



# TETRAKIS(TRIMETHYLSILOXY)ZIRCONIUM

Safety Data Sheet SIT7306.0

Date of issue: 01/17/2017 Version: 1.0

## SECTION 1: Identification

### 1.1. Product identifier

Product name : TETRAKIS(TRIMETHYLSILOXY)ZIRCONIUM  
 Product code : SIT7306.0  
 Product form : Substance  
 Physical state : Solid  
 Formula : C<sub>12</sub>H<sub>36</sub>O<sub>4</sub>Si<sub>4</sub>Zr  
 Synonyms : ZIRCONIUM TRIMETHYLSILOXIDE  
 Chemical family : METAL COMPOUND

### 1.2. Recommended use of the chemical and restrictions on use

Recommended use : 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](mailto:info@gelest.com) - [www.gelest.com](http://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

Serious eye damage/eye irritation Category 2A H319

Full text of H statements : see section 16

### 2.2. Label elements

#### GHS-US labeling

Hazard pictograms (GHS-US) :



GHS07

Signal word (GHS-US) :

Warning

Hazard statements (GHS-US) :

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  
 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

### 2.3. Hazards not otherwise classified (HNOC)

No additional information available

### 2.4. Unknown acute toxicity (GHS US)

No data available

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Substance type : Mono-constituent  
 Name : TETRAKIS(TRIMETHYLSILOXY)ZIRCONIUM  
 CAS No : 18623-00-2

| Name                               | Product identifier  | %        | GHS-US classification |
|------------------------------------|---------------------|----------|-----------------------|
| Tetrakis(trimethylsiloxy)zirconium | (CAS No) 18623-00-2 | 95 - 100 | Eye Irrit. 2A, H319   |

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Full text of hazard classes and H-statements : see section 16

### 3.2. Mixtures

Not applicable

### 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 if you feel unwell.  |

### 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 | : May cause 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

|                                |   |
|--------------------------------|---|
| Suitable extinguishing media   | : Water spray. Water fog. Foam. Carbon dioxide. Dry chemical. |
| Unsuitable extinguishing media | : Do not use straight streams.                                |

### 5.2. Special hazards arising from the substance or mixture

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

### 5.3. Advice for firefighters

|                                |  |
|--------------------------------|--|
| Firefighting instructions      | : Exercise caution when fighting any chemical fire. Use water spray or fog for cooling exposed containers.   |
| 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. Provide local exhaust or general room ventilation to minimize exposure to dust.   |
| 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. |

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### 7.2. Conditions for safe storage, including any incompatibilities

|                        |   |
|------------------------|---|
| Storage conditions     | : Keep container tightly closed.                          |
| Incompatible materials | : Oxidizing agent.  |
| 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. 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           | : Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. NIOSH-certified dust and mist (orange cartridge) respirator. |

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

|   |                      |
|---|----------------------|
| Physical state                              | : Solid              |
| Appearance                                  | : Solid.             |
| Molecular mass                              | : 447.98 g/mol       |
| Color                                       | : Off-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) | : No data available  |
| Melting point                               | : 150 - 152 °C       |
| Freezing point                              | : No data available  |
| Boiling point                               | : 135 °C @ 0.1 mm Hg |
| Flash point                                 | : > 110 °C           |
| Auto-ignition temperature                   | : No data available  |
| Decomposition temperature                   | : No data available  |
| Flammability (solid, gas)                   | : No data available  |
| Vapor pressure                              | : No data available  |
| Relative vapor density at 20 °C             | : No data available  |
| 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 in sealed containers.

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### 10.3. Possibility of hazardous reactions

Material decomposes slowly in contact with moist air and rapidly in contact with water liberating hexamethyldisiloxane.

### 10.4. Conditions to avoid

Heat. Open flame. Sparks.

### 10.5. Incompatible materials

Oxidizing agent.

### 10.6. Hazardous decomposition products

Organic acid vapors. Zirconium oxide.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

|  |   |
|--|---|
| Acute toxicity                                     | : Not classified  |
| Skin corrosion/irritation                          | : Not classified  |
| 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  |
| Symptoms/injuries after inhalation                 | : May cause irritation to the respiratory tract.  |
| Symptoms/injuries after skin contact               | : May cause 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

|                              |                                       |
|------------------------------|---------------------------------------|
| Effect on ozone layer        | : No additional information available |
| Effect on the global warming | : No known effects from this product. |
| GWPmix comment               | : 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  | : Incinerate. Dispose in a safe manner in accordance with local/national regulations. |
| Ecology - waste materials       | : Avoid release to the environment.   |

## SECTION 14: Transport information

### 14.1. UN number

Not regulated for transport.

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### 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

#### TETRAKIS(TRIMETHYLSILOXY)ZIRCONIUM (18623-00-2)

TSCA Exemption/Exclusion

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

#### Tetrakis(trimethylsiloxyl)zirconium (18623-00-2)

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

No additional information available

## SECTION 16: Other information

Full text of H-phrases::

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 No.: European Commission 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.

### HMIS III Rating

Health

: 2 Moderate Hazard - Temporary or minor injury may occur

Flammability

: 1 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)

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: 01/17/2017

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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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