



# SAFETY DATA SHEET

## 1. Identification

**Name of the substance or mixture (trade name)** Blank

**Product code** Part #: 930001

**Major recommended uses for the substance or mixture** Sample.

**Specific restrictions for use of the substance or mixture** Not available.

**Manufacturer/Importer/Distributor information**

**Manufacturer**

**Supplier** Olympus

**Address** 48 Woerd Ave. Waltham, MA 02453, USA

**Telephone** +1 781-419-3900

**Emergency telephone number** CHEMTREC

US: 1-800-424-9300, International: +1 703-527-3887

## 2. Hazards identification

### Classification of the substance or mixture

**Physical hazards** Not classified.

**Health hazards** Carcinogenicity (inhalation) Category 1A  
Specific target organ toxicity, repeated exposure (inhalation) Category 2 (Lung, Respiratory system)

**Environmental hazards** Not classified.

### GHS labeling elements, including precautionary statements

#### Hazard symbol(s)



#### Signal word

Danger

#### Hazard statement(s)

May cause cancer by inhalation. May cause damage to organs (Lung, Respiratory system) through prolonged or repeated exposure by inhalation.

#### Precautionary statement(s)

##### Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust. Wear protective gloves/protective clothing/eye protection/face protection.

##### Response

IF exposed or concerned: Get medical advice/attention.

##### Storage

Store locked up.

##### Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

#### Other hazards which do not result in classification

None known.

#### Supplemental information

None.

## 3. Composition/information on ingredients

### Substance

Common chemical name or technical name	CAS number	Concentration or concentration range
Silicon dioxide	7631-86-9	100

### Composition comments

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

## 4. First-aid measures

### First-aid measures

<b>Inhalation</b>	Move to fresh air. Call a physician if symptoms develop or persist.
<b>Skin contact</b>	Wash off with soap and water. Get medical attention if irritation develops and persists.
<b>Eye contact</b>	Do not rub eyes. Rinse with water. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Rinse mouth. Get medical attention if symptoms occur.
<b>Most important symptoms/effects, acute and delayed</b>	Dusts may irritate the respiratory tract, skin and eyes. Coughing. Discomfort in the chest. Shortness of breath.
<b>Personal protection for first-aid responders</b>	IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
<b>Notes to physician</b>	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

## 5. Fire-fighting measures

### Means of fire extinguishing

<b>Suitable extinguishing media</b>	Use fire-extinguishing media appropriate for surrounding materials.
<b>Unsuitable extinguishing media</b>	None known.
<b>Specific hazards arising from the chemical</b>	During fire, gases hazardous to health may be formed.
<b>Special fire fighting procedures</b>	Use water spray to cool unopened containers.
<b>Protective measures taken by firefighting crews</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.

## 6. Control measures for spills and leaks

### Personal precautions, protective equipment and emergency procedures

<b>To be taken by those who are not involved in rendering emergency services</b>	Ensure adequate ventilation. Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. Do not breathe dust. For personal protection, see section 8 of the SDS.
<b>To be taken by those who are involved in rendering emergency services</b>	Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.
<b>Environmental precautions</b>	Avoid discharge into drains, water courses or onto the ground.
<b>Methods and materials for containment and cleaning up</b>	Avoid the generation of dusts during clean-up. Collect dust using a vacuum cleaner equipped with HEPA filter. Collect in containers and seal securely. Containers with collected spillage must be properly labeled with correct contents and hazard symbol. For waste disposal, see section 13 of the SDS.

## 7. Handling and storage

<b>Precautions for safe handling</b>	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Should be handled in closed systems, if possible. Minimize dust generation and accumulation. Do not breathe dust. Provide appropriate exhaust ventilation at places where dust is formed. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
<b>Conditions for safe storage, including any incompatibilities</b>	Store locked up. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

<b>Control parameters</b>	Follow standard monitoring procedures.
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**Occupational exposure limits**

**US. ACGIH Threshold Limit Values**

Material	Type	Value	Form
Silicon dioxide (CAS 7631-86-9)	TWA	0.025 mg/m3	Respirable fraction.

**Argentina. OELs. Law 19587 (Establishing the Conditions for Health and Safety in the Workplace) and Decree 351/79 Article 61, Annex III, as amended**

Material	Type	Value	Form
Silicon dioxide (CAS 7631-86-9)	TWA	0.05 mg/m3	Respirable fraction.

