

Chemical Safety Data Sheet MSDS / SDS

Quartz (SiO₂) SDS

Revision Date:2024-04-25 Revision Number:1

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

Product name: Quartz (SiO₂)
CAS: 14808-60-7

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

Relevant identified uses: For R&D use only. Not for medicinal, household or other use.
Uses advised against: none

Company Identification

Company: Chemicalbook.in
Address: 5 vasavi Layout Basaveswara Nilayam Pragathi Nagar Hyderabad, India -500090
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SECTION 2: Hazards identification**Classification of the substance or mixture**

Flammable liquids, Category 2
Skin irritation, Category 2

Skin sensitization, Category 1
Serious eye damage, Category 1
Specific target organ toxicity - single exposure, Category 3
Specific target organ toxicity - single exposure, Category 3
Specific target organ toxicity - repeated exposure, Category 1
Hazardous to the aquatic environment, long-term (Chronic) - Category Chronic 2

GHS label elements, including precautionary statements

Pictogram(s)



Signal word

Danger

Hazard statement(s)

H225 Highly flammable liquid and vapour
H315 Causes skin irritation
H317 May cause an allergic skin reaction
H318 Causes serious eye damage
H335 May cause respiratory irritation
H336 May cause drowsiness or dizziness
H372 Causes damage to organs through prolonged or repeated exposure
H411 Toxic to aquatic life with long lasting effects

Precautionary statement(s)

Prevention

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.
P240 Ground and bond container and receiving equipment.
P241 Use explosion-proof [electrical/ventilating/lighting/...] equipment.
P242 Use non-sparking tools.
P243 Take action to prevent static discharges.
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...
P264 Wash ... thoroughly after handling.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P272 Contaminated work clothing should not be allowed out of the workplace.
P271 Use only outdoors or in a well-ventilated area.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P270 Do not eat, drink or smoke when using this product.

P273 Avoid release to the environment.

Response

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water [or shower].

P370+P378 In case of fire: Use ... to extinguish.

P302+P352 IF ON SKIN: Wash with plenty of water/...

P321 Specific treatment (see ... on this label).

P332+P317 If skin irritation occurs: Get medical help.

P362+P364 Take off contaminated clothing and wash it before reuse.

P333+P317 If skin irritation or rash occurs: Get medical help.

P305+P354+P338 IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

P317 Get medical help.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P319 Get medical help if you feel unwell.

P391 Collect spillage.

Storage

P403+P235 Store in a well-ventilated place. Keep cool.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

Disposal

P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Other hazards which do not result in classification

no data available

SECTION 3: Composition/information on ingredients

Substance

Chemical name: Quartz (SiO₂)

Common names and synonyms: Quartz (SiO₂)

CAS number: 14808-60-7
EC number: 238-878-4
Concentration: 100%

SECTION 4: First aid measures

Description of necessary first-aid measures

If inhaled

Fresh air, rest.

Following skin contact

Rinse and then wash skin with water and soap.

Following eye contact

Rinse with plenty of water (remove contact lenses if easily possible).

Following ingestion

Rinse mouth.

Most important symptoms/effects, acute and delayed

Exposure Routes: inhalation, skin and/or eye contact Symptoms: Irritation eyes, pneumoconiosis Target Organs: Eyes, respiratory system (NIOSH, 2016)

Indication of immediate medical attention and special treatment needed, if necessary

Basic treatment: Establish a patent airway. Suction if necessary. Watch for signs of respiratory insufficiency and assist ventilations if needed. Administer oxygen by nonrebreather mask at 10 to 15 L/min. Monitor for pulmonary edema and treat if necessary . Monitor for shock and treat if necessary . Anticipate seizures and treat if necessary . For eye contamination, flush eyes immediately with water. Irrigate each eye continuously with normal saline during transport . Do not use emetics. For ingestion, rinse mouth and administer 5 ml/kg up to 200 ml of water for dilution if the patient can swallow, has a strong gag reflex, and does not drool . Cover skin burns with dry sterile dressings after decontamination . Poison A and B

SECTION 5: Firefighting measures

Suitable extinguishing media

In case of fire in the surroundings: all extinguishing agents allowed.

Specific hazards arising from the chemical

no data available

Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6: Accidental release measures**Personal precautions, protective equipment and emergency procedures**

Avoid dust formation. Avoid breathing mist, gas or vapours. Avoid contacting with skin and eye. Use personal protective equipment. Wear chemical impermeable gloves. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Environmental precautions

Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Sweep spilled substance into covered containers. If appropriate, moisten first to prevent dusting. Wash away remainder with plenty of water.

Methods and materials for containment and cleaning up

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

SECTION 7: Handling and storage**Precautions for safe handling**

Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

Conditions for safe storage, including any incompatibilities

Separated from strong oxidants. Avoid dusty atmosphere. Cab-O-Sil*

SECTION 8: Exposure controls/personal protection

Control parameters

Occupational Exposure limit values

| Component | Quartz (SiO ₂) | | | |
|----------------------------|---|--------------------------------|--------------------------|------------------------|
| CAS No. | 14808-60-7 | | | |
| | Limit value - Eight hours | | Limit value - Short term | |
| | ppm | mg/m ³ | ppm | mg/m ³ |
| Australia | ? | 0,1 (1) | ? | ? |
| Austria | ? | 0,15 respirable aerosol | ? | ? |
| Belgium | ? | 0,1 | ? | ? |
| Canada - Ontario | ? | 0,1 (1) | ? | ? |
| Canada - Québec | ? | 0,1 | ? | ? |
| Denmark | ? | 0,3 inhalable aerosol | ? | 0,6 inhalable aerosol |
| ? | ? | 0,1 respirable aerosol | ? | 0,2 respirable aerosol |
| Finland | ? | 0,05 (1) | ? | ? |
| France | ? | 0,1 respirable aerosol | ? | ? |
| Hungary | ? | 0,15 respirable aerosol | ? | ? |
| Ireland | ? | 0,1 (1) | ? | ? |
| New Zealand | ? | 0,2 (1) | ? | ? |
| People's Republic of China | ? | 1 (1) (2) | ? | ? |
| ? | ? | 0,7 (1) (3) | ? | ? |
| ? | ? | 0,5 (1) (4) | ? | ? |
| Singapore | ? | 0,1 respirable aerosol | ? | ? |
| South Korea | ? | 0,05 | ? | ? |
| Spain | ? | 0,1 (1) | ? | ? |
| Sweden | ? | 0,1 respirable aerosol | ? | ? |
| Switzerland | ? | 0,15 respirable aerosol | ? | ? |
| The Netherlands | ? | 0,075 respirable dust | ? | ? |
| USA - NIOSH | ? | 0,05 | ? | ? |
| USA - OSHA | ? | 30/(%silica+2) total dust | ? | ? |
| ? | ? | 10/(%silica+2) respirable dust | ? | ? |
| | Remarks | | | |
| Australia | (1) Respirable fraction | | | |
| Canada - Ontario | (1) Respirable aerosol | | | |
| Finland | (1) Respirable fraction | | | |
| France | Bold type: Restrictive statutory limit values | | | |
| Ireland | (1) Respirable fraction | | | |
| New Zealand | (1) Respirable aerosol | | | |
| People's Republic of China | (1) Inhalable fraction (2) 10% | | | |

Biological limit values

no data available

Appropriate engineering controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

Individual protection measures, such as personal protective equipment (PPE)**Eye/face protection**

Wear tightly fitting safety goggles with side-shields conforming to EN 166(EU) or NIOSH (US).

