



SILICON DIOXIDE - fused (synthetic)

Safety Data Sheet SIS6964.4

Date of issue: 31/05/2016

Version: 1.0

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

1.1. Product identifier

| | |
|-----------------|--|
| Product form | : Substance |
| Physical state | : Solid |
| Substance name | : SILICON DIOXIDE - fused (synthetic) |
| Product code | : SIS6964.4 |
| Formula | : SiO ₂ |
| Synonyms | : SYNTHETIC; VITREOUS SILICA; FUSED AMORPHOUS SILICA |
| Chemical family | : INORGANIC SILICATE |

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Use of the substance/mixture : Chemical intermediate

1.2.2. Uses advised against

No additional information available

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

GELEST INC.

Fritz-Klatte-Strasse 8
65933 Frankfurt

Germany

T +49 (0) 69 3535106-500 - F +49 (0) 69 3535106-501 - (M-F): 8:00 AM - 4:00 PM

info@gelestde.com - www.gelestde.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 according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

EUH-statements : EUH210 - Safety data sheet available on request.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

| | |
|----------------|---------------------------------------|
| Substance type | : Mono-constituent |
| Name | : SILICON DIOXIDE - fused (synthetic) |
| CAS-No. | : 60676-86-0 |

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| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|------------------------|--|----------|---|
| Silicon dioxide, fused | (CAS-No.) 60676-86-0 (EC-No.) 262-373-8;424-440-1 | 97 - 100 | Not classified |

Full text of 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 person to fresh air and keep comfortable for breathing. If you feel unwell, seek medical advice. |
| First-aid measures after skin contact | : Wash with plenty of 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/effects after inhalation | : May cause irritation to the respiratory tract. Inhalation of product may aggravate existing chronic respiratory conditions such as asthma, emphysema or bronchitis. |
| Symptoms/effects after skin contact | : May cause skin irritation. May be harmful in contact with skin. There is evidence that silica can exacerbate scleroderma, an immune disorder of the skin. |
| Symptoms/effects after eye contact | : May cause eye irritation. |
| Symptoms/effects 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 | : Not combustible. |
| Unsuitable extinguishing media | : None known. |

5.2. Special hazards arising from the substance or mixture

| | |
|------------------|---------------|
| Fire hazard | : None known. |
| Explosion hazard | : None known. |

5.3. Advice for firefighters

| | |
|--------------------------------|---|
| Protection during firefighting | : Do not attempt to take action without suitable protective equipment. 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. |

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6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

| | |
|-----------------------------------|--|
| Additional hazards when processed | : While not flammable, the ability of fumed silica to generate static charge may present a hazard when used in combination with flammable liquids. |
| 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. |

7.2. Conditions for safe storage, including any incompatibilities

| | |
|------------------------|---|
| Storage conditions | : Keep container tightly closed. |
| Incompatible materials | : Fluorine. Hydrofluoric acid. Hydrogen fluoride. |

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

| Silicon dioxide, fused (60676-86-0) | | |
|-------------------------------------|---|--|
| Austria | MAK (mg/m ³) | 0.3 mg/m ³ (respirable fraction) |
| Belgium | Limit value (mg/m ³) | 0.1 mg/m ³ (alveolar dust) |
| Bulgaria | OEL TWA (mg/m ³) | 0.07 mg/m ³ (respirable fraction) |
| Germany | TRGS 900 Occupational exposure limit value (mg/m ³) | 0.3 mg/m ³ (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed-respirable fraction) |
| Italy - Portugal - USA ACGIH | ACGIH TWA (mg/m ³) | 10 mg/m ³ |
| USA OSHA | OSHA PEL (TWA) (mg/m ³) | 6 mg/m ³ |
| Switzerland | MAK (mg/m ³) | 0.3 mg/m ³ (respirable dust) |
| United Kingdom | WEL TWA (mg/m ³) | 0.08 mg/m ³ (respirable dust) |
| United Kingdom | WEL STEL (mg/m ³) | 0.24 mg/m ³ (calculated-respirable dust) |
| Denmark | Grænseværdie (langvarig) (mg/m ³) | 0.1 mg/m ³ (respirable) |
| Ireland | OEL (8 hours ref) (mg/m ³) | 0.08 mg/m ³ (respirable dust) |
| Ireland | OEL (15 min ref) (mg/m ³) | 0.24 mg/m ³ (calculated-respirable dust) |
| Poland | NDS (mg/m ³) | 2 mg/m ³ (inhalable fraction) 1 mg/m ³ (respirable fraction) |
| Canada (Quebec) | VEMP (mg/m ³) | 0.1 mg/m ³ (containing no Asbestos and <1% Crystalline silica-respirable dust) |

8.2. Exposure controls

Appropriate engineering controls:

Provide local exhaust or general room ventilation.

