SAFETY DATA SHEET

SILICA GEL WHITE

CAS No.: 112926-00-8

This Safety Data Sheet is issued by Suraj Chemicals as the distributor/supplier of record, based on manufacturer and published GHS / regulatory reference data for this substance. Users should also consult the specific manufacturer's SDS where available.

1. IDENTIFICATION

GHS Product identifier

SILICA GEL WHITE
Non-Indicating Silica Gel; Amorphous Silica Desiccant
CAS: 112926-00-8

Other means of identification

Not relevant

Recommended use of the chemical and restrictions on use

Relevant uses: Desiccant/drying agent for packaging, containers, instrument cases, pharmaceuticals, electronics and storage of moisture-sensitive goods. Suitable for food-contact packaging applications where a food-grade certified batch is supplied. For industrial and packaging use.

Uses advised against: All uses not specified in this section or in section 7.3.

Supplier's details

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2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

GHS:
Classification of this product has been carried out in accordance with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS). Amorphous silica gel is **not classified** as hazardous under GHS criteria based on available data.

Not classified	No hazard category applies based on standard data for amorphous silica gel, CAS 112926-00-8

GHS label elements, including precautionary statements

GHS: No pictogram/signal word required.

Hazard statements

None assigned.

Precautionary statements

P261: Avoid breathing dust.
P264: Wash hands thoroughly after handling.
P280: Wear protective gloves/eye protection when handling bulk/loose material.
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 regulations.

Other hazards which do not result in classification

This product is manufactured from amorphous silica and does not contain crystalline silica (quartz/cristobalite). Fine dust from handling loose beads may cause mechanical/nuisance irritation to eyes and respiratory tract. Small sachets are a choking hazard if swallowed by children/pets – keep out of reach. Not a PBT/vPvB substance.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substances

Chemical description: Silica Gel, Amorphous (non-indicating)

In accordance with Annex 4.3.3 of the GHS, the product contains:

Identification	Chemical Name / Classification	Concentration
CAS: 112926-00-8	Silica gel, amorphous – Not classified	>99%

To obtain more information on the hazards of the substances, consult sections 11, 12 and 16.

Mixtures

Non-applicable

4. FIRST AID MEASURES

Description of necessary first-aid measures

Request medical assistance immediately, showing the SDS of this product, if symptoms occur or persist.

By inhalation

Remove the person affected to fresh air and keep at rest.

By skin contact

Wash skin thoroughly with plenty of water and soap.

By eye contact

Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Remove contact lenses if present and easy to do. Seek medical attention if irritation persists.

By ingestion/aspiration

Silica gel beads are physiologically inert but present a choking/blockage hazard, especially in children. If swallowed, seek medical advice. Do not induce vomiting. Rinse mouth with water.

Most important symptoms/effects, acute and delayed	Mechanical irritation from dust. No specific toxic effects expected. See section 11.
Indication of immediate medical attention and special treatment needed, if necessary	Not relevant

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	**Suitable:** Product is non-combustible; use extinguishing media appropriate to the surrounding fire (water spray, foam, dry chemical powder, carbon dioxide). **Unsuitable:** None known
Specific hazards arising from the chemical	Not flammable, not explosive.
Special protective actions for fire-fighters	Wear self-contained breathing apparatus and full protective clothing in case of surrounding fire.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	**For non-emergency personnel** Avoid raising dust. Use appropriate PPE (see Section 8). **For emergency responders** Not normally required; sweep/vacuum spilled beads.
Environmental precautions	Prevent entry into drains and watercourses in bulk quantity.
Methods and materials for containment and cleaning up	Sweep or vacuum up spilled beads and place in a suitable container for disposal or reuse.
Reference to other sections	See sections 8 and 13.

7. HANDLING AND STORAGE

Precautions for safe handling

A. General precautions for safe use
Avoid generating and breathing dust. Keep sachets/containers sealed until point of use to preserve absorption capacity.

B. Technical recommendations for the prevention of fires and explosions
Non-combustible – no special fire prevention measures required.

C. Technical recommendations on general occupational hygiene
Do not eat, drink or smoke while handling loose material. Wash hands after handling.

