

MATERIAL SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006, Article 31

Synthetic Amorphous Silica

1.- IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY

Chemical Name:	Amorphous Precipitated Silica.
Trade Names:	RUBBERSIL RS-250, RUBBERSIL RS-250 G, RUBBERSIL RS-200, RUBBERSIL RS-200 G, RUBBERSIL RS-150, RUBBERSIL RS-150 G, RUBBERSIL RS-50, RUBBERSIL RS-200 S
Chemical Family:	Silicon Dioxide. Precipitated Hydrated Amorphous Silica. Anhydrous Silicic Acid.
Use of the Substance:	White Reinforcing Filler in: Rubber Compounds, Shoes soles, Tires, Hoses, Belt Conveyors, Other Rubber Technical Articles.
Manufacturer:	Glassven-Yangzhong Silicas and Chemicals J.V.Ltd. Changwang Xi Road, Youfang Town, Yangzhong City, Jiangsu Province. CHINA (212216) Tel.: +86 511 88525968 / 88527008 E-mail: oscar.barrera@glassven.com
Emergency Telephone:	+58 244 3223747 / 321 23 53. (Monday to Friday, from 7:30am to 5:00pm- Western Time)

2.- HAZARDS IDENTIFICATION

Classification:	This product is not classified according to Regulation (EC) No. 1272/2008 This product is not classified as dangerous according to Directive 67/548/EEC.
Label Element(s):	None
Principal Routes of Exposure:	Inhalation, skin contact, eye contact.
<u>POTENTIAL HEALTH EFFECTS:</u>	
Inhalation:	Inhalation may 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.
Carcinogenic Effects:	Does not contain any substances listed by IARC, NTP, OSHA and ACGIH.
Target Organ Effects:	Lungs.
Medical Conditions Aggravated by Exposure:	Asthma, Respiratory Disorder.
<u>POTENTIAL ENVIRONMENTAL EFFECTS:</u>	No special environmental precautions required.
<u>OTHER HAZARDS:</u>	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	CLP Classification
Silicon Dioxide Anhydrous (SiO ₂)	112926-00-8	231-545-4	98.00 Min.	Not Classified
Sodium Sulfate (Na ₂ SO ₄)	7757-82-6	231-820-9	2.00 Max.	Not Classified



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.
Skin Contact: Wash skin with soap and water.
Eye Contact: Flush eyes with plenty of water. Eyelids should be held away from the eyeball to ensure thorough rinsing. Seek medical advice if irritation develops.
Ingestion: Health Injuries are not known or expected under industrial or commercial handling.
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
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 mechanically 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 should 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 should 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 VALUES:

Amorphous Silica, CAS 112926-00-8

ACGIH- TLV	10 mg/m ³ TWA
US- OSHA	80/(%SiO ₂) mg/m ³ or 20 mppcf (total dust)
NIOSH- TWA	6 mg/m ³
UK- EH 40/95	2.4 mg/m ³ TWA (respirable dust) 6 mg/m ³ TWA (inhalable dust)
Germany (DFG)- MAK	4 mg/m ³
Italy- OEL	10 mg/m ³ TWA
Spain- OEL Data	10 mg/m ³ TWA
Sweden- OEL	5 mg/m ³ / 10 mg/m ³ TWA
Switzerland- SUVA	4 mg/m ³ TWA

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.

PERSONAL PROTECTIVE EQUIPMENTS:

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 CHEMICALS PROPERTIES

Appearance:	Powder or Granular
Color:	White
Odor:	Odorless
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 (5% water suspension)
Partition Coefficient n-Octanol/ Water:	Not determined
Relative Vapor Density (Air=1):	Not applicable



Evaporation Rate: Not determined
Viscosity: Not applicable
Other Information: Volatile Matter: < 7% moisture (2 hours @ 105°C)
Impurities: contains less than 2% Na₂SO₄

