SECTION 1: Identification

1.1. Identification
Product name: 2,2-DIMETHOXY-1,6-DIAZA-2-SILACYCLOOCTANE
Product code: SID3543.0
Product form: Substance
Physical state: Solid
Formula: C7H18N2O2Si
Chemical family: ORGANOMETHOXYSLANE

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

2.2. GHS Label elements, including precautionary statements
GHS US Labeling
Hazard pictograms (GHS US):
Signal word (GHS US): Warning
Hazard statements (GHS US): H315 - Causes skin irritation
H319 - Causes serious eye irritation
Precautionary statements (GHS US): P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P264 - Wash hands thoroughly after handling.
P302+P352 - If on skin: Wash with plenty of water
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337+P313 - If eye irritation persists: Get medical advice/attention.
P321 - Specific treatment (see first aid instructions on this label)
P362+P364 - Take off contaminated clothing and wash it before reuse.

2.3. Hazards not otherwise classified (HNOC)
Other hazards not contributing to the classification: Additional methanol may be formed by reaction with moisture and water. The US OSHA PEL (TWA) for methanol is 200 ppm.

2.4. Unknown acute toxicity (GHS US)
Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances
Substance type: Mono-constituent
Name: 2,2-DIMETHOXY-1,6-DIAZA-2-SILACYCLOOCTANE
CAS-No.: 182008-07-7
### 2,2-DIMETHOXY-1,6-DIAZA-2-SILACYCLOOCTANE

**Safety Data Sheet**

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,2-Dimethoxy-1,6-diaza-2-silacyclooctane</td>
<td>(CAS No.) 182008-07-7</td>
<td>96 - 100</td>
<td>Skin Irrit. 2, H315, Eye Irrit. 2A, H319</td>
</tr>
</tbody>
</table>

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. 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 (acute and delayed)**

**Symptoms/effects after inhalation**
May cause irritation to the respiratory tract.

**Symptoms/effects after skin contact**
Causes skin irritation.

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

**Symptoms/effects after ingestion**
May be harmful if swallowed.

**Chronic symptoms**
On contact with water this compound liberates methanol which is known to have a chronic effect on the central nervous system.

4.3. **Immediate medical attention and special treatment, if necessary**

NOTE TO PHYSICIAN: This product reacts with water in the acid contents of the stomach to form methanol. The combination of visual disturbances, metabolic acidosis and formic acid in urine is evidence of methanol poisoning. The therapeutic intravenous administration of ethanol (10 mls/hour) allows methanol to be preferentially oxidized and reduces production of methanol metabolites. Acidosis must be treated by intravenous administration of sodium bicarbonate and methanol elimination may be increased by hemodialysis, as indicated. Treatment should be based on blood methanol levels and acid-base balance.

#### SECTION 5: Fire-fighting measures

5.1. **Suitable (and unsuitable) extinguishing media**

**Suitable extinguishing media**
- Water spray.
- Foam.
- Carbon dioxide.
- Dry chemical.

**Unsuitable extinguishing media**
- Do not use straight streams.

5.2. **Specific protective equipment and precautions for fire-fighters**

**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.
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. Do not breathe dust. Avoid dust formation. Provide local exhaust or general room ventilation to minimize exposure to dust.

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.
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:
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: 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: Solid
- Appearance: Solid. Becoming liquid on exposure to air.
- Molecular mass: 190.32 g/mol
- Color: White.
- Odor: No data available
- Odor threshold: No data available
- Refractive index: No data available
- pH: No data available
- Relative evaporation rate (butyl acetate=1): < 1
- Melting point: 61 - 62 °C
- Freezing point: No data available
- Boiling point: 71 - 73 °C @ 2.5 mm Hg
- Flash point: > 65 °C
- Auto-ignition temperature: No data available
- Decomposition temperature: No data available
- Flammability (solid, gas): No data available
- Vapor pressure: < 1 mm Hg @ 20°C
- Relative vapor density at 20 °C: > 1
2,2-DIMETHOXY-1,6-DIAZA-2-SILACYCLOOCTANE
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<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relative density</td>
<td>&lt; 1</td>
</tr>
<tr>
<td>% Volatiles</td>
<td>&lt; 30 %</td>
</tr>
<tr>
<td>Solubility</td>
<td>Reacts with water.</td>
</tr>
<tr>
<td>Log Pow</td>
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</tr>
<tr>
<td>Log Kow</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
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</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>No data available</td>
</tr>
</tbody>
</table>

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 when stored in sealed containers.

