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

1.1. **Product identifier**

- **Product form:** Substance
- **Physical state:** Liquid
- **Substance name:** BIS(TRIMETHYLSILYL)PEROXIDE
- **Product code:** SIB1868.0
- **Formula:** $C_6H_{18}O_2Si_2$
- **Synonyms:** HEXAMETHYLDISILPEROXANE; TRIMETHYLSILYLPEROXIDE; PEROXIDE CURING AGENT
- **Chemical family:** PEROXIDE

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)**
- Org. Perox. C: H242
- Skin Irrit.: H315
- Eye Irrit.: H319
- STOT SE: H335

Full text of H-phrases: see section 16

2.2. **Label elements**

**GHS-US labeling**

- **Hazard pictograms (GHS-US):**
  - GHS02
  - GHS07

- **Signal word (GHS-US):** Danger

- **Hazard statements (GHS-US):**
  - H242 - Heating may cause a fire
  - H315 - Causes skin irritation
  - H319 - Causes serious eye irritation
  - H335 - May cause respiratory irritation

- **Precautionary statements (GHS-US):**
  - P200 - Wear protective gloves/protective clothing/eye protection/face protection
  - P210 - Keep away from heat, open flames, sparks, - No smoking
  - P220 - Keep/Store away from flammable or combustible materials, metals, oxidizer
  - P234 - Keep only in original container
  - P261 - Avoid breathing vapors
  - P264 - Wash hands thoroughly after handling
  - P271 - Use only outdoors or in a well-ventilated area
  - 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
  - P312 - Call a doctor if you feel unwell
  - P321 - Specific treatment (see first aid instructions on this label)
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P362+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
P410 - Protect from sunlight
P411+P235 - Store at temperatures not exceeding 10°C (50°F). Keep cool
P420 - Store away from other materials
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 : BIS(TRIMETHYLSILYL)PEROXIDE
CAS No : 5796-98-5

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification (GHS-US)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bis(trimethylsilyl)peroxide</td>
<td>(CAS No) 5796-98-5</td>
<td>95-100</td>
<td>Org. Perox. C, H242</td>
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<td></td>
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<td></td>
<td>Skin Irrit. 2, H315</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Eye Irrit. 2A, H319</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>STOT SE 3, H335</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 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 respiratory irritation.
Symptoms/injuries after skin contact : Causes skin irritation.
Symptoms/injuries after eye contact : Causes serious eye irritation.
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 : Heating may cause a fire. Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame.
Explosion hazard : Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.

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.
Other information : Detonations have been reported when material is transferred by metal hypodermic needles.
SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures: Eliminate ignition sources. 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: Cover spill with non combustible material, e.g.: sand, earth, vermiculite. 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

Additional hazards when processed: Hazardous waste due to potential risk of explosion.
Precautions for safe handling: Avoid all eye and skin contact and do not breathe vapor and mist. Do not transfer through metal tubing or pipes. Transfer with plastic or glass recommended. Provide good ventilation in process area to prevent accumulation of vapors. Use only outdoors or in a well-ventilated area.
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: Proper grounding procedures to avoid static electricity should be followed.
Storage conditions: Store in sealed containers below 10°C (50°F). Keep container tightly closed. Keep only in original container. Protect from sunlight. Store locked up. Store away from other materials.
Storage area: Store in a well-ventilated place. Store away from heat.
Special rules on packaging: Keep only in original container.

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: 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. Contact lenses should not be worn.
Skin and body protection: Wear suitable protective clothing.
Respiratory protection: 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

Physical state: Liquid
Appearance: Clear liquid.
Molecular mass: 178.38 g/mol
Color: No data available
Odor: Slight.
### Odor threshold
- No data available

### Refractive index
- No data available

### pH
- No data available

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

### Melting point
- > 135 °C (decomposes)

### Freezing point
- No data available

### Boiling point
- 35 °C @ 35 mm Hg

### Flash point
- > 100 °C

### Auto-ignition temperature
- No data available

### Decomposition temperature
- Self-accelerating decomposition temperature (SADT): estimated 80°C (176°F)

### Flammability (solid, gas)
- No data available

### Vapor pressure
- No data available

### Relative vapor density at 20 °C
- > 1

### Relative density
- 0.829

### Solubility
- Insoluble in water. 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
- Heating may cause a fire.

### 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 below 10°C (50°F). Never allow temperature to exceed 50°C (122°F).

