SECTION 1: Identification

1.1. Identification

Product name: GELEST TITANIUM DIOXIDE DE
Product code: WIA-DEA
Product form: Substance
Physical state: Solid
Synonyms: TITANIUM DIOXIDE, PIGMENT WHITE 6, C.I. 77891 POLY(DIETHYLSILOXANE), TRIETHYLSILOXY; SILOXANES AND SILICONES, DIETHYL; DIETHYL POLYSILOXANE; DIETHICONE
Other means of identification: INCI NAME: TITANIUM DIOXIDE (&) POLYDIETHYLSILOXANE

1.2. Recommended use and restrictions on use

Recommended use: Pigment
Cosmetics, personal care products

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
Not classified

2.2. GHS Label elements, including precautionary statements

GHS US labeling
No labeling applicable

2.3. Hazards not otherwise classified (HNOC)

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Substance type: Multi-constituent
Name: GELEST TITANIUM DIOXIDE DE
CAS-No.: 13463-67-7 (&) 63148-61-8

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Titanium Dioxide</td>
<td>(CAS-No.) 13463-67-7</td>
<td>94 - 96</td>
<td>Not classified</td>
</tr>
<tr>
<td>Poly(diethylsiloxane), triethyldimethoxterminated</td>
<td>(CAS-No.) 63148-61-8</td>
<td>4 - 6</td>
<td>Not classified</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.

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.
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: May cause skin irritation.
Symptoms/effects after eye contact: Direct contact with eyes is likely to be irritating.
Symptoms/effects after ingestion: May cause gastrointestinal irritation.
Chronic symptoms: Possible respiratory damage following repeated or prolonged inhalation.

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
Unsuitable extinguishing media: Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical
No additional information available

5.3. Special protective equipment and precautions for fire-fighters
Protection during firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures
6.1. Personal precautions, protective equipment and emergency procedures
6.1.1. For non-emergency personnel
Emergency procedures: Evacuate unnecessary personnel.

6.1.2. For emergency responders
Protective equipment: Equip cleanup crew with proper protection.

6.2. Environmental precautions
Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up
Methods for cleaning up: Avoid dust formation. Sweep or shovel spills into appropriate container for disposal. Provide ventilation system and use necessary personal protective equipment as described in "8. EXPOSURE CONTROLS AND PERSONAL PROTECTION".

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. Do not breathe dust. 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. Keep in a clean and dry area in original unopened containers.

SECTION 8: Exposure controls/personal protection
8.1. Control parameters

<table>
<thead>
<tr>
<th></th>
<th>ACGIH TWA (mg/m³)</th>
<th>OSHA PEL (TWA) (mg/m³)</th>
<th>IDLH (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Titanium Dioxide</td>
<td>10 mg/m³</td>
<td>15 mg/m³ (total dust)</td>
<td>5000 mg/m³</td>
</tr>
</tbody>
</table>

8.2. Appropriate engineering controls
Appropriate engineering controls: Ensure good ventilation of the work station.
### 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:**
Safety glasses. 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

<table>
<thead>
<tr>
<th>9.1. Information on basic physical and chemical properties</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical state</strong> : Solid</td>
</tr>
<tr>
<td><strong>Appearance</strong> : Powder</td>
</tr>
<tr>
<td><strong>Color</strong> : White</td>
</tr>
<tr>
<td><strong>Odor</strong> : No data available</td>
</tr>
<tr>
<td><strong>Odor threshold</strong> : No data available</td>
</tr>
<tr>
<td><strong>Refractive index</strong> : No data available</td>
</tr>
<tr>
<td><strong>pH</strong> : No data available</td>
</tr>
<tr>
<td><strong>Relative evaporation rate (butyl acetate=1)</strong> : No data available</td>
</tr>
<tr>
<td><strong>Melting point</strong> : &gt; 1800 °C</td>
</tr>
<tr>
<td><strong>Freezing point</strong> : No data available</td>
</tr>
<tr>
<td><strong>Boiling point</strong> : No data available</td>
</tr>
<tr>
<td><strong>Flash point</strong> : No data available</td>
</tr>
<tr>
<td><strong>Auto-ignition temperature</strong> : No data available</td>
</tr>
<tr>
<td><strong>Decomposition temperature</strong> : No data available</td>
</tr>
<tr>
<td><strong>Flammability (solid, gas)</strong> : No data available</td>
</tr>
<tr>
<td><strong>Vapor pressure</strong> : No data available</td>
</tr>
<tr>
<td><strong>Relative vapor density at 20 °C</strong> : No data available</td>
</tr>
<tr>
<td><strong>Relative density</strong> : No data available</td>
</tr>
<tr>
<td><strong>Solubility</strong> : Insoluble in water.</td>
</tr>
<tr>
<td><strong>Log Pow</strong> : No data available</td>
</tr>
<tr>
<td><strong>Log Kow</strong> : No data available</td>
</tr>
<tr>
<td><strong>Viscosity, kinematic</strong> : No data available</td>
</tr>
<tr>
<td><strong>Viscosity, dynamic</strong> : No data available</td>
</tr>
<tr>
<td><strong>Explosive properties</strong> : No data available</td>
</tr>
<tr>
<td><strong>Oxidizing properties</strong> : No data available</td>
</tr>
<tr>
<td><strong>Explosion limits</strong> : No data available</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>9.2. Other information</th>
</tr>
</thead>
<tbody>
<tr>
<td>No additional information available</td>
</tr>
</tbody>
</table>