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 (rat) > 5000 mg/Kg.
Eye Irritation: May cause irritation.
Skin Irritation: May dry skin and mucous membranes.
Inhalation: Powder may irritate the respiratory system.
Ingestion: May cause discomfort.
Sensitization Information: The components of this product are not known to be sensitizes with repeated or prolonged use.
Mutagenicity, Embryotoxicity and Teratogenicity: There is not evidence of mutagenic, embryotoxic, and teratogenic effects in humans.
Reproductive Toxicity: There is not evidence of 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 EC₀ : >10000 mg/L (24-hours acute immobilization test).
Rainbow Trout EC₀: >10000 mg/L (4-days static study).
Freshwater Fish EC₀: >10000 mg/L (96-hours, static acute toxicity study).
LD50 (CARP)= 10000 mg/L (72-hours)
Mobility: Not expected to migrate
Persistence and Degradability: Non-degradable
Bioaccumulation: Inert material
Other Adverse Effects: None Known

13.- DISPOSAL CONSIDERATIONS

Product: Disposal of in accordance with local, state and national regulations.
Contaminated Packaging: According to local regulations.
Further Information: RCRA: Not applicable.
European Waste Catalogue (EWC): 061399

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 substance.
RID / ADR:	Not dangerous substance.
ICAO / IATA:	Not dangerous substance.
US DOT:	Non-hazardous material.

15.- REGULATORY INFORMATION

SARA 313:	Synthetic Amorphous Silica is not listed on the SARA 313.
E Number:	551
FAO/WHO (JECFA):	Silicon Dioxide
FOOD CHEMICALS CODEX:	Silicon Dioxide
HARMONIZED TARIFF CODE (HS):	2811.22.00
INCI (CTFA):	Hydrated Silica

NATIONAL CHEMICAL INVENTORY LISTING:

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.
EUROPE EINECS:	Silicon Dioxide 231-545-4. Sodium Sulphate 231-820-9.
JAPAN ENCS:	Silicon Dioxide 1 – 548. Sodium Sulfate 1-501.
KOREA KECI:	Synthetic Amorphous Silica KE-32733. Sodium Sulfate KE-31609
PHILIPPINES PICCS:	Silicon Dioxide 112926-00-8. Sulfuric Acid Disodium Salt 7757-82-6.
UNITED STATES TSCA:	Silica 7631-86-9 (generic group: silicon dioxide). Sulfuric Acid Sodium 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.
CFR:	Code of Federal Regulations.
CLP:	Classification, Labeling and Packaging.
CTFA:	Cosmetic, Toiletry and Fragrance Association.
DFG:	Deutsche Forschungsgemeinschaft (German Research Foundation).
DOT:	Department of Transportation.
DSL:	Domestic Substances List.
ECn:	Effective Concentration.



ECC:	European Economic Community.
EINECS:	European Inventory of Existing Commercial Chemical Substances.
ENCS:	Existing and New Chemical Substances.
FAO:	Food and Agriculture Organization.
HSE:	Health, Safety and Environment.
IARC:	International Agency for Research on Cancer.
IATA:	International Air Transport Association.
ICAO:	International Civil Aviation Organization.
IECSC:	Inventory of Existing Chemical Substances in China.
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.
MAK:	Maximale Arbeitsplatzkonzentration (Maximum Workplace Concentration).
NIOSH:	National Institute for Occupational Safety and Health.
NTP:	National Toxicology Program.
OEL:	Occupational Exposure Limit.
OSHA:	Occupational Safety and Health Administration.
PBT:	Persistent, Bioaccumulative and Toxic.
PICCS:	Philippine Inventory of Chemicals and Chemical Substance.
RCRA:	Resource Conservation and Recovery Act.
RID:	Regulations Concerning the International Carriage of Dangerous Good by Rail.
SARA:	Superfund Amendment and Reauthorization Act.
USP-NF:	United States Pharmacopeia- National Formulary.
TLV:	Threshold Limit Value.
TSCA:	Toxic Substances Control Act.
TWA:	Time Weighted Average.
vPvB :	very Persistent and very Bioaccumulative.
WHO:	World Health Organization.

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Revision 02
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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 SAFETY DATA SHEET