**Chile. OELs. Decree No. 594, arts. 61 & 66: Regulating Basic Health and Environmental Conditions in the Workplace and Setting Permissible Levels of Exposure to Chemical and Physical Agents**

Material	Type	Value	Form
Silicon dioxide (CAS 7631-86-9)	TWA	0.04 mg/m3	Respirable fraction.

**Ecuador. OELs (INEN 2266:2013, 2013-01 2nd rev.: Transport, storage and handling of hazardous materials. Requirements. 1st ed., 1/29, 2013)**

Material	Type	Value	Form
Silicon dioxide (CAS 7631-86-9)	TWA	0.025 mg/m3	Respirable fraction.

**Paraguay. Decree No. 14.390/92 that approves the General Technical Regulation of Safety, Hygiene and Medicine in the Workplace**

Material	Type	Value	Form
Silicon dioxide (CAS 7631-86-9)	TWA	0.025 mg/m3	Respirable fraction.

**Peru. OELs. Decreto Supremo 015-2005-SA (Reglamento sobre Valores Límites Permisibles para Agentes Químicos en el Ambiente de Trabajo)**

Material	Type	Value	Form
Silicon dioxide (CAS 7631-86-9)	TWA	0.05 mg/m3	Respirable fraction.

**Venezuela. OELs. (COVENIN 2253: Permissible Environmental Concentration Limits for Chemical Substances in Workplaces and Biological Exposure Indices)**

Material	Type	Value
Silicon dioxide (CAS 7631-86-9)	TWA	0.05 mg/m3

**Biological limit values**

No biological exposure limits noted for the ingredient(s).

**Appropriate engineering controls**

Should be handled in closed systems, if possible. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. If engineering measures are not sufficient to maintain concentrations of dust particulates below the Occupational Exposure Limit (OEL), suitable respiratory protection must be worn.

**Personal protective measures**

**Eyes and face protection**

Risk of contact: Wear safety glasses with side shields (or goggles).

**Skin protection**

**Hand protection**

No specific hygiene procedures noted, but good personal hygiene practices are always advisable, especially when working with chemicals.

**Other**

No skin protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid skin contact.

**Respiratory protection**

Wear respirator with dust filter.

**Thermal hazards**

No protection is ordinarily required under normal conditions of use.

**Hygiene measures**

Observe any medical surveillance requirements. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical and chemical properties

### Appearance

<b>Physical state</b>	Solid.
<b>Form</b>	Powder.
<b>Color</b>	White.
<b>Odor</b>	Odorless.
<b>Odor threshold</b>	Not available.
<b>pH</b>	Not applicable.
<b>Melting point/freezing point</b>	3110 °F (1710 °C)
<b>Initial boiling point and boiling temperature range</b>	4046 °F (2230 °C)
<b>Flash point</b>	Not applicable.
<b>Evaporation rate</b>	Not applicable.
<b>Flammability (solid, gas)</b>	Non flammable.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not applicable.
<b>Flammability limit - upper (%)</b>	Not applicable.
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	Not applicable.
<b>Vapor density</b>	Not applicable.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	Insoluble in water.
<b>Partition coefficient (n-octanol/water)</b>	Not applicable.
<b>Auto-ignition temperature</b>	Not applicable.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not applicable.
<b>Other physical and chemical parameters</b>	
<b>Density</b>	2.20 - 2.60 g/cm3
<b>Explosive properties</b>	Not explosive.
<b>Molecular formula</b>	O2Si
<b>Oxidizing properties</b>	Not oxidizing.

## 10. Stability and reactivity

<b>Reactivity</b>	Stable at normal conditions.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid</b>	Avoid dust formation. Contact with incompatible materials.
<b>Incompatible materials</b>	Strong oxidizing agents. Hydrofluoric acid. Magnesium.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	Dust may irritate respiratory system. Prolonged inhalation may be harmful.
<b>Skin contact</b>	Dust or powder may irritate the skin.
<b>Eye contact</b>	Dust may irritate the eyes.
<b>Ingestion</b>	Expected to be a low ingestion hazard.
<b>Symptoms</b>	Dusts may irritate the respiratory tract, skin and eyes. Coughing. Shortness of breath. Discomfort in the chest. Prolonged exposure may cause chronic effects.