### SECTION 10: Stability and reactivity

<table>
<thead>
<tr>
<th>10.1. Reactivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>No additional information available</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>10.2. Chemical stability</th>
</tr>
</thead>
<tbody>
<tr>
<td>The product is stable at normal handling and storage conditions.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>10.3. Possibility of hazardous reactions</th>
</tr>
</thead>
<tbody>
<tr>
<td>No additional information available</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>10.4. Conditions to avoid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avoid dust formation.</td>
</tr>
</tbody>
</table>
10.5. Incompatible materials
No additional information available

10.6. Hazardous decomposition products
No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity: Not classified

**Titanium Dioxide (13463-67-7)**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>&gt; 10000 mg/kg</td>
</tr>
</tbody>
</table>

**Poly(diethylsiloxane), triethylsiloxy terminated (63148-61-8)**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>&gt; 15000 mg/kg</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation: Not classified
Serious eye damage/irritation: Not classified
Respiratory or skin sensitization: Not classified
Germ cell mutagenicity: Not classified
Carcinogenicity: Not classified.

In 2006, the International Agency for Research of Cancer (IARC) classified titanium dioxide as "possibly carcinogenic" to humans (Group 2B). The IARC Working Group concluded there was sufficient evidence in experimental animals for the carcinogenicity of titanium dioxide, however, IARC found little evidence of an increased risk for cancer among humans based on epidemiological study data.

**Titanium Dioxide (13463-67-7)**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>IARC group</td>
<td>2B - Possibly carcinogenic to humans</td>
</tr>
<tr>
<td>In OSHA Hazard Communication Carcinogen list</td>
<td>Yes</td>
</tr>
</tbody>
</table>

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/effects after inhalation: May cause respiratory irritation.
Symptoms/effects after skin contact: May cause skin irritation.
Symptoms/effects after eye contact: Direct contact with eyes is likely to be irritating.
Symptoms/effects after ingestion: May cause gastrointestinal irritation.
Chronic symptoms: Possible respiratory damage following repeated or prolonged inhalation.

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 the ozone layer: No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Product/Packaging disposal recommendations: Dry material can be landfilled. Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility.

Ecology - waste materials: Avoid release to the environment.
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

GELEST TITANIUM DIOXIDE DE (13463-67-7 (&) 63148-61-8)

<table>
<thead>
<tr>
<th>TSCA Exemption/Exclusion</th>
<th>This substance is excluded from U.S. TSCA notification requirements according to 40 CFR 720.30(a).</th>
</tr>
</thead>
</table>

Titanium Dioxide (13463-67-7)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Poly(diethylsiloxane), triethoxysilox terminated (63148-61-8)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

Titanium Dioxide (13463-67-7)
Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification | Class D Division 2 Subdivision A - Very toxic material causing other toxic effects

Poly(diethylsiloxane), triethoxysilox terminated (63148-61-8)
Listed on the Canadian NDSL (Non-Domestic Substances List)

EU-Regulations

Titanium Dioxide (13463-67-7)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations

Titanium Dioxide (13463-67-7)
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on CICR (Turkish Inventory and Control of Chemicals)

Poly(diethylsiloxane), triethoxysilox terminated (63148-61-8)
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

15.3. US State regulations

WARNING: This product can expose you to Titanium Dioxide, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.
GELEST TITANIUM DIOXIDE
DE
Safety Data Sheet

Titanium Dioxide (13463-67-7)

<table>
<thead>
<tr>
<th>U.S. - California - Proposition 65 - Carcinogens List</th>
<th>U.S. - California - Proposition 85 - 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 significant risk level (NSRL)</th>
<th>Maximum allowable dose level (MADL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Titanium Dioxide (13463-67-7)

| U.S. - Massachusetts - Right To Know List | U.S. - New Jersey - Right to Know Hazardous Substance List | U.S. - Pennsylvania - RTK (Right to Know) List |

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; GHS: The Globally Harmonized System of Classification and Labelling; APF: Assigned Protection Factor.

Hazard Rating:
- Health: 1 Slight Hazard - Irritation or minor reversible injury possible
- Flammability: 0 Minimal Hazard - Materials that will not burn
- Physical: 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Prepared by safety and environmental affairs.

Date of issue: 07/21/2016 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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