Personal protective equipment:

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.

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|--|-----------------------|
| Physical state | : Solid |
| Appearance | : Powder. |
| Molecular mass | : 60.09 g/mol |
| Colour | : White. |
| Odour | : No data available |
| Odour threshold | : No data available |
| Refractive index | : 1.45 |
| pH | : No data available |
| Relative evaporation rate (butylacetate=1) | : No data available |
| Melting point | : 1585 °C |
| Freezing point | : No data available |
| Boiling point | : No data available |
| Flash point | : No data available |
| Auto-ignition temperature | : No data available |
| Decomposition temperature | : No data available |
| Flammability (solid, gas) | : No data available |
| Vapour pressure | : < 0.01 mm Hg @ 20°C |
| Relative vapour density at 20 °C | : No data available |
| Relative density | : 2.203 |
| % Volatiles | : 0 % |
| Solubility | : Insoluble in 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 |
| Oxidising properties | : No data available |
| Explosive 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.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

Fluorine. Hydrofluoric acid. Hydrogen fluoride.

10.6. Hazardous decomposition products

None known.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Silicon dioxide, fused (60676-86-0)

| | |
|--------------------|--------------|
| LD50 oral rat | > 5000 mg/kg |
| LD50 dermal rabbit | > 2000 mg/kg |

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitisation : Not classified

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Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

Silicon dioxide, fused (60676-86-0)

IARC group : 3 - Not classifiable

Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified
Potential adverse human health effects and symptoms : Chronic Toxicity: This product does not contain any ingredient designated by IARC, NTP, ACGIH or OSHA as probable or suspected human carcinogens.
Symptoms/effects after inhalation : May cause irritation to the respiratory tract. Inhalation of product may aggravate existing chronic respiratory conditions such as asthma, emphysema or bronchitis.
Symptoms/effects after skin contact : May cause skin irritation. May be harmful in contact with skin. There is evidence that silica can exacerbate scleroderma, an immune disorder of the skin.
Symptoms/effects after eye contact : May cause eye irritation.
Symptoms/effects after ingestion : May be harmful if swallowed.

SECTION 12: Ecological information

12.1. Toxicity

Acute aquatic toxicity : Not classified
Chronic aquatic toxicity : Not classified

Silicon dioxide, fused (60676-86-0)

EC50 Daphnia 1 : > 1000 mg/l Daphnia-magna; 24H

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. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Sewage disposal recommendations : Do not dispose of waste into sewer.
Product/Packaging disposal recommendations : Landfill. 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

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR) : Not applicable
UN-No. (IMDG) : Not applicable
UN-No. (IATA) : Not applicable
UN-No. (ADN) : Not applicable
UN-No. (RID) : Not applicable

14.2. UN proper shipping name

Proper Shipping Name (ADR) : Not applicable
Proper Shipping Name (IMDG) : Not applicable
Proper Shipping Name (IATA) : Not applicable
Proper Shipping Name (ADN) : Not applicable
Proper Shipping Name (RID) : Not applicable

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14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : Not applicable

IMDG

Transport hazard class(es) (IMDG) : Not applicable

IATA

Transport hazard class(es) (IATA) : Not applicable

ADN

Transport hazard class(es) (ADN) : Not applicable

RID

Transport hazard class(es) (RID) : Not applicable

14.4. Packing group

Packing group (ADR) : Not applicable

Packing group (IMDG) : Not applicable

Packing group (IATA) : Not applicable

Packing group (ADN) : Not applicable

Packing group (RID) : Not applicable

14.5. Environmental hazards

Dangerous for the environment : No

Marine pollutant : No

Other information : No supplementary information available

14.6. Special precautions for user

- Overland transport

Not applicable

- Transport by sea

Not applicable

- Air transport

Not applicable

- Inland waterway transport

Not applicable

- Rail transport

Not applicable

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

SILICON DIOXIDE - fused (synthetic) is not on the REACH Candidate List

SILICON DIOXIDE - fused (synthetic) is not on the REACH Annex XIV List

SILICON DIOXIDE - fused (synthetic) is not subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

SILICON DIOXIDE - fused (synthetic) is not subject to Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC

% Volatiles : 0 %

15.1.2. National regulations

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Germany

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed

SZW-lijst van mutagene stoffen : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not listed

15.2. Chemical safety assessment

No additional information available

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 |
|--|

Other information : Prepared by safety and environmental affairs.

Full text of H- and EUH-statements:

| | |
|--------|---|
| EUH210 | Safety data sheet available on request. |
|--------|---|

SDS EU (REACH Annex II) - Custom

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