D. Technical recommendations to prevent environmental risks
No special measures required beyond good housekeeping.

Conditions for safe storage, including any incompatibilities

A. Specific storage requirements

Minimum Temp.	5°C
Maximum Temp.	40°C
Maximum time (unopened, sealed packaging)	24 Months

B. General conditions for storage
Store in tightly sealed, moisture-proof original packaging in a cool, dry place. Once opened, reseal promptly to preserve absorption capacity.

Specific end use(s)	Except for the instructions already specified, it is not necessary to provide any special recommendation regarding the uses of this product.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

No specific occupational exposure limit is established for amorphous silica gel under the Factories Act, 1948. General nuisance dust limits (particulates not otherwise classified) of 10 mg/m³ (total dust, 8-hr TWA) are recommended as good practice for handling of loose beads.

Appropriate engineering controls

General ventilation is normally sufficient. Use local exhaust where significant dust is generated (e.g. bulk transfer/re-packing).

B. Respiratory protection
Dust mask/filtering half-mask where dust generation is possible during bulk handling.

C. Specific protection for the hands
Standard work gloves for bulk handling; not required for sealed sachet handling.

D. Eye and face protection
Safety glasses recommended when handling loose bulk material.

E. Bodily protection
Standard work clothing.

F. Additional emergency measures
Eyewash station recommended where bulk material is handled.

Environmental exposure controls
No special measures required.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	
Physical state at 20°C	Solid (granules/beads)
Appearance	Translucent hard granules/beads
Color	White / colourless (translucent)
Odor	Odorless
Odour threshold	Not relevant *
Volatility	
Boiling point at atmospheric pressure	Non-applicable (solid)
Vapour pressure at 20°C / 50°C	Not relevant *
Evaporation rate at 20°C	Not relevant *
Product Description	
Bulk density	Approx. 0.70–0.75 g/cm³
Dynamic / Kinematic viscosity	Non-applicable (solid)
Concentration	>99% SiO2
pH (5% aqueous slurry)	Approx. 4–7
Vapour density at 20°C	Not relevant *
Partition coefficient n-octanol/water 20°C	Not relevant (inorganic solid)
Solubility in water at 20°C	Practically insoluble; absorbs water (up to ~35% of own weight)
Decomposition temperature	Not applicable (thermally stable up to very high temperatures)
Melting point/freezing point	>1600°C
Flammability	
Flash Point	Non-applicable
Flammability (solid, gas)	Non-combustible
Autoignition temperature	Not relevant *
Lower / Upper flammability limit	Not relevant *
Particle Characteristics	
Median equivalent diameter	Typically 2–5 mm (bead/granule grade dependent)

** Not relevant due to the nature of the product, not providing information on the properties of its hazards.*

Other information

Explosive properties	Not explosive
Oxidising properties	Not an oxidizer
Corrosive to metals	Non-corrosive
Heat of combustion	Not relevant *
Surface tension at 20°C	Not relevant *
Refraction index	Not relevant *

10. STABILITY AND REACTIVITY

Reactivity Not reactive under normal conditions of use. Reacts with hydrofluoric acid and, at elevated temperature, with strong alkalis and molten metals.

Chemical stability Chemically stable under the indicated conditions of storage, handling and use.

Possibility of hazardous reactions Under the specified conditions, hazardous reactions are not expected.

Conditions to avoid

Shock/Friction	Contact with Air	Increase in Temperature	Sunlight	Humidity
Not applicable	Not applicable	Not applicable	Not applicable	Reduces absorption capacity/lifespan if exposed prematurely

Incompatible materials

Hydrofluoric Acid	Strong Alkalis (molten/hot)
Avoid contact	Avoid contact

Hazardous decomposition products None under normal conditions of use.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Amorphous silica gel is generally regarded as of low toxicological concern and does not contain crystalline silica.

A. Ingestion (acute effect)
Practically non-toxic; physiologically inert. Beads present a physical choking/blockage hazard, not a chemical toxicity hazard.

