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

### 1.1. Product identifier

<table>
<thead>
<tr>
<th>Physical state</th>
<th>Substance name</th>
<th>Formula</th>
<th>Synonyms</th>
<th>Chemical family</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substances</td>
<td>(DIPHENYLPHOSPHINO)TRIMETHYLSILANE, 95%</td>
<td>C(<em>{15})H(</em>{19})PSi</td>
<td>TRIMETHYLSILYLDIPHENYLPHOSPHINE</td>
<td>ORGANOSILANE</td>
</tr>
</tbody>
</table>

### 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: Hazard identification

### 2.1. Classification of the substance or mixture

**GHS-US classification**

- Flam. Liq. 2 H225  
- Skin Irrit. 2 H315  
- Eye Irrit. 2A H319

**Full text of H statements : see section 16**

### 2.2. Label elements

**GHS-US labeling**

- **Signal word (GHS-US):** Danger
- **Hazard pictograms (GHS-US):**
  - GHS02 (Flame)
  - GHS07 (Exclamation)

- **Hazard statements (GHS-US):**
  - H225 - Highly flammable liquid and vapor
  - H315 - Causes skin irritation
  - H319 - Causes serious eye irritation

- **Precautionary statements (GHS-US):**
  - P280 - Wear protective gloves/protective clothing/eye protection/face protection
  - 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
  - P264 - Wash hands thoroughly after handling
  - P303+P361+P353 - If on skin (or hair): take off immediately all contaminated clothing. rinse skin with water/shower
  - P310 - Keep away from heat, open flames, sparks. - No smoking
  - P315 - Avoid contact with skin and eyes
  - P330 - Keep out of the reach of children
  - P360 - Do not transfer to other containers
  - P362-P364 - In case of fire: Use water spray to extinguish
  - P370+P378 - In case of fire: Use water spray, foam, carbon dioxide, dry chemical to extinguish
  - P403+P235 - Keep in cool place

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(DIPHENYLPHOSPHINO)TRIMETHYLSILANE, 95%

Safety Data Sheet

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

SECTION 3: Composition/Information on ingredients

3.1. Substance
Substance type: Mono-constituent
Name: (DIPHENYLPHOSPHINO)TRIMETHYLSILANE, 95%
CAS No: 17154-34-6

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Diphenylphosphino)trimethylsilane</td>
<td>(CAS No) 17154-34-6</td>
<td>95 - 100</td>
<td>Flam. Liq. 2, H225 Skin Irrit. 2, H315 Eye Irrit. 2A, H319</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.

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 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 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 after inhalation: May cause irritation to the respiratory tract.

Symptoms/injuries after skin contact: Causes skin irritation.

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

Symptoms/injuries after ingestion: No information available.

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: Do not use straight streams.

5.2. Special hazards arising from the substance or mixture
Fire hazard: Highly flammable liquid and vapor. Irritating fumes of diphenylphosphine 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. 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
General measures: Eliminate every possible source of ignition. Use special care to avoid static electric charges.

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.

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. 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. Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Precautions for safe handling: Avoid all eye and skin contact and do not breathe vapor and mist. Ground/bond container and receiving equipment. Provide good ventilation in process area to prevent accumulation of vapors. Take precautionary measures against static discharge. Use only non-sparking tools.

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

Technical measures: Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof electrical equipment.

Storage conditions: Keep container tightly closed. Keep in a cool place.

Incompatible materials: Acids; Alcohols; Oxidizing agent.

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

No additional information available.

8.2. Exposure controls

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

Personal protective equipment: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Avoid all unnecessary exposure.

Hand protection: Neoprene or nitrile rubber gloves.

Eye protection: Chemical goggles. 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: 258.38 g/mol

Color: Straw.

Odor: Unpleasant.

Odor threshold: No data available

Refractive index: 1.603

pH: No data available

Relative evaporation rate (butyl acetate=1): No data available

Melting point: No data available

Freezing point: < 0 °C
(DIPHENYLPHOSPHINO)TRIMETHYLSILANE, 95%
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**Boiling point**: 120 °C @ 0.2 mm Hg
**Flash point**: 10 °C
**Auto-ignition temperature**: No data available
** Decomposition temperature**: No data available
** Flammability (solid, gas)**: Highly flammable liquid and vapor
** Vapor pressure**: < 0.01 mm Hg @ 25°C
** Relative vapor density at 20 °C**: > 1
** Relative density**: 1.009
** 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 diphenylphosphine.

