# SECTION 1: Identification

## 1.1. Identification

**Product name**: PRASEODYMIUM ZIRCONIUM SILICATE  
**Product code**: SIP6902.2  
**Product form**: Substance  
**Physical state**: Solid  
**Formula**: C18H54N3PrSi6  
**Synonyms**:  
- PRASEODYMIUM HEXAMETHYLDISILAZIDE  
- PRASEODYMIUM(3+) BIS(TRIMETHYLSILYL)AMIDE  
- TRIS[BIS(TRIMETHYLSILYL)AMIDO]PRASEODYMIUM  
**Chemical family**: RARE EARTH COMPOUND

## 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**  
- Skin corrosion/irritation Category 2: H315 - Causes skin irritation  
- Serious eye damage/eye irritation Category 2A: H319 - Causes serious eye irritation  
- Specific target organ toxicity (single exposure) Category 3: H335 - May cause respiratory irritation  
Full text of H statements: see section 16

## 2.2. GHS Label elements, including precautionary statements

**GHS US labeling**

### Hazard pictograms (GHS US)

[![Hazard Pictogram](image)](

**Signal word (GHS US)**: Warning

**Hazard statements (GHS US)**:  
- H315 - Causes skin irritation  
- H319 - Causes serious eye irritation  
- H335 - May cause respiratory irritation

**Precautionary statements (GHS US)**:  
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
- P261 - Avoid breathing dust.  
- P264 - Wash hands thoroughly after handling.  
- P271 - Use only outdoors or in a well-ventilated area.  
- P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing  
- P302+P352 - If on skin: Wash with plenty of soap and water  
- P332+P313 - If skin irritation occurs: Get medical advice/attention.  
- P337+P313 - If eye irritation persists: Get medical advice/attention.  
- P314 - Call a doctor if you feel unwell  
- P321 - Specific treatment (see first aid instructions on this label)  
- P364 - Take off contaminated clothing and wash it before reuse.  
- P403+P233 - Store in a well-ventilated place. Keep container tightly closed.  
- 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
PRASEODYMIUM ZIRCONIUM SILICATE
Safety Data Sheet

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>Name</th>
<th>CAS-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mono-constituent</td>
<td>PRASEODYMIUM ZIRCONIUM SILICATE</td>
<td>35789-00-5</td>
</tr>
</tbody>
</table>

Name: Praseodymium tris(hexamethyldisilazide) (CAS-No.) 35789-00-5

Product identifier: (CAS-No.) 35789-00-5

%: 95 - 100

GHS-US classification:
- Skin Irrit. 2, H315
- Eye Irrit. 2A, H319

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. 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 (acute and delayed)

Symptoms/effects after inhalation:
May cause respiratory irritation.

Symptoms/effects after skin contact:
Causes skin irritation.

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

Symptoms/effects after ingestion:
No information available.

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

Suitable extinguishing media:

Unsuitable extinguishing media:
Do not use straight streams.

5.2. Specific hazards arising from the chemical

Fire hazard:
Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame.

5.3. Special protective equipment and precautions for fire-fighters

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 contact with skin and eyes. Do not breathe dust.

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 product 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: 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 contact with skin and eyes. Avoid dust formation. Do not breathe dust. Use only outdoors or in a well-ventilated area.
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. Store locked up.
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:

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 dust and mist (teal cartridge) respirator.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Solid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Powder.</td>
</tr>
<tr>
<td>Molecular mass</td>
<td>622.07 g/mol</td>
</tr>
<tr>
<td>Color</td>
<td>Light-green.</td>
</tr>
<tr>
<td>Odor</td>
<td>characteristic.</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>Refractive index</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>154 - 157 °C</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>&lt; 0.0001 mm Hg @ 25°C</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
<td>No data available</td>
</tr>
</tbody>
</table>
### Relative density
No data available

### 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.

#### 10.3. Possibility of hazardous reactions
Material decomposes slowly in contact with air by reaction with water and carbon dioxide.

