOXYSILANE (15180-47-9)

TSCA Exemption/Exclusion

Low Volume Exemption in accordance with 40 CFR 723.50(c)(1), This LVE limits site of manufacture of this substance to Gelest, Inc.unless otherwise approved by U.S. EPA

#### (N,N-Diethylaminomethyl)triethoxysilane (15180-47-9)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

#### 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

No additional information available

## **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.

## **HMIS III Rating**

Health

: 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given

Flammability

: 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)

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.

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SDS US (GHS HazCom 2012) - Custom

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

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