10.3. Possibility of hazardous reactions
Reacts with water and moisture in air, liberating methanol.

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

10.5. Incompatible materials

10.6. Hazardous decomposition products
Methanol. Organic amine 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

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**: Not classified
- **Specific target organ toxicity – repeated exposure**: Not classified
- **Aspiration hazard**: Not classified
- **Potential Adverse human health effects and symptoms**: This material liberates small amounts of methanol on contact with moisture. Material generates methanol on contact with water or moisture in skin, eyes and mucous membranes and has an irritating, dehydrating effect on overexposed tissue.
- **Symptoms/effects after inhalation**: May cause irritation to the respiratory tract.
- **Symptoms/effects after skin contact**: Causes skin irritation.
- **Symptoms/effects after eye contact**: Causes serious eye irritation.
- **Symptoms/effects after ingestion**: May be harmful if swallowed.
- **Chronic symptoms**: On contact with water this compound liberates methanol which is known to have a chronic effect on the central nervous system.
- **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

<table>
<thead>
<tr>
<th>Other adverse effects</th>
<th>Effect on the ozone layer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This substance may be hazardous to the environment. 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>May be incinerated. Dispose in a safe manner in accordance with local/national regulations.</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.

#### Transport by sea
No additional information available

#### Air transport
No additional information available

### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

**2,2-DIMETHOXY-1,6-DIAZA-2-SILACYCLOOCTANE (182008-07-7)**

**TSCA Exemption/Exclusion**

Low Volume Exemption in accordance with 40 CFR 723.50(c)(1). Use of this substance is restricted to use in specialty, low VOC adhesion promoter and coupling agent. Anyone who intends to use this chemical substance for commercial purposes must comply with specific use restrictions and controls specified herein. This LVE limits site of manufacture of this substance to Gelest, Inc. unless otherwise approved by U.S. EPA

**2,2-Dimethoxy-1,6-diaza-2-silacyclooctane (182008-07-7)**

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
2,2-DIMETHOXY-1,6-DIAZA-2-SILACYCLOOCTANE
Safety Data Sheet

Full text of H-phrases:

| H315 | Causes skin irritation |
| H319 | Causes serious eye irritation |

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 Index No.: European Commission Index Number; OECD: The Organisation for Economic Co-operation and Development; GHS: The Globally Harmonized System of Classification and Labelling; APF: Assigned Protection Factor.

Hazard Rating
Health: 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given
Flammability: 2 Moderate Hazard - Materials which must be moderately heated or exposed to high ambient temperatures before ignition will occur. Includes liquids having a flash point at or above 100 F but below 200 F. (Classes II & IIIA)
Physical: 1 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.

Prepared by safety and environmental affairs.
Date of issue: 09/02/2015 Revision date: 10/26/2018 Version: 2.1

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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NOTICE OF TSCA USE RESTRICTIONS AND REQUIRED CONTROLS FOR
SID3543.0
2,2-DIMETHOXY-1,6-DIAZA-2-SILACYCLOOCTANE

Dear Customer:

The chemical product purchased, SID3543.0 has been granted a Low Volume Exemption by the U.S. Environmental Protection Agency (EPA) under the Toxic Substances Control Act (TSCA) regulations (40 CFR 723.50). Any manufacturer or processor who intends to use this chemical substance for commercial purposes must comply with the specific use restrictions and controls specified as follows:

USE OF THIS CHEMICAL SUBSTANCE IS RESTRICTED TO: Specialty, low VOC adhesion promoter and coupling agent

CONTROLS: Workers must use personal protection equipment to limit dermal and inhalation exposures as described in Section 8: Exposure Controls/Personal Protection of the Safety Data Sheet (SDS). These exposure controls include:

Hand protection: Impervious gloves (neoprene or nitrile rubber gloves)
Eye Protection: Chemical goggles. Contact lenses should not be worn.
Skin and Body Protection: Wear suitable protective clothing.

WASTE DISPOSAL: Customer must rinse containers with solvent prior to disposal. Residues and wash solvents must be containerized for off-site disposal by incineration at licensed waste disposal facility. Do not release to publicly owned treatment works (POTW) via sewer or to surface waters.

If you have questions or need more information related to allowable use of this substance, contact Gelest Regulatory Affairs at 215-547-1015.

Best Regards,

Gelest, Inc.
Regulatory Affairs Department