

## Safety Data Sheet ( SDS )

This MSDS valid for our hydrophobic fumed silica of HB-132, HB-135, HB-612, HB-615, HB-620, HB-630

### 1. Identification of the substance/ preparation and the company

Name of product	Chinese name	疏水型气相二氧化硅·疏水型气相法白炭黑	
	English name	Hydrophobic fumed silica	
Chemical name	Silicon dioxide (SiO <sub>2</sub> )	molecular weight	60.08
CAS Number		68909-20-6	
Product description	High purity amorphous silica with higher than 99.8 wt% silica content		
REACH Reg. No.	/		
Use of the product	Fumed silica is mainly used in sealants, paints, coatings and some other polymers such as rubbers, plastics and resins to act as a reinforcement, thickening, anti-setting and rheology agent. And used as a free flow aids in the powder system such as food, pharmacy, fertilizer and extinguisher etc. Used as additives in cosmetics, defamers, thermal insulation materials etc.		
Use advised against	No uses advised against		
Manufacturer	Hubei HuiFu Nanomaterial Co., Ltd. No .66-2, Xiaoting avenue, Xiaoting district, Yichang city, Hubei province, China Phone: 86-20-89850560, FAX: 86-20-82519070 Internet: <a href="http://www.hifull.com">www.hifull.com</a> Email: <a href="mailto:hifull@hifull.com">hifull@hifull.com</a>		
For Emergencies	TEL: 86-20-89850560 FAX:86-20-82519070 ,Email: <a href="mailto:hifull@hifull.com">hifull@hifull.com</a>		

### 2. Hazards identification

Classification of the substance	This product does not meet the criteria for classification in any hazard class according to Regulation (EC) No1272/2008[CLP] on classification, labeling and packaging of substances and mixtures.
Label	No label information available. The product is not classified as hazardous under Regulation(EC) No 1272/2008[CLP/GHS]
Route of entry or possible contact	Inhalation, Eyes contact, Skin contact
Acute health effects	Eye contact: No acute toxic effects are expected. Slight irritation by mechanical effects is possible. Skin contact: No acute toxic effects are expected. Temporary discomfort like feeling of dryness on the skin. Inhalation: No acute toxic effects are expected. May cause physical discomfort to the respiratory tract.



	Not mutagenic in different in-vitro and in-vivo test systems. A long term exposure exceeding TLV can lead to damaging effect as a result of mechanical overloading of the respiratory tract. Chronic respiratory exposure: Changes in respiratory organs observed in animal experiments (inflammatory processes) were reversible; no indication of silicosis. Animal tests have shown no indication to carcinogenic or to reproduction effects.
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### 3. Composition/information on ingredients

CAS NO.	68909-20-6
Chemical characteristics	Pyrogenic micro-dispersed silica surface modified by organosilicon, synthetic X-ray amorphous silicon dioxide (SiO <sub>2</sub> )
Appearance	White solid - powder · odorless
Molecular formula	SiO <sub>2</sub>
Purity ( wt%)	>99.8%

\* This substance is also known as Silica, amorphous, fumed, crystalline free, CAS No. 112945-52-5.

### 4. First-aid measures

In all cases of doubt, or when symptoms persist, seek medical attention.	
Eye Contact	Flush eyes with plenty of water immediately · get medical attention if symptoms occurring.
Skin Contact	Wash skin with plenty of water or with water and soap.
Swallowing	Drink plenty of water. Get medical attention if symptoms occurring.
Inhalation	Remove to fresh air. Get medical attention if symptoms occurring.

### 5. Fire-fighting measures

Combustibility	Noncombustible material, but the package of the product may cause combustion risk
Fire and explosion hazards	The material is noncombustible substance, while electrostatic charging is possible in using. Ensure all parts of equipment are well earthed. Use inert gas when working with combustible and explosive liquids.
Extinguishing agent	No limitations of extinguishing agents are given. Use extinguishing measures appropriate to the source of fire.
Advice for fire-fighters	Wear full protective clothing including a self-contained breathing apparatus for firefighting if necessary.