#### 10.4. Conditions to avoid
No additional information available

#### 10.5. Incompatible materials
No additional information available

#### 10.6. Hazardous decomposition products
Hexamethyldisilazane, Organic acid vapors, Praseodymium oxide fumes.

### 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

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.

#### 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
<table>
<thead>
<tr>
<th>Effect on the ozone layer</th>
<th>This substance may be hazardous to the environment.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other adverse effects</td>
<td>No additional information available</td>
</tr>
</tbody>
</table>

### SECTION 13: Disposal considerations

#### 13.1. Disposal methods
<table>
<thead>
<tr>
<th>Sewage disposal recommendations</th>
<th>Do not dispose of waste into sewer.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product/Packaging disposal recommendations</td>
<td>Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility.</td>
</tr>
<tr>
<td>Ecology - waste materials</td>
<td>Avoid release to the environment.</td>
</tr>
</tbody>
</table>

### SECTION 14: Transport information

#### 14.1. UN number
Not regulated for transport.

#### 14.2. UN proper shipping name
Not applicable

#### 14.3. Additional information
| Other information               | No supplementary information available.             |

### SECTION 15: Regulatory information

#### 15.1. US Federal regulations
**PRASEODYMIUM ZIRCONIUM SILICATE (35789-00-5)**

<table>
<thead>
<tr>
<th>TSCA Exemption/Exclusion</th>
<th>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.</th>
</tr>
</thead>
</table>

**Praseodymium tris(hexamethyldisilazide) (35789-00-5)**

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
**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>H315</th>
<th>Causes skin irritation</th>
</tr>
</thead>
<tbody>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
<tr>
<td>H335</td>
<td>May cause respiratory irritation</td>
</tr>
</tbody>
</table>
## Abbreviations and acronyms

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ND</td>
<td>Not Determined, No Data</td>
</tr>
<tr>
<td>NA</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>LD</td>
<td>Lethal Dose</td>
</tr>
<tr>
<td>LC</td>
<td>Lethal Concentration</td>
</tr>
<tr>
<td>ATE</td>
<td>Acute Toxicity Estimates</td>
</tr>
<tr>
<td>H</td>
<td>hour</td>
</tr>
<tr>
<td>°C</td>
<td>°C unless otherwise stated</td>
</tr>
<tr>
<td>mm</td>
<td>millimeters Hg, torr</td>
</tr>
<tr>
<td>PEL</td>
<td>permissible exposure level</td>
</tr>
<tr>
<td>TWA</td>
<td>time weighted average</td>
</tr>
<tr>
<td>TLV</td>
<td>threshold limit value</td>
</tr>
<tr>
<td>TG</td>
<td>Test Guideline</td>
</tr>
<tr>
<td>NIOSH</td>
<td>National Institute for Occupational Safety and Health</td>
</tr>
<tr>
<td>IARC</td>
<td>International Agency for Research on Cancer</td>
</tr>
<tr>
<td>NTP</td>
<td>National Toxicology Program</td>
</tr>
<tr>
<td>HMIS</td>
<td>Hazardous Material Information System</td>
</tr>
<tr>
<td>CAS No.</td>
<td>Chemical Abstract Service Registration Number</td>
</tr>
<tr>
<td>EC No.</td>
<td>European Commission Registration Number</td>
</tr>
<tr>
<td>EC Index No.</td>
<td>European Commission Index Number</td>
</tr>
<tr>
<td>OECD</td>
<td>The Organisation for Economic Co-operation and Development</td>
</tr>
<tr>
<td>GHS</td>
<td>The Globally Harmonized System of Classification and Labelling</td>
</tr>
<tr>
<td>APF</td>
<td>Assigned Protection Factor</td>
</tr>
</tbody>
</table>

## Hazard Rating

<table>
<thead>
<tr>
<th>Category</th>
<th>Rating</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>3</td>
<td>Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given</td>
</tr>
<tr>
<td>Flammability</td>
<td>1</td>
<td>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)</td>
</tr>
<tr>
<td>Physical</td>
<td>1</td>
<td>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</td>
</tr>
</tbody>
</table>

Prepared by safety and environmental affairs.

Date of issue: 01/23/2017  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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