<b>Acute toxicity</b>	Not expected to be acutely toxic.
<b>Skin irritation and corrosion</b>	Dust or powder may irritate the skin.
<b>Serious eye damage/eye irritation</b>	Dust may irritate the eyes.
<b>Respiratory or skin sensitization</b>	
<b>Respiratory sensitization</b>	Due to partial or complete lack of data the classification is not possible.
<b>Skin sensitization</b>	This product is not expected to cause skin sensitization.
<b>Germ cell mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
<b>Carcinogenicity</b>	May cause cancer by inhalation.
<b>ACGIH Carcinogens</b>	
Silicon dioxide (CAS 7631-86-9)	A2 Suspected human carcinogen.
<b>Colombia. OELs. Resolution No. 02400: Norms Concerning Working Conditions, Health and Safety in the Workplace</b>	
Silicon dioxide (CAS 7631-86-9)	A2 Suspected human carcinogen.
<b>Ecuador. OELs (INEN 2266:2013, 2013-01 2nd rev.: Transport, storage and handling of hazardous materials. Requirements. 1st ed., 1/29, 2013)</b>	
Silicon dioxide (CAS 7631-86-9)	Group A2 Suspected human carcinogen.
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>	
Silicon dioxide (CAS 7631-86-9)	1 Carcinogenic to humans.
<b>Paraguay. Decree No. 14.390/92 that approves the General Technical Regulation of Safety, Hygiene and Medicine in the Workplace</b>	
Silicon dioxide (CAS 7631-86-9)	A2 Suspected human carcinogen.
<b>Toxic to reproduction</b>	This product is not expected to cause reproductive or developmental effects.
<b>Specific target organ toxicity - single exposure</b>	Due to partial or complete lack of data the classification is not possible.
<b>Specific target organ toxicity - repeated exposure</b>	May cause damage to organs (Lung, Respiratory system) through prolonged or repeated exposure by inhalation.
<b>Aspiration hazard</b>	Due to the physical form of the product it is not an aspiration hazard.
<b>Chronic effects</b>	Chronic lung disease (silicosis) and/or lung cancer may result from prolonged/repeated breathing of the dust of this material.

## 12. Ecological information

<b>Ecotoxicity</b>	Not expected to be harmful to aquatic organisms.
<b>Persistence and degradability</b>	Not applicable.
<b>Bioaccumulative potential</b>	The product is not bioaccumulating.
<b>Partition coefficient n-octanol / water (log Kow)</b>	Not available.
<b>Bioconcentration factor (BCF)</b>	Not available.
<b>Mobility in soil</b>	The product is insoluble in water.
<b>Other adverse effects</b>	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

## 13. Considerations on final disposal

### Recommended methods for final destination

<b>Residual waste</b>	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
<b>Contaminated packaging</b>	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.
<b>Local disposal regulations</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities. Dispose of contents/container in accordance with local/regional/national/international regulations. When your own wastewater treatment plant is not available, collect entire waste and then charge to a licensed industrial waste management professional with manifests for industrial waste.

## 14. Transport information

### National regulations

#### ANTT

Not regulated as dangerous goods.

### International regulations

#### IATA

Not regulated as dangerous goods.

#### IMDG

Not regulated as dangerous goods.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.

## 15. Regulatory information

### Federal regulations

This chemical product safety data sheet was prepared in accordance with the Brazilian Standard (ABNT NBR 14725-4: (Safety data sheet for chemicals (SDS))). The Chemicals Safety Information Card of the hazardous chemical can be obtained from a supplier.

### International regulations

#### Montreal Protocol

Not applicable.

#### Stockholm Convention

Not applicable.

#### Rotterdam Convention

Not applicable.

#### Kyoto protocol

Not applicable.

#### Basel Convention

Not applicable.

## 16. Other information

**Significant information, yet not specifically related to the previous sections** Not available.

### References

ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices  
HSDB® - Hazardous Substances Data Bank  
IARC Monographs. Overall Evaluation of Carcinogenicity  
National Toxicology Program (NTP) Report on Carcinogens  
Korea. Accidental Release Prevention Substances (Presidential Decree of Toxic Chemical Control Law, Executive Order No. 19203)

### Legends and abbreviations

DNEL: Derived No Effect Level.  
PNEC: Predicted No Effect Concentration.  
PBT: Persistent, bioaccumulative, toxic.

### Disclaimer

Olympus cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.