

SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006, Article 31
According to Hazard Communication Standard (HCS) 29 CFR 1910.1200 (g) and GHS Rev 03

Synthetic Amorphous Silica

1.- IDENTIFICATION

Chemical Name:	Amorphous Precipitated Silica.
Trade Names:	PIROSIL PS-120, PIROSIL PS-120 M, PIROSIL PS-150, PIROSIL PS-200, PIROSIL PS-230, PIROSIL PS-300, PIROSIL PS-300 Plus, PIROSIL PS-2000, PIROSIL PS-3000.
Chemical Family:	Silicon Dioxide. Precipitated Hydrated Amorphous Silica. Anhydrous Silicic Acid.
Use of the Substance:	Free flowing agent, carrier agent, anticaking agent, drying aid.
Manufacturer:	Glassven Yangzhong Additives J.V. Ltd. Xing Wang Xi Road No. 30, Youfang Town, Yangzhong City, Jiangsu Province. CHINA (212216). Tel.: (+86) 511 88527008 E-mail: rosanty.colina@glassven.com
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2.- HAZARDS IDENTIFICATION

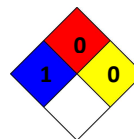
EC Classification: This product is not classified as dangerous according to Directive 67/548/EEC.
Classification of the substance or mixture

Signal Word: WARNING
Mild Irritant (skin and eye)
Slightly respiratory tract Irritant
Label elements
OSHA HCS 2012

WARNING
Not a hazardous substance or mixture according to the Globally Harmonized System (GHS).

Other information

NFPA



Principal Routes of Exposure: Inhalation, skin contact, eye contact.

POTENTIAL HEALTH EFFECTS:

Inhalation:	Inhalation can cause irritation to the respiratory system.
Eye Contact:	May cause mechanical irritation. Irritating, but will not permanently injure eyes tissue.
Skin Contact:	Avoid prolonged, repeated or excessive contact with the skin. It may cause irritation and dryness.
Ingestion:	Health Injuries are not known or expected under industrial or commercial handling.

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Carcinogenic Effects: Does not contain any substances listed by IARC (International Agency for Research on Cancer), NTP (National Toxicology Program), OSHA (Occupational Safety and Health Administration), ACGIH (American Conference for Governmental Industrial Hygienists).

Target Organ Effects: Lungs.

Medical Conditions Aggravated by Exposure: Asthma, Respiratory Disorder.

POTENTIAL ENVIRONMENTAL EFFECTS: No special environmental precautions required.

OTHER HAZARDS: This product is not identified as PBT or vPvB according to Annex XIII of Regulation (EC) No. 1907/2006

3.- COMPOSITION / INFORMATION ON INGREDIENTS

Components	CAS Number	EINECS Number	% W/W	GHS Classification	EC Classification
Silicon Dioxide Anhydrous (SiO ₂)	112926-00-8	231-545-4	98.00 Min.	None	None
Sodium Sulfate (Na ₂ SO ₄)	7757-82-6	231-820-9	2.00 Max.	None	None

Other Information: Old CAS Number: 7631-86-9 (Silicon Dioxide)

Hazardous Impurities: This product does not contain crystalline silica (detection limit <0.01 % w/w).

4.- FIRST AID MEASURES

Inhalation: Move patient to fresh air. If symptoms persist, seek medical advice. Wash skin with soap and water.

Skin Contact: Flush eyes with plenty of water. Eyelids shall be held away from the eyeball to ensure thorough rinsing. Seek medical advice if irritation develops.

Eye Contact: Health Injuries are not known or expected under industrial or commercial handling.

Ingestion: In case of ingestion, do not induce vomiting. If victim is conscious, rinse mouth with water.

5.- FIRE – FIGHTING MEASURES

Suitable Extinguishing Media: All extinguishing media can be used.

Inappropriate Extinguishing Media: None

Specific Fire and Exposure Hazards: None

Hazardous Decomposition and/or Combustion Products: None



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Protective Equipment for Fire-Fighters: Use protective equipment appropriate for surrounding materials.

6.- ACCIDENTAL RELEASE MEASURES

Personal Precautions:	In case of dust formation, use dust mask. See also section 8.
Environmental Precautions:	This product does not present any particular risk to the environment. Refer to applicable national, state and local regulations prior to washing in drain.
Methods for Cleaning up:	Collect as much as possible in a clean container, preferable reusable or disposable. Avoid dust generation. Do not allow that material goes into drains or waterways.

7.- HANDLING AND STORAGE

Handling:	Wash thoroughly after using this product. Do not eat, drink, smoke or apply cosmetics while handling this product. Avoid breathing dust or particles generated by this product. Use in a well-ventilated location. Remove contaminated clothing after being in contact with the product. Employees in direct contact with this material shall be trained about its safe handling. Open containers slowly on a stable surface. Containers must be properly labeled. Empty containers may contain residual amounts of this product; therefore, they shall be handled with care.
Storage Requirements:	Store containers in a dry location. Store away from incompatible materials. Keep container tightly closed when it is not in use. Inspect all incoming containers before storage to ensure they are properly labeled and not damaged.