### 10.3. Possibility of hazardous reactions
- Non-hazardous polymerization can occur at elevated temperature. Detonations have been reported during transfer with metal hypodermic needles.

### 10.4. Conditions to avoid

### 10.5. Incompatible materials
- Flammable or combustible materials. Metals. Oxidizing agent.

### 10.6. Hazardous decomposition products
- 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)**: May cause respiratory irritation.
- **Specific target organ toxicity (repeated exposure)**: Not classified
- **Aspiration hazard**: Not classified
- **Symptoms/injuries after inhalation**: May cause respiratory irritation.
- **Symptoms/injuries after skin contact**: Causes skin irritation.
- **Symptoms/injuries after eye contact**: Causes serious eye irritation.
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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 : 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 : Hazardous waste due to potential risk of explosion.
Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

14.1. UN number
UN-No. (DOT) : 3103
DOT NA no. : UN3103

14.2. UN proper shipping name
Proper Shipping Name (DOT) : Organic peroxide type C, liquid (BIS(TRIMETHYLSILYL)PEROXIDE)
Department of Transportation (DOT) Hazard Classes : 5.2 - Class 5.2 - Organic Peroxide 49 CFR 173.128
Hazard labels (DOT) : 5.2 - Organic peroxide

DOT Symbols : G - Identifies PSN requiring a technical name
Packing group (DOT) : II - Medium Danger
DOT Packaging Exceptions (49 CFR 173.xxx) : 152
DOT Packaging Non Bulk (49 CFR 173.xxx) : 225
DOT Packaging Bulk (49 CFR 173.xxx) : None

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

Transport by sea
DOT Vessel Stowage Location : D - The material must be stowed “on deck only” 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, but the material is prohibited on passenger vessels in which the limiting number of passengers is exceeded.
DOT Vessel Stowage Other : 12 - Keep as cool as reasonably practicable,40 - Stow “clear of living quarters”,52 - Stow “separated from” acids,53 - Stow “separated from” alkaline compounds

Air transport
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 5 L
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DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)

SECTION 15: Regulatory information

15.1. US Federal regulations

<table>
<thead>
<tr>
<th>Abbreviation and acronym</th>
<th>Health</th>
<th>Flammability</th>
<th>Physical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye Irrit. 2A</td>
<td>3 Serious Hazard</td>
<td>3 Serious Hazard</td>
<td>2 Moderate Hazard</td>
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<tr>
<td>Org. Perox. C</td>
<td>Organic Peroxide Category C</td>
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<td></td>
</tr>
<tr>
<td>Skin Irrit. 2</td>
<td>Skin corrosion/irritation Category 2</td>
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<tr>
<td>STOT SE 3</td>
<td>Specific target organ toxicity (single exposure) Category 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H242</td>
<td>Heating may cause a fire</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H335</td>
<td>May cause respiratory irritation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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:

Eye Irrit. 2A: Serious eye damage/eye irritation Category 2A
Org. Perox. C: Organic Peroxide Category C
Skin Irrit. 2: Skin corrosion/irritation Category 2
STOT SE 3: Specific target organ toxicity (single exposure) Category 3
H242: Heating may cause a fire
H315: Causes skin irritation
H319: Causes serious eye irritation
H335: May cause respiratory irritation

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: 2 Moderate Hazard

15.2. International regulations

Bis(trimethylsilyl)peroxide (5796-98-5)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Bis(trimethylsilyl)peroxide (5796-98-5)
Not listed on the United States TSCA (Toxic Substances Control Act) inventory

15.3. US State regulations

<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>
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</thead>
<tbody>
<tr>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

No significance risk level

SECTION 16: Other information

Abbreviations and acronyms:

- TSCA Exemption/Exclusion
- DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)

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.
Prepared by safety and environmental affairs.

Date of issue: 11/21/2014  Revision date: 09/17/2015  Version: 1.1

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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