B. Inhalation (acute effect)
Dust may cause mechanical irritation of the respiratory tract. Not classified as a respiratory hazard.

C. Contact with skin and eyes (acute effect)
May cause mechanical/mild irritation from dust or dry granules.

D. CMR effects (carcinogenicity, mutagenicity, reproductive toxicity)
Amorphous silica is not classified as a carcinogen (distinct from crystalline silica). Classification criteria are not met based on available data.

E. Sensitizing effects
Not classified as a sensitizer.

F. Specific target organ toxicity (STOT) – single exposure
Classification criteria are not met based on available data.

G. Specific target organ toxicity (STOT) – repeated exposure
Classification criteria are not met based on available data.

H. Aspiration hazard
Not applicable (solid).

Product-specific toxicological information

Identification	Acute Toxicity	Genus
Silica gel, amorphous CAS: 112926-00-8	LD50 oral: >5000 mg/kg (practically non-toxic)	Rat

12. ECOLOGICAL INFORMATION

Not classified as hazardous to the aquatic environment.

Toxicity
Amorphous silica has very low aquatic toxicity (LC50/EC50 typically >1000 mg/L for fish/invertebrates, class data).

Persistence and degradability
Inorganic substance; biodegradability testing not applicable.

Bioaccumulative potential
Not expected to bioaccumulate.

Mobility in soil

Koc	Henry	Dry Soil	Moist Soil
Not relevant	Not relevant	Low mobility (insoluble solid)	Low mobility

Results of PBT and vPvB assessment
Non-applicable (inorganic substance)

Other adverse effects
Not described

13. DISPOSAL CONSIDERATIONS

Disposal methods
Spent/saturated silica gel may generally be disposed of as general/inert solid waste in accordance with local regulations.
Refer to national and local regulations on waste management.

14. TRANSPORT INFORMATION

Transport of dangerous goods by land (ADR 2023 / RID 2023)

14.1 UN number	Not regulated as dangerous goods
14.2 UN proper shipping name	Non-applicable
14.3 Transport hazard class(es)	Non-applicable
14.4 Packing group	Non-applicable
14.5 Environmental hazard	No
14.6 Special precautions for user	Physico-chemical properties: see section 9
14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code)	Not relevant

Transport of dangerous goods by sea (IMDG 41-22)

14.1 UN number	Not regulated as dangerous goods
14.2 UN proper shipping name	Non-applicable
14.3 Transport hazard class(es)	Non-applicable
14.4 Packing group	Non-applicable
14.5 Marine pollutant	No
14.6 Special precautions for user	Not regulated
14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code)	Not relevant

Transport of dangerous goods by air (IATA/ICAO 2024)

14.1 UN number	Not regulated as dangerous goods
14.2 UN proper shipping name	Non-applicable
14.3 Transport hazard class(es)	Non-applicable
14.4 Packing group	Non-applicable
14.5 Environmental hazard	No
14.6 Special precautions for user	Not regulated
14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code)	Not relevant

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15. REGULATORY INFORMATION

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

It is recommended to use the information included in this safety data sheet as data used in a risk evaluation of local circumstances, in order to establish the necessary risk prevention measures for the manipulation, use, storage and disposal of this product.

Other legislation

The Factories Act, 1948 (Act No. 63 of 1948), as amended by the Factories (Amendment) Act, 1987 (Act 20 of 1987)
Food Safety and Standards Act, 2006 (applicable only for food-grade certified batches)
Public Liability Insurance Act, 1991

16. OTHER INFORMATION

Legislation related to safety data sheets

This safety data sheet has been designed in accordance with Annex 4 – Guidance on the preparation of Safety Data Sheets of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

Texts of the legislative phrases mentioned in sections 2 and 3

Non-applicable – no hazard statements are assigned to this product.

Not applicable, as the product is not classified as hazardous.

Advice related to training

Minimal training is recommended to prevent industrial risks for staff using this product, in order to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

Principal bibliographical sources

The United Nations Economic Commission for Europe (UNECE); publicly available GHS classification and physicochemical reference data for amorphous silica gel (CAS 112926-00-8).

Abbreviations and acronyms

ADR: European agreