

Material Safety Data Sheet

According to: ST/SG/AC.10/30/Rev.6(GHS)
Silica Gel

Section 1 - Identification of the substance/preparation and of the company/undertaking

Product Identifier

Product name: Silica Gel

Sample code: 28112210.00

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

Identified uses: /

Details of the supplier of the safety data sheet

Supplier: QINGDAO BANGKAI HI-TECH MATERIALS CO.,LTD

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Section 2 - Hazards Identification

Classification of the substance or mixture

Classification according to GHS

Eye irritation (Category 2)

Specific target organ toxicity - single exposure (Category 3)

GHS label elements:

Pictogram



Signal word

Warning

Hazard statement(s)

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

Precautionary statement(s)

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P304 + P340 IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards

Physical and chemical hazards: See Section 10

Human health hazards: See Section 11

Environmental hazards: See Section 12

Section 3 - Composition/Information on Ingredient

Chemical composition

Component	CAS No.	Formula	Composition	EC No.	GHS CLASS
Silica-amorphous	112926-00-8/ 7631-86-9/ 63231-67-4	SiO ₂	98.5%	231-545-4	Eye Irrit. 2 STOT SE 3 H319 H335
Water	7732-18-5	H ₂ O	1.5%	231-791-2	/

For the full text of H-Statements in this Section, see Section 16.

Section 4-First Aid Measures

Description of first aid measures

Eye Contact: In case of overexposure to dusts or fumes, immediately flush eyes with plenty of water for at least 15 minutes occasionally lifting the eye lids. Get medical attention if irritation persists. Thermal burns should be treated as medical emergencies.

Skin Contact: In case of overexposure to dusts or particulates, wash with soap and plenty of water. If irritation develops and persists, seek medical attention.

Ingestion: Do not induce vomiting. Never give anything by mouth to an unconscious person. Wash out mouth with water. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical aid if irritation develops and persists.

Inhalation: Remove from exposure and move to fresh air immediately. Loosen tight clothing such as a collar, tie, belt or waistband. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.

Personal protective equipment for first-aid responders:

No further relevant information available.

Most important symptoms/effects, acute and delayed:

No further relevant information available.

Indication of immediate medical attention and special treatment needed:

Treat symptomatically.

Section 5 – Fire-Fighting Measures

Extinguishing media

Suitable Extinguishing Media:

Use agent most appropriate to extinguish surrounding fire. Use water spray, dry chemical, carbon dioxide, or chemical foam.

Special hazards arising from the substance or mixture:

Thermal decomposition can lead to release of irritating gases and vapors. Under fire conditions toxic fumes may be released.

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Advice for firefighters:

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Section 6 - Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use personal protective equipment. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas. Spilled or released at long industrial condition: Remove ignition sources, Keep away from heat and flame, evacuate area. Avoid breathing dust, vapour, smoke. Shut off source of the leak only if it is easy to do so. Pellets remained on ground may cause slipping.

Environmental precautions

Keep spilled material out of sewers, ditches and bodies of water.

Methods and materials for containment and cleaning up

Sweep up and place in suitable containers for recycle or disposal according to local / national regulations (see section 13). Keep in suitable, closed containers for disposal.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

Section 7 - Handling and Storage

Precautions for safe handling

Pneumatic material handling and processing equipment may generate dust of sufficiently small particle size that, when suspended in air, may be explosive. In accordance with good industrial practice, handle with care and avoid unnecessary personal contact. Wash thoroughly after handling. Use with adequate ventilation. Minimize dust generation and accumulation. To prevent dust storms, air transport pipes, bag filters and storage tanks need to install devices to eliminate static electricity and grounding, bag filters of the filter with conductive material. Avoid contact with eyes. Avoid breathing dust, vapor, mist, or gas. Do not eat, drink or smoke while handling the product. Keep away from sources of ignition.

Conditions for safe storage, including any incompatibilities

Keep away from heat, sparks, and flame. Store in a cool, dry, well-ventilated away from incompatible substances. Keep away from sources of ignition. Do not store in direct sunlight. Temperatures in excess may cause resin degradation. Keep out of the reach of children.

Specific end uses No data available

Section 8 - Exposure Controls/Personal Protection

Control parameters

Exposure limits:

CAS# 112926-00-8/7631-86-9/63231-67-4:

OSHA:PEL-TWA 20 mppcf (80 mg/m³/%SiO₂)



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NIOSH: REL-TWA 6 mg/m³
Australia- TWA: 2 mg/m³ (respirable dust)

Engineering Controls

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Personal Protective Equipment

Eyes Protection: No special eye protection is normally required. If operating conditions create dust that is not adequately controlled, wear appropriate goggles.

Skin Protection: For prolonged or repeated contact use protective gloves.

Body Protection: Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Respirators Protection: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Other Protection: Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking. To maintain good health habits.

Section 9 - Physical and Chemical Properties

Physical State	Powder
Colour	White
Odour	Odorless
pH	6-8
Melting point/freezing point	1610°C
Boiling point or initial boiling point and boiling range	2230°C
Flash point	Not applicable
Flammability (solid, gas)	No data available
Lower and upper explosion limit/ flammability limit	No data available
Vapour pressure	No data available
Relative vapour density	No data available
Density/Relative density	400-500 g/L
Solubility	Insoluble
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Kinematic viscosity	No data available
Particle characteristics	No data available

Section 10 - Stability and Reactivity

Reactivity	No data available
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	
Hazardous Polymerization	Will not occur.
Hazardous Reactions	None under normal processing.
Conditions to avoid	Incompatible materials. Ignition sources, excess heat.
Incompatible materials	Strong oxidizing agents, strong acids, strong bases. Chlorine trifluoride, Ethylene oxide, Hydrogen fluoride, Oxygen difluoride, Sodium nitrate.
Hazardous decomposition products	May produce irritating and toxic fumes and gases.