### 6. Accidental release measures

Precautions	Avoid dust formation. Do not breathe dust. Cover any spilled material in accordance with regulations to prevent dispersal by wind.
Environmental precautions	Avoid dust formation and release directly. Deal with the dust in accordance with the local related regulatory.
Methods for cleaning up	Clean up promptly by vacuum and fill into containers.

### 7. Handling and storage

Precautions for safe handling	Do not leave container open. Sufficient ventilation must be guaranteed for refilling, transfer, or open use. Avoid the formation of dust. Avoid contacting with the skin and the eyes.
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Precautions for storage	Keep container dry and tightly closed. Avoid dust deposit. Electrostatic discharge possible during transport and processing. Take precautionary measures against electrostatic charging.
Specific end uses	Apart from the uses mentioned in section 1(use of the product), it may be used in some other field as an additives.

### 8. Exposure controls and personal protection

Occupational exposure limit values	China MAC (mg/m <sup>3</sup> )	2mg/m <sup>3</sup>
	The USATVL-TWA	10mg/m <sup>3</sup>
	The USATLV-STEL	3mg/m <sup>3</sup>
Exposure controls	Use only with adequate general or local exhaust ventilation to maintain airborne concentration below TLV.	
Respiratory protection	A NIOSH approved particulate respirator with a P95 or higher rating.	
Eye protection	Use equipment for eye protection tested and approved under appropriate government standards such as EN 166(EU).	
Skin protection	Avoid to contact with skin directly. Wear antistatic clothes and boot. Handle with gloves. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. Barrier cream may be used to prevent dryness of skin.	
Environmental exposure controls	Do not allow material to be released to the environment without the proper governmental permits.	
Industry hygiene	General industrial hygiene practice.	

### 9. Physical and chemical properties

Melting point ( °C )	~1700	Boiling point ( °C )	~2300
Flash Point	No data available	Flammability	noncombustible
Density(g/cm <sup>3</sup> (20°C))	2.2	Tamped density(g/l)	30~60
Appearance	White solid - powder · odorless		
pH-Value	3.7-4.5 (4wt% suspension in water at 25°C)		
Water solubility / miscibility	Virtually insoluble		
Enthalpy (kJ/mol)	No data available	Decomposition temperature ( °C )	Non decomposable
Explosive properties	No data available	Electrical conductivity	Non conductive

### 10. Stability and reactivity

Stability in storage	Stable at room temperature and recommended storage conditions
Reactivity	Soluble in strong alkali. Strong reaction with hydrofluoric acid (HF).
Conditions to avoid	Avoid moisture
Incompatible materials	Keep away from hydrofluoric acid (HF).
Hazardous decomposition products	Non decomposition products released in fire conditions

### 11. Toxicological information

Acute toxicity	LD <sub>50</sub> : Oral : > 5000mg/kg ( rat); by inhalation : > 0.477mg/l/4h ( rat )
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	LC <sub>50</sub> : None dead rate at technical max. concentration(rabbit)
Mutagenicity	No data available
Teratogenicity	No data available
Irritability	Experience with rabbit : Not irritating to eyes and skin. Experience with man: By prolonged contact with the product no damage to health was observed. Repeated exposure may cause skin drying and cracking.
Carcinogenicity	Not classified
Chronic toxicity	Not mutagenic in different in-vitro and in-vivo test systems. A long term exposure exceeding TLV can lead to damaging effect as a result of mechanical overloading of the respiratory tract. Chronic respiratory exposure: Changes in respiratory organs observed in animal experiments (inflammatory processes) were reversible; no indication of silicosis. Animal tests have shown no indication to carcinogenic or to reproduction effects.

