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

1.1. Product identifier

Product form: Substance
Physical state: Liquid
Substance name: ZINC BIS(HEXAMETHYLDISILAZIDE)
Product code: SIZ9700.0
Formula: C12H36N2Si4Zn
Synonyms: ZINC BIS[BIS(TRIMETHYLSILYL)AMIDE]; BIS[BIS(TRIMETHYLSILYL)AMIDO]ZINC
Chemical family: METAL ORGANOSILYLAMIDE

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

GHS-US classification
Flam. Liq. 3 H226
Water-react. 2 H261
Skin Corr. 1B H314
Eye Dam. 1 H318

Full text of H statements: see section 16

2.2. Label elements

GHS-US labeling
Hazard pictograms (GHS-US): 

Signal word (GHS-US): Danger
Hazard statements (GHS-US): 
H226 - Flammable liquid and vapor
H261 - In contact with water releases flammable gases
H314 - Causes severe skin burns and eye damage

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 - Do not allow contact with water
P231+P232 - Handle under inert gas. Protect from moisture
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
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.
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 : ZINC BIS(HEXAMETHYLDISILAZIDE)
CAS No : 3999-27-7

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
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<tr>
<td>Zinc bis(hexamethyldisilazide) (CAS no) 3999-27-7</td>
<td>95 - 100</td>
<td>Flam. Liq. 3, H226 Water-react. 2, H261 Skin Corr. 1B, H314 Eye Dam. 1, H318</td>
<td></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 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, both acute and delayed
Symptoms/injuries : Causes severe skin burns and eye damage.
Symptoms/injuries after inhalation : May cause irritation to the respiratory tract.
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
Suitable extinguishing media : Dry powder.
Unsuitable extinguishing media : Water.

5.2. Special hazards arising from the substance or mixture
Fire hazard : Flammable liquid and vapor. In contact with water releases flammable gases. Irritating fumes and organic acid vapors may develop when material is exposed to water or open flame.
Reactivity : Reacts with water.

5.3. Advice for firefighters
Firefighting instructions : 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: 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: 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. Do not allow contact with water. Ground/bond container and receiving equipment. Handle under inert gas. Protect from moisture. 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. 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

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 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 - amine gas (brown cartridge) respirator.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Liquid
Appearance: Liquid.
Molecular mass: 386.15 g/mol
**ZINC BIS(HEXAMETHYLDISILAZIDE)**

**Safety Data Sheet**

**Color**: Colorless.

**Odor**: No data available

**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**: 12 - 13 °C

**Freezing point**: No data available

**Boiling point**: 82 - 87 °C @ 0.5 mm Hg

**Flash point**: 40 °C

**Auto-ignition temperature**: No data available

**Decomposition temperature**: No data available

**Flammability (solid, gas)**: Flammable liquid and vapor

**Vapor pressure**: < 0.01 mm Hg @ 25°C

**Relative vapor density at 20 °C**: No data available

**Relative density**: 0.957

**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

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### SECTION 10: Stability and reactivity

10.1. **Reactivity**

Reacts with water.

10.2. **Chemical stability**

Stable in sealed containers stored under nitrogen.

10.3. **Possibility of hazardous reactions**

No additional information available

10.4. **Conditions to avoid**

Heat. Open flame. Sparks.

10.5. **Incompatible materials**

Strong oxidizing agents. Water.

10.6. **Hazardous decomposition products**


---

### 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/injuries after inhalation**: May cause irritation to the respiratory tract.
### 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.

### 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
- This substance may be hazardous to the environment.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods
- Do not dispose of waste into sewer.
- Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility.

### SECTION 14: Transport information

#### 14.1. UN number
- UN-No.(DOT): 3129
- DOT NA no.: UN3129

#### 14.2. UN proper shipping name
- Water-reactive liquid, corrosive, n.o.s.
- (ZINC BIS(HEXAMETHYLDISILAZIDE))
- Class (DOT): 4.3 - Class 4.3 - Dangerous when wet material 49 CFR 173.124
- Hazard labels (DOT): 4.3 - Dangerous when wet
  - 8 - Corrosive

### DOT Symbols
- G - Identifies PSN requiring a technical name

### Packing group (DOT)
- II - Medium Danger

### DOT Packaging Exceptions (49 CFR 173.xxx)
- None

### DOT Packaging Non Bulk (49 CFR 173.xxx)
- 202

### DOT Packaging Bulk (49 CFR 173.xxx)
- 243

#### 14.3. Additional information
- Emergency Response Guide (ERG) Number: 138
- No supplementary information available.

### Transport by sea
- E - 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, but is prohibited from carriage on passenger vessels in which the limiting number of passengers is exceeded.
- 13 - Keep as dry as reasonably practicable.
- 85 - Under deck stowage must be in mechanically ventilated space.
Air transport
DOT Quantity Limitations Passenger aircraft/rail : 1 L
(49 CFR 173.27)
DOT Quantity Limitations Cargo aircraft only (49 : 5 L
CFR 175.75)

SECTION 15: Regulatory information

15.1. US Federal regulations

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<td>Not listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
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15.2. International regulations
No additional information available

15.3. US State regulations

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<tr>
<td>Non-significant risk level (NSRL)</td>
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</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:

| H226 | Flammable liquid and vapor |
| H261 | In contact with water releases flammable gases |
| H314 | Causes severe skin burns and eye damage |
| H318 | Causes serious eye damage |

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.
ZINC BIS(HEXAMETHYLDISILAZIDE)
Safety Data Sheet

Date of issue: 04/27/2016 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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