8.- EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMITS:

TLVs ACGIH	10 mg/m ³
UK EH 40/95	3 mg/m ³ Respirable dust, 8 hours OES 6 mg/m ³ Total dust, 8 hours OES
PELs OSHA	80 mg/m ³ (Total dust) %SiO ₂ or 20 mppcf
NIOSH REL: TWA	6 mg/m ³
DFG MAK	4 mg/m ³
QES:TWA	5 - 10 mg/m ³
USA OSHA CFR 29 PART 1910.1000	6 mg/m ³

VENTILATION AND ENGINEERING CONTROLS:

Uses with adequate ventilation to ensure that the exposure levels are maintained below the limits provided in this section.
Prudent practice is to guarantee that eye wash station/safety showers are near locations where this product is used or stored.

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PERSONAL PROTECTIVE EQUIPMENTS:
Pictograms



Respiratory Protection:

Use mask in case of dust formation.
If respiratory protection is needed, such as during emergency response to uncontrolled releases, use only protection authorized in 29 CFR 1910.134, applicable U.S. State regulations or the appropriate standard of Canada and its provinces.
Advice on respiratory protective equipment is given in British standards BS 2091 and BS 4275, and the HSE publication HS(g) 53. In the USA, ASTM E1156-88 (re-approved in 1993) specifies standards practice for handling amorphous silica.

Hand Protection:

Wear rubber gloves for routine industrial use.

Eye Protection:

Use splash goggles or safety glasses with side shields.

Skin Protection:

Use body protection appropriate for task. Special protection equipment is not required.

Hygiene Measures:

Handle in accordance with good industrial hygiene and safety practice.

ENVIRONMENTAL EXPOSURE CONTROLS:

This product does not present any particular risk to the environment. Refer to applicable national, state and local regulations prior to washing in drain.

9.- PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Powder
Color:	White
Odor:	Without odor
Boiling Point:	Not applicable
Melting Point:	Not determined
Flash Point:	Not applicable
Flammability:	Not applicable
Explosive Properties:	Not applicable
Explosion Limits:	Not applicable
Oxidizing Properties:	Not applicable
Vapor Pressure:	Not applicable
Density:	Variable
Bulk Density:	Variable
Water Solubility:	Insoluble
Solubility in Other Solvents:	Insoluble in most organic solvents.
pH:	6.00 – 9.00
Partition Coefficient n-Octanol/ Water:	Not determined
Relative Vapor Density (Air=1):	Not applicable
Evaporation Rate:	Not determined
Viscosity:	Not applicable
Other Information:	<u>Volatile Matter:</u> < 7% moisture (2 hours @ 105°C) <u>Impurities:</u> contains less than 2.0 % Na ₂ SO ₄

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10.- STABILITY AND REACTIVITY




Stability:	Stable Product
Conditions to Avoid:	None Known
Materials to Avoid:	Hydrofluoric Acid
Hazardous Decomposition Products:	None

11.- TOXICOLOGICAL INFORMATION

Silicon Dioxide is not found in the following lists:

U.S FEDERAL OSHA Z
NTP
IARC
CAL/OSHA

Therefore, it is neither considered to be nor suspected to be cancer-causing agents by these agencies. Synthetic Amorphous Silica is a permitted food additive in the UK, USA and many other countries. It has been fully evaluated by the U.N Codex Alimentarius commission and given clearance for use as a food additive.

Acute Toxicity:	LD50 oral (rata) >10000 mg/Kg.
 Eye Irritation:	Irritant.
 Skin Irritation:	Dry skin and mucous membranes.
 Inhalation:	Powder can irritate the respiratory system.
Ingestion:	Can cause discomfort.
Sensitization Information:	The components of this product are not known to be sensitizes with repeated or prolonged use.
Mutagenicity, Embryotoxicity and Teratogenicity:	This product is not reported to produce mutagenic, embryotoxic, and teratogenic effects in humans.
Reproductive Toxicity:	This product is not reported to cause reproductive effects in humans.

12.- ECOLOGICAL INFORMATION

Synthetic Amorphous Silica is virtually inert and has not known adverse effect on the environment.

Ecotoxicological Information:	Daphnia Magna EC ₀ : >1000 ppm (24-hours acute immobilization test). Rainbow Trout EC ₀ : >10000 ppm (4-days static study). Freshwater Fish EC ₀ : >10000 ppm (96-hours, static acute toxicity study). LD50 (CARP)= 10000 mg/l (72-hours)
Mobility:	Not expected to migrate
Persistence and Degradability:	Undegradable
Bioaccumulation:	Inert material
Other Adverse Effects:	None

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13.- DISPOSAL CONSIDERATIONS

Product:	Waste disposal in accordance with regulations (most probably controlled landfill).
Contaminated Packaging:	According to local regulations.
Classification under RCRA:	This classification is not applicable for this product.

