SECTION 1: Identification

1.1. Identification

Product name: (N,N-DIMETHYLAMINO)TRIMETHYLSILANE
Product code: SID3605.0
Product form: Substance
Physical state: Liquid
Formula: C5H15NSi
Synonyms: TMSDMA; PENTAMETHYLSILANAMINE; TRIMETHYLSILYLDIMETHYLAMINE
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
Flammable liquids Category 2 H225 Highly flammable liquid and vapor
Skin corrosion/irritation Category 1H314 Causes severe skin burns and eye damage
Serosious eye damage/eye irritation Category 1 H318 Causes serious eye damage

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): H225 - Highly flammable liquid and vapor
                           H314 - Causes severe skin burns and eye damage
                           H318 - Causes serious eye damage
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.
                                  P210 - Keep away from heat, open flames, sparks. - No smoking.
                                  P233 - Keep container tightly closed.
                                  P240 - Ground/Bond container and receiving equipment
                                  P241 - Use explosion-proof electrical equipment
                                  P242 - Use only non-sparking tools.
                                  P243 - Take precautionary measures against static discharge.
                                  P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting
                                  P303+P361+P335 - 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.
                                  P370+P378 - In case of fire: Use water spray, foam, carbon dioxide, dry chemical to extinguish.
                                  P403+P235 - Keep in a cool place
                                  P405 - Store locked up.
                                  P501 - Dispose of contents/container to licensed waste disposal facility.
2.3. Hazards not otherwise classified (HNOC)
No additional information available

2.4. Unknown acute toxicity (GHS US)
Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

<table>
<thead>
<tr>
<th>Substance type</th>
<th>Mono-constituent</th>
</tr>
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<tbody>
<tr>
<td>Name</td>
<td>(N,N-DIMETHYLAMINO)TRIMETHYLSILANE</td>
</tr>
<tr>
<td>CAS-No.</td>
<td>2083-91-2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>(N,N-dimethylamino)trimethylsilane</td>
<td>(CAS-No.) 2083-91-2</td>
<td>95 - 100</td>
<td>Flam. Liq. 2, H225 Skin Corr. 1B, H314 Eye Dam. 1, H318</td>
</tr>
</tbody>
</table>

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. Get medical advice/attention.

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.

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 irritation to the respiratory tract. Overexposure may cause: Coughing. Headache. Nausea.

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


Unsuitable extinguishing media: Water.

5.2. Specific hazards arising from the chemical

Fire hazard: Highly flammable liquid and vapor. 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 vapor-air mixture.

5.3. Special protective equipment and precautions for fire-fighters

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 vapor 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**
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 Heading 8. Exposure controls and personal protection.

SECTION 7: **Handling and storage**

7.1. **Precautions for safe handling**
Additional hazards when processed: Handle empty containers with care because residual vapors are flammable.
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. Containers must be properly grounded before beginning transfer. Take precautionary measures against static discharge. Use only non-sparking tools.

Hygiene measures: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse.

7.2. **Conditions for safe storage, including any incompatibilities**
Technical measures: Ground/bond container and receiving equipment. Use explosion-proof electrical equipment.
Storage conditions: Keep container tightly closed.
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:**
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:** 117.27 g/mol
**Color:** Straw.
**Odor:** Acrid. Amine.
**Odor threshold:** No data available
**Refractive index:** 1.397
**pH:** No data available
**Relative evaporation rate (butyl acetate=1):** > 1
**Melting point:** No data available
**Freezing point:** < 0 °C
(N,N-DIMETHYLAMINO)TRIMETHYLSILANE
Safety Data Sheet

Boiling point : 85 - 86 °C
Flash point : -19 °C
Auto-ignition temperature : No data available
Decomposition temperature : No data available
Flammability (solid, gas) : Highly flammable liquid and vapor
Vapor pressure : No data available
Relative vapor density at 20 °C : > 1
Relative density : 0.741
% Volatiles : 100 %
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
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

10.6. Hazardous decomposition products
Dimethylamine. Organic acid vapors.

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute toxicity : Not classified
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
Reproductive toxicity : Not classified
Specific target organ toxicity – single exposure : Not classified
Specific target organ toxicity – repeated exposure : Not classified
Aspiration hazard : Not classified
Symptoms/effects after inhalation : May cause irritation to the respiratory tract. Overexposure may cause: Coughing. Headache. Nausea.
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
(N,N-DIMETHYLAMINO)TRIMETHYLSILANE
Safety Data Sheet

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
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 vapors are flammable.
Ecology - waste materials: Avoid release to the environment.

SECTION 14: Transport information

14.1. UN number
UN-No.(DOT) : 2733
DOT NA no.: UN2733

14.2. UN proper shipping name
Transport document description: UN2733 Amines, flammable, corrosive, n.o.s. ((N,N-DIMETHYLAMINO)TRIMETHYLSILANE), 3 (8), II
Proper Shipping Name (DOT): Amines, flammable, corrosive, n.o.s. ((N,N-DIMETHYLAMINO)TRIMETHYLSILANE)
Class (DOT): 3 - Class 3: Flammable and combustible liquid 49 CFR 173.120
Packing group (DOT): II - Medium Danger
Hazard labels (DOT): 3 - Flammable liquid 8 - Corrosive

DOT Packaging Non Bulk (49 CFR 173.xxx): 202
DOT Packaging Bulk (49 CFR 173.xxx): 243
DOT Packaging Exceptions (49 CFR 173.xxx): 150
DOT Symbols: G - Identifies PSN requiring a technical name

14.3. Additional information
Emergency Response Guide (ERG) Number: 132
Other information: No supplementary information available.

Transport by sea
DOT Vessel Stowage Location: B - (i) The material may be stowed “on deck” or “under deck” on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) “On deck only” on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.

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

Air transport
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27): 1 L
(N,N-DIMETHYLAMINO)TRIMETHYLSILANE
Safety Data Sheet

DOT Quantity Limitations Cargo aircraft only (49 : 5 L
CFR 175.75)

SECTION 15: Regulatory information

15.1. US Federal regulations

(N,N-dimethylamino)trimethylsilane (2083-91-2)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA
(N,N-dimethylamino)trimethylsilane (2083-91-2)
Listed on the Canadian NDSL (Non-Domestic Substances List)

EU-Regulations
(N,N-dimethylamino)trimethylsilane (2083-91-2)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations
(N,N-dimethylamino)trimethylsilane (2083-91-2)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

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:

<table>
<thead>
<tr>
<th>H225</th>
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<td>Causes severe skin burns and eye damage</td>
</tr>
<tr>
<td>H318</td>
<td>Causes serious eye damage</td>
</tr>
</tbody>
</table>

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.: Chemical 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: 4 Severe Hazard - Flammable gases, or very volatile flammable liquids with flash points below 73 F, and boiling points below 100 F. Materials may ignite spontaneously with air. (Class IA)

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.

Date of issue: 11/24/2014 Revision date: 04/08/2019 Version: 1.1

SDS US (GHS HazCom 2012) - Custom

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