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

1.1. **Product identifier**
- **Product form**: Substance
- **Physical state**: Liquid
- **Substance name**: (1-NAPHTHYLMETHYL)TRICHLOROSILANE
- **Product code**: SIN6596.0
- **Formula**: C\(_{11}\)H\(_9\)Cl\(_3\)Si
- **Synonyms**: (TRICHLOROSILYLMETHYL)NAPTHALENE
- **Chemical family**: ORGANOCHLOROSILANE

1.2. **Relevant identified uses of the substance or mixture and uses advised against**
- **Use of the substance/mixture**: Chemical intermediate
- **For research use only**

1.3. **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

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 (GHS-US)**  
  Skin Cor.: 1B H314  
  Eye Dam.: 1 H318  
- **Full text of H-phrases: see section 16**

2.2. **Label elements**
- **GHS-US labelling**
- **Hazard pictograms (GHS-US)**: ▲

- **Signal word (GHS-US)**: Danger
- **Hazard statements (GHS-US)**:  
  - 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  
  - 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  
  - P405 - Store locked up  
  - P321 - Specific treatment (see first aid instructions on this label)  
  - P501 - Dispose of contents/container to licensed waste disposal facility.

2.3. **Other hazards**
- **No additional information available**

2.4. **Unknown acute toxicity (GHS US)**
- **No data available**
(1-NAPHTHYLMETHYL)TRICHLOROSILANE
Safety Data Sheet

SECTION 3: Composition/information on ingredients
3.1. Substance
Substance type : Multi-constituent
Name : (1-NAPHTHYLMETHYL)TRICHLOROSILANE
CAS No : 17998-59-3

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification (GHS-US)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1-Naphthylmethyl)trichlorosilane</td>
<td>(CAS No) 17998-59-3</td>
<td>&gt; 95</td>
<td>Skin Corr. 1B, H314 Eye Dam. 1, H318</td>
</tr>
<tr>
<td>Other Organosilanes</td>
<td></td>
<td>&lt; 5</td>
<td>Not classified</td>
</tr>
<tr>
<td>Hydrochloric acid</td>
<td>(CAS No) 7647-01-0</td>
<td></td>
<td>Skin Corr. 1A, H314 Eye Dam. 1, H318</td>
</tr>
</tbody>
</table>

3.2. Mixture
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. If exposed or concerned: Get medical advice/attention.
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, both acute and delayed
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.

4.3. Indication of any immediate medical attention and special treatment needed
No additional information available

SECTION 5: Firefighting measures
5.1. Extinguishing media
Unsuitable extinguishing media : Water.

5.2. Special hazards arising from the substance or mixture
Fire hazard : Irritating fumes of hydrochloric acid and organic acid vapors may develop when material is exposed to water or open flame.

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 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".

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

08/17/2015 EN (English US) SDS ID: SIN6596.0 2/7
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 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 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

Storage conditions: Keep container tightly closed. Store locked up.


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

<table>
<thead>
<tr>
<th>Hydrochloric acid (7647-01-0)</th>
<th>USA ACGIH</th>
<th>ACGIH Ceiling (ppm)</th>
<th>2 ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA NIOSH</td>
<td>NIOSH REL (ceiling) (mg/m³)</td>
<td>7 mg/m³</td>
<td></td>
</tr>
<tr>
<td>USA NIOSH</td>
<td>NIOSH REL (ceiling) (ppm)</td>
<td>5 ppm</td>
<td></td>
</tr>
<tr>
<td>USA OSHA</td>
<td>OSHA PEL (Ceiling) (mg/m³)</td>
<td>7 mg/m³</td>
<td></td>
</tr>
<tr>
<td>USA OSHA</td>
<td>OSHA PEL (Ceiling) (ppm)</td>
<td>5 ppm</td>
<td></td>
</tr>
<tr>
<td>USA IDLH</td>
<td>US IDLH (ppm)</td>
<td>50 ppm</td>
<td></td>
</tr>
</tbody>
</table>

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/acid gas (yellow cartridge) respirator.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Physical state</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Clear liquid.</td>
</tr>
<tr>
<td>Molecular mass</td>
<td>275.64 g/mol</td>
</tr>
<tr>
<td>Color</td>
<td>Straw.</td>
</tr>
<tr>
<td>Odor</td>
<td>Acrid.</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>Refractive index</td>
<td>1.5974</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>&lt; 0 °C</td>
</tr>
<tr>
<td>Boiling point</td>
<td>150 - 151 °C @ 7 mm Hg</td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt; 65 °C</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
</tbody>
</table>
### 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
1.3112

### 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 hydrogen chloride.

#### 10.4. Conditions to avoid
Heat. Open flame. Sparks.

#### 10.5. Incompatible materials

#### 10.6. Hazardous decomposition products

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

<table>
<thead>
<tr>
<th>Acute toxicity</th>
<th>Not classified</th>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Hydrochloric acid (7647-01-0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
</tr>
<tr>
<td>238 - 277 mg/kg</td>
</tr>
<tr>
<td>LD50 dermal rabbit</td>
</tr>
<tr>
<td>&gt; 5010 mg/kg</td>
</tr>
<tr>
<td>LC50 inhalation rat (mg/l)</td>
</tr>
<tr>
<td>1.68 mg/l (Exposure time: 1 h)</td>
</tr>
<tr>
<td>ATE US (oral)</td>
</tr>
<tr>
<td>238.000 mg/kg body weight</td>
</tr>
<tr>
<td>ATE US (vapors)</td>
</tr>
<tr>
<td>1.680 mg/l/4h</td>
</tr>
<tr>
<td>ATE US (dust, mist)</td>
</tr>
<tr>
<td>1.680 mg/l/4h</td>
</tr>
</tbody>
</table>

| 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 |

<table>
<thead>
<tr>
<th>Hydrochloric acid (7647-01-0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IARC group</td>
</tr>
<tr>
<td>3 - Not classifiable</td>
</tr>
</tbody>
</table>

| 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/injuries after inhalation |
| May cause irritation to the respiratory tract. Overexposure may cause: Cough. Headache. Nausea. |