14.- TRANSPORT INFORMATION

This product is not classified as dangerous for transport in accordance with the following criteria:

UN Number:	None
IMO / IMDG:	Not Dangerous Goods
RID / ADR:	Not Dangerous Goods
ICAO / IATA:	Not Dangerous Goods

Transport is not limited, and no Risk Phrase or Safety Phrase apply

15.- REGULATORY INFORMATION

SARA 313:	Synthetic Amorphous Silica is not listed on the SARA 313
Labeling According to EEC Directives:	Synthetic Amorphous Silica is not classified as dangerous according to the regulation 67/548/EEC.
Globally Harmonized System of Classification and Labelling of Chemicals (GHS)	Not a dangerous substance or mixture according to the Globally Harmonized System (GHS).
E Number:	551
FAO/WHO (JECFA):	Silicon Dioxide
FOOD CHEMICAL CODEX:	Silicon Dioxide
HARMONIZED TARIFF CODE:	2811.22.00
INCI (CTFA):	Hydrated Silica
<u>NATIONAL CHEMICAL INVENTORY LISTING:</u>	
AUSTRALIA AICS:	Synthetic Amorphous Silica 112926-00-8. Sulfuric Acid Disodium Salt 7757-82-6.
CANADA DSL / NDSL:	Silica Gel, pptd., crystalline free 112926-00-8. Sulfuric Acid Disodium Salt 7757-82-6.
CHINA IECSC:	Synthetic Amorphous Silica 112926-00-8. Sulfuric Acid Disodium Salt 7757-82-6.
EUROPA EINECS:	Silicon Dioxide 231-545-4. Sodium Sulphate 7757-82-6.
JAPAN ENCS:	Silicon Dioxide 1 – 548. Sodium Sulfate 1-501.
KOREA KECI:	Synthetic Amorphous Silica KE-32733. Sodium Sulfate KE-31609
PHILLIPINES PICCS:	Synthetic Amorphous Silica 112926-00-8. Sulfuric Acid Disodium Salt 7757-82-6.
UNITED STATES TSCA:	Silica 7631-86-9. Sulfuric Acid Disodium Salt 7757-82-6.

16.- OTHER INFORMATION

Modification of the Material Safety Data Sheet according to Regulation (EC) No. 1907/2006 of the Commission on 18 December 2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) as amended by Commission Regulation (EU) No. 453/2010.

ACGIH:	American Conference of Governmental Industrial Hygienists.
ADR:	Agreement on Dangerous Goods by Road.
AICS:	Australian Inventory of Chemical Substances.
ASTM:	American Society for Testing and Materials.
CAS:	Chemical Abstracts Service

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CFR:	Code of Federal Regulations.
CTFA:	Cosmetic, Toiletry and Fragrance Association.
DSL:	Domestic Substances List.
ECn:	Effective Concentration.
EINECS:	European Inventory of Existing Commercial Chemical Substances.
ENCS:	Existing and New Chemical Substances.
FAO:	Food and Agriculture Organization.
GHS	Global Harmonized System
HSE:	Health, Safety and Environment
IATA:	International Air Transport Association.
ICAO:	International Civil Aviation Organization.
IMDG:	International Maritime Dangerous Goods.
IMO:	International Maritime Organization.
INCI:	International Nomenclature of Cosmetic Ingredients.
JECFA:	Joint Expert Committee on Food Additives.
KECI:	Korean Existing Chemicals Inventory.
LD50:	Lethal Dose.
NDSL	Non-Domestic Substances List.
NIOSH:	National Institute for Occupational Safety and Health.
PBT:	Persistent, Bioaccumulative and Toxic.
PEL:	Permissible Exposure Limit.
PICCS:	Philippine Inventory of Chemicals and Chemical Substance.
ppm:	Parts per million.
RCRA:	Resource Conservation and Recovery Act.
RID:	Regulations Concerning the International Carriage of Dangerous Good by Rail.
SARA:	Superfund Amendment and Reauthorization Act.
TLV:	Threshold Limit Value.
TSCA:	Toxic Substances Control Act.
TWA:	Time Weighted Average
TWA:	Time Weighted Average
vPvB :	very Persistent and very Bioaccumulative.
WHO:	World Health Organization.
Phrase-R:	R36 Irritating to eyes
	R37 Irritating to respiratory system
	R38 Irritating to skin

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Revision 07
Last Revision Date: 02/03/2020

This information only concerns the above-mentioned product and does not need to be valid if used with other product(s) or in any process. The information is to our best present knowledge correct and complete and is given in good faith but without warranty. It remains the user's own responsibility to make sure that the information is appropriate and complete for his special use of this product.

END OF SDS.