Skin protection

Wear fire/flame resistant and impervious clothing. Handle with gloves. Gloves must be inspected prior to use. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Respiratory protection

If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

Thermal hazards

no data available

SECTION 9: Physical and chemical properties and safety characteristics

| | |
|-------------------------------|---|
| Physical state: | Transparent to gray, odorless powder. Irritating to the skin and eyes on contact. Inhalation will cause irritation in the respiratory tract. [Note: Amorphous silica is the non-crystalline form of SiO ₂ .] |
| Colour: | Amorphous powder |
| Odour: | Odorless |
| Melting point/freezing point: | 1610°C |

| | |
|---|--------------------------------|
| Boiling point or initial boiling point and boiling range: | 2230°C |
| Flammability: | Noncombustible Solid |
| Lower and upper explosion limit/flammability limit: | no data available |
| Flash point: | no data available |
| Auto-ignition temperature: | no data available |
| Decomposition temperature: | no data available |
| pH: | no data available |
| Kinematic viscosity: | no data available |
| Solubility: | Insoluble (NIOSH, 2016) |
| Partition coefficient n-octanol/water: | no data available |
| Vapour pressure: | 0 mm Hg (approx) (NIOSH, 2016) |
| Density and/or relative density: | 2.2 |
| Relative vapour density: | no data available |
| Particle characteristics: | no data available |

SECTION 10: Stability and reactivity

Reactivity

Reacts with strong oxidants. This generates fire and explosion hazard.

Reacts violently with strong oxidants. This generates fire and explosion hazard.
Reacts with strong oxidants. This generates fire and explosion hazard.

Chemical stability

no data available

Possibility of hazardous reactions

Heating the material at high temperatures results in the formation of crystalline silica (see ICSC 0809 Cristobalite). SILICA, AMORPHOUS is a non-combustible solid. Generally unreactive chemically. Incompatible with fluorine, oxygen difluoride, chlorine trifluoride. Soluble in molten alkalis and reacts with most metallic oxides at high temperature.

Conditions to avoid

no data available

Incompatible materials

Fluoride, oxygen difluoride, chlorine trifluoride.

Hazardous decomposition products

no data available

SECTION 11: Toxicological information

Acute toxicity

Oral: LD50 Rat oral >22,500 mg/kg

Inhalation: no data available

Dermal: no data available

Skin corrosion/irritation

no data available

Serious eye damage/irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

EPA: Not evaluated. IARC: Carcinogenic to humans . NTP: Known to be a human carcinogen

Reproductive toxicity

no data available

STOT-single exposure

no data available

STOT-repeated exposure

no data available

Aspiration hazard

no data available

SECTION 12: Ecological information

Toxicity

Toxicity to fish: no data available

Toxicity to daphnia and other aquatic invertebrates: no data available

Toxicity to algae: no data available

Toxicity to microorganisms: no data available

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

Other adverse effects

no data available

SECTION 13: Disposal considerations**Disposal methods****Product**

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

SECTION 14: Transport information**UN Number**

ADR/RID: no data available

IMDG: no data available

IATA: no data available

UN Proper Shipping Name

ADR/RID: no data available

IMDG: no data available

IATA: no data available

Transport hazard class(es)

ADR/RID: no data available

IMDG: no data available

IATA: no data available

Packing group, if applicable

ADR/RID: no data available

IMDG: no data available

IATA: no data available

Environmental hazards

ADR/RID: Yes

IMDG: Yes

IATA: Yes

Special precautions for user

no data available

Transport in bulk according to IMO instruments

no data available

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product in question

European Inventory of Existing Commercial Chemical Substances (EINECS)

Listed.

EC Inventory

Listed.

United States Toxic Substances Control Act (TSCA) Inventory

Listed.

China Catalog of Hazardous chemicals 2015

Not Listed.

New Zealand Inventory of Chemicals (NZIoC)

Listed.

(PICCS)

Listed.

Vietnam National Chemical Inventory

Listed.

IECSC)

Listed.

Korea Existing Chemicals List (KECL)

Listed.

SECTION 16: Other information

Abbreviations and acronyms

CAS: Chemical Abstracts Service

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

IMDG: International Maritime Dangerous Goods

IATA: International Air Transportation Association

TWA: Time Weighted Average

STEL: Short term exposure limit

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

EC50: Effective Concentration 50%

References

IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>

HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>

IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>

eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website:
http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en

CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>

ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>

ERG - Emergency Response Guidebook by U.S. Department of Transportation, website:
<http://www.phmsa.dot.gov/hazmat/library/erg>

Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>

ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

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