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

| Symptoms/injuries after eye contact |
| Causes serious eye damage. |
(1-NAPHTHYLMETHYL)TRICHLOROSILANE
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Symptoms/injuries 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 ozone layer : No additional information available
Effect on the global warming : No known ecological damage caused by this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Sewage disposal recommendations : Do not dispose of waste into sewer.
Waste 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

14.1. UN number
UN-No.(DOT) : 2987
DOT NA no. : UN2987

14.2. UN proper shipping name
Proper Shipping Name (DOT) : Chlorosilanes, corrosive, n.o.s. ((1-NAPHTHYLMETHYL)TRICHLOROSILANE)
Department of Transportation (DOT) Hazard Classes : 8 - Class 8 - Corrosive material 49 CFR 173.136
Hazard labels (DOT) : 8 - Corrosive

Packing group (DOT) : II - Medium Danger
DOT Packaging Exceptions (49 CFR 173.xxx) : None
DOT Packaging Non Bulk (49 CFR 173.xxx) : 206
DOT Packaging Bulk (49 CFR 173.xxx) : 242

14.3. Additional information
Other information : No supplementary information available.

Transport by sea
DOT Vessel Stowage Location : C - The material must be stowed “on deck only” on a cargo vessel and on a passenger vessel.
DOT Vessel Stowage Other : 40 - Stow “clear of living quarters”

Air transport
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : Forbidden
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 30 L
## SECTION 15: Regulatory information

### 15.1. US Federal regulations

**TSCA Exemption/Exclusion**

CAUTION: This material is supplied for research and development purposes subject to the R&D 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.

**Hydrochloric acid (7647-01-0)**

- Listed on the United States TSCA (Toxic Substances Control Act) inventory
- Listed on the United States SARA Section 302
- Listed on United States SARA Section 313

SARA Section 302 Threshold Planning Quantity (TPQ): 500 (gas only)

SARA Section 313 - Emission Reporting: 1.0 % (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size)

**N-(1-Naphthylmethyl)trichlorosilane (17998-59-3)**

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

**15.2. International regulations**

**Hydrochloric acid (7647-01-0)**

- Listed on the AICS (Australian Inventory of Chemical Substances)
- Listed on the Canadian DSL (Domestic Substances List)
- Listed on IECS (Inventory of Existing Chemical Substances Produced or Imported in China)
- Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
- Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
- Listed on the Korean ECL (Existing Chemicals List)
- Listed on NZIoC (New Zealand Inventory of Chemicals)
- Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
- Listed on the ENCS (Existing Chemicals) inventory
- Listed on the Turkish inventory of chemical

**15.3. US State regulations**

**N-(1-Naphthylmethyl)trichlorosilane (17998-59-3)**

- U.S. - California - Proposition 65 - Carcinogens List: No
- U.S. - California - Proposition 65 - Developmental Toxicity: No
- U.S. - California - Proposition 65 - Reproductive Toxicity - Female: No
- U.S. - California - Proposition 65 - Reproductive Toxicity - Male: No

**Hydrochloric acid (7647-01-0)**

<table>
<thead>
<tr>
<th>U.S. - California - Proposition 65 - Carcinogens List</th>
<th>U.S. - California - Proposition 65 - Developmental Toxicity</th>
<th>U.S. - California - Proposition 65 - Reproductive Toxicity - Female</th>
<th>U.S. - California - Proposition 65 - Reproductive Toxicity - Male</th>
<th>No significance risk level (NSRL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

**Other Organosilanes**

<table>
<thead>
<tr>
<th>U.S. - California - Proposition 65 - Carcinogens List</th>
<th>U.S. - California - Proposition 65 - Developmental Toxicity</th>
<th>U.S. - California - Proposition 65 - Reproductive Toxicity - Female</th>
<th>U.S. - California - Proposition 65 - Reproductive Toxicity - Male</th>
<th>No significance risk level (NSRL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>
(1-NAPHTHYLMETHYL)TRICHLOROSILANE
Safety Data Sheet

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.: 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.

Full text of H-phrases:

<table>
<thead>
<tr>
<th>H-Phrase</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye Dam. 1</td>
<td>Serious eye damage/eye irritation Category 1</td>
</tr>
<tr>
<td>Skin Corr. 1A</td>
<td>Skin corrosion/irritation Category 1A</td>
</tr>
<tr>
<td>Skin Corr. 1B</td>
<td>Skin corrosion/irritation Category 1B</td>
</tr>
<tr>
<td>H314</td>
<td>Causes severe skin burns and eye damage</td>
</tr>
<tr>
<td>H318</td>
<td>Causes serious eye damage</td>
</tr>
</tbody>
</table>

HMIS III Rating:

- Health: 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given
- Flammability: 2 Moderate Hazard
- Physical: 1 Slight Hazard

Prepared by safety and environmental affairs.

Date of issue: 08/17/2015
Version: 1.0

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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