## 12. Ecological information

General notification	Not applicable to Biodegradation. No harmful effects to environment. Can be removed mechanically from waste water.
Toxicity	Acute toxicity to fish: no data available Acute toxicity to daphnia: no data available Acute toxicity to algae: no data available Acute toxicity to bacteria: no data available
Persistence and degradability	No data available
Bio accumulative potential	No data available
Mobility in soil	No data available
Result of PBT and vPvB assessment	No data available
Other adverse effects	No data available

## 13. Disposal considerations

Waste disposal Recommendation	Waste material can be stored together and disposed in according with local/state regulations by a licensed company.
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## 14. Transport information

This product is not regulated as a hazardous material or dangerous goods for Land/ Sea/ Air transportation.
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## 15. Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture	
EU regulation	Authorizations: No information available. Restrictions on use: No information available. EINECS: This substance is not listed in the inventory. DSD (67/548/EEC): This substance is not listed in the Annex I.



Other chemical regulation	<p>TSCA - United States Toxic Substances Control Act Section 8(b) Inventory</p> <p>DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List    Complies</p> <p>EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances    Complies    ENCS - Japan Existing and New Chemical Substances    Complies</p> <p>IECSC - China Inventory of Existing Chemical Substances    Complies</p> <p>KECL - Korean Existing and Evaluated Chemical Substances    Complies</p> <p>PICCS - Philippines Inventory of Chemicals and Chemical Substances    Complies</p> <p>AICS - Australian Inventory of Chemical Substances    Complies</p> <p>NZIOC - New Zealand Inventory of Chemicals    Complies</p> <p>TCSI - Taiwan Chemical Substance Inventory    Complies</p>
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### 16. Other information

Abbreviations and acronyms	<p>CLP: EU regulation (EC) No 1272/2008 on classification, labelling and packaging of chemical substances and mixtures. CAS: Chemical Abstracts Service (division of the American Chemical Society).</p> <p>EINECS: European Inventory of Existing Commercial Chemical Substances.</p> <p>RID: European Rail Transport.</p> <p>IMDG: International Maritime Code for Dangerous Goods.</p> <p>IATA: International Air Transport Association.</p> <p>OSHA: The United States Occupational Safety and Health Administration.</p> <p>TSCA: Toxic Substances Control Act, The American chemical inventory.</p> <p>DSD: Dangerous Substance Directive (67/548/EEC).</p> <p>IECSC: Inventory of existing chemical substances in China.</p> <p>DSL: Domestic Substances List, The Canadian chemical inventory.</p> <p>AICS: The Australian Inventory of Chemical Substances.</p> <p>ECL: Existing Chemicals List, the Korean chemical inventory.</p> <p>ENCS: Japanese Existing and New Chemical Substances.</p>
Product name	<p>HB-132 Hexamethyldisiloxane modified of hydrophilic fumed silica with a specific surface area of <math>200 \pm 20 \text{m}^2/\text{g}</math></p> <p>HB-135 Hexamethyldisiloxane modified of hydrophilic fumed silica with a specific surface area of <math>380 \pm 30 \text{m}^2/\text{g}</math></p> <p>HB-612 Hexamethyldisiloxane modified of hydrophilic fumed silica with a specific surface area of <math>150 \pm 20 \text{m}^2/\text{g}</math></p> <p>HB-615 Hexamethyldisiloxane modified of hydrophilic fumed silica with a specific surface area of <math>150 \pm 20 \text{m}^2/\text{g}</math></p> <p>HB-620 Hexamethyldisiloxane modified of hydrophilic fumed silica with a specific surface area of <math>200 \pm 20 \text{m}^2/\text{g}</math></p> <p>HB-630 Hexamethyldisiloxane modified of hydrophilic fumed silica with a specific surface area of <math>380 \pm 30 \text{m}^2/\text{g}</math></p>
Key references and sources for data	Not available
Training advice	Provide adequate information, instruction and training for operators