Section 11 - Toxicological Information

Information on toxicological effects

Acute toxicity:

CAS# 7631-86-9:

Oral, rat: LD50 >3160 mg/kg;

Skin corrosion/irritation	No data available
Serious eye damage/eye irritation	No data available
Respiratory or skin sensitization	No data available
Germ cell mutagenicity	No data available

Carcinogenicity

Silica-amorphous - IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Water- Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Reproductive toxicity No data available

Specific target organ toxicity - single exposure No data available

Specific target organ toxicity - repeated exposure No data available

Aspiration hazard No data available

Potential Health Effects

Eye: Dusts or particulates may cause mechanical irritation including pain, tearing, and redness. Vapours and fumes from burning material may cause irritation. Scratching of the cornea can occur if eye is rubbed. Contact with the heated material may cause thermal burns.

Skin: No special hazard risk under normal use. Dusts or particulates may cause mechanical irritation due to abrasion. Contact with heated material may cause thermal burns.

Ingestion: Ingestion is an unlikely route of exposure; no hazard in normal industrial use. If ingested in sufficient quantity may cause injury such as gastrointestinal disturbances. May be a choking hazard.

Inhalation: Inhalation of airborne particulate may lead to mechanical irritation of the respiratory tract and mucous membranes. Vapours and fumes from molten or burning material may cause respiratory irritation, headache, and nausea. Inhalation of excessive levels of dust or fumes may be harmful. If it is contaminated with

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crystalline silica it may produce severe lung effects, including emphysema and pulmonary fibrosis due to the contaminating silica.

Signs and Symptoms of Exposure

Irritating vapors to respiratory system and eyes may form when polymer is processed at high temperatures. Molten or heated material in skin contact can cause severe burns. Silica gel is a synthetic amorphous silica, not to be confused with crystalline silica such as quartz, cristobalite, or tridymite or with diatomaceous earth or other naturally occurring forms of amorphous silica that frequently contain crystalline forms. Epidemiological studies indicate a low potential for health effects. Prolonged inhalation of crystalline silica may result in silicosis, a disabling pulmonary fibrosis characterized by fibrotic changes and miliary nodules in the lungs, a dry cough, shortness of breath, emphysema, decreased chest expansion, and increased susceptibility to tuberculosis. In advanced stages, loss of appetite, pleuritic pain, and total incapacity to work. Advanced silicosis may result in death due to cardiac failure or destruction of lung tissue. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Additional Information

RTECS#: CAS# 7631-86-9: VV7310000/ CAS# 112926-00-8/63231-67-4: VV8850000/ CAS# 7732-18-5:
ZC0110000

Section 12 - Ecological Information

Toxicity	No data available
Persistence and degradability	No data available
Bioaccumulative potential	No data available
Mobility in soil	No data available
Results of PBT and vPvB assessment	No data available
Other adverse effects	Do not empty into drains.

Section 13 - Disposal Considerations

Waste treatment methods

Waste from Residues / Unused Products: Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

Contaminated packaging: Contaminated packaging material should be treated equivalent to residual chemical. Clean packaging material should be subjected to waste management schemes (recovery recycling, reuse) according to local legislation.

Section 14 - Transport Information

	IATA	IMDG	RID/ADR
Proper shipping name	Not regulated	Not regulated	Not regulated
Hazard class	/	/	/
Un number	/	/	/
Packing group	/	/	/

Section 15 - Regulatory Information

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

Regulatory information: Reference to the local, national, US, EU, CA and international regulations.

Canada

All chemicals in this product s are listed on Canada's DSL List.

US Federal

Toxic Substance Control Act (TSCA)

All chemicals in this product are listed on the TSCA Inventory.

China

Inventory of Existing Chemical Substances Produced or Imported in China (IECSC)

All chemicals in this product are listed on the IECSC Inventory.

Section 16 - Additional Information

MSDS Creation Date: Dec 19, 2016

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Text of H-code(s) mentioned in Section 3

Eye Irrit. 2: Eye irritation(Category 2)

STOT SE 3: Specific target organ toxicity - single exposure(Category 3)

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

Other Information:

ACGIH: (American Conference of Governmental Industrial Hygienists); CAS: (Chemical Abstracts Service);

DSL: (the Domestic Substances List of Canada) ; EC: (European Commission) ; IARC: (International Agency



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for Research on Cancer) ;IATA: (International Air Transport Association) ;IMDG: (International Maritime Dangerous Goods) ;ADR: (European Agreement Concerning the International Carriage of Dangerous Goods by Road);RID: (Regulations Concerning the International Carriage of Dangerous Goods by Rail); LD50: (Lethal dose, 50 percent kill) ; NDSL: (the Non-domestic Substances List of Canada) ; NIOSH: (US National Institute for Occupational Safety and Health) ;NTP: (US National Toxicology Program) ;OSHA: (US Occupational Safety and Health) ; PEL: (Permissible Exposure Level); REL: (Recommended Exposure Limit) ; RTECS: (Registry of Toxic Effects of Chemical Substances) ; STEL: (Short Term Exposure Limit) ;TDG: (Recommendations on the TRANSPORT OF DANGEROUS GOODS Model Regulations); TSCA:(Toxic Substances Control Act of USA); IECSC: (Inventory of Existing Chemical Substances Produced or Imported in China) ;TWA: (Time Weighted Average) ;TLV: (Threshold Limit Value)