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

10.5. Incompatible materials

10.6. Hazardous decomposition products
diphenylphosphine. Organic acid vapors.

**SECTION 11: Toxicological information**

11.1. Information on toxicological effects

- **Acute toxicity**: Not classified
- **Skin corrosion/irritation**: Causes skin irritation.
- **Serious eye damage/irritation**: Causes serious eye irritation.
- **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/injuries after inhalation**: May cause irritation to the respiratory tract.
- **Symptoms/injuries after skin contact**: Causes skin irritation.
- **Symptoms/injuries after eye contact**: Causes serious eye irritation.
- **Symptoms/injuries after ingestion**: No information available.
- **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 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 : 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) : 1993
DOT NA no. : UN1993

**14.2. UN proper shipping name**
Proper Shipping Name (DOT) : Flammable liquids, n.o.s. ([DIPHENYLPHOSPHINO)TRIMETHYLSILANE])
Class (DOT) : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120
Hazard labels (DOT) : 3 - Flammable liquid

DOT Symbols : G - Identifies PSN requiring a technical name
Packing group (DOT) : II - Medium Danger
DOT Packaging Exceptions (49 CFR 173.xxx) : 150
DOT Packaging Non Bulk (49 CFR 173.xxx) : 202
DOT Packaging Bulk (49 CFR 173.xxx) : 242

**14.3. Additional information**
Emergency Response Guide (ERG) Number : 128
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

**Air transport**
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 5 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 60 L
(DIPHENYLPHOSPHINO)TRIMETHYLSILANE, 95%
Safety Data Sheet

SECTION 15: Regulatory information

15.1. US Federal regulations

<table>
<thead>
<tr>
<th>(DIPHENYLPHOSPHINO)TRIMETHYLSILANE, 95% (17154-34-6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA Exemption/Exclusion</td>
</tr>
<tr>
<td>CAUTION: This material is supplied for research and development purposes subject to the R&amp;D exemption under TSCA, 40 CFR 720.36, and must meet the requirements of the exemption, including supervision by a &quot;technically qualified individual&quot; as defined by 40 CFR 720.3(ee). The use of this material for &quot;commercial purposes&quot; as defined by 40 CFR 720.3(r) is not permitted in the United States</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(Diphenylphosphino)trimethylsilane (17154-34-6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
</tbody>
</table>

15.2. International regulations

No additional information available

15.3. US State regulations

<table>
<thead>
<tr>
<th>(DIPHENYLPHOSPHINO)TRIMETHYLSILANE, 95%(17154-34-6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. - California - Proposition 65 - Carcinogens List No</td>
</tr>
<tr>
<td>U.S. - California - Proposition 65 - Developmental Toxicity No</td>
</tr>
<tr>
<td>U.S. - California - Proposition 65 - Reproductive Toxicity - Female No</td>
</tr>
<tr>
<td>U.S. - California - Proposition 65 - Reproductive Toxicity - Male No</td>
</tr>
</tbody>
</table>

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<th>(Diphenylphosphino)trimethylsilane (17154-34-6)</th>
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</tr>
<tr>
<td>U.S. - California - Proposition 65 - Reproductive Toxicity - Male</td>
</tr>
<tr>
<td>Non-significant risk level (NSRL)</td>
</tr>
<tr>
<td>No</td>
</tr>
<tr>
<td>No</td>
</tr>
<tr>
<td>No</td>
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<tr>
<td>No</td>
</tr>
</tbody>
</table>

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>H225</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highly flammable liquid and vapor</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>H315</th>
</tr>
</thead>
<tbody>
<tr>
<td>Causes skin irritation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>H319</th>
</tr>
</thead>
<tbody>
<tr>
<td>Causes serious eye irritation</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: 3 Serious Hazard
Physical: 1 Slight Hazard

Prepared by safety and environmental affairs.

Date of issue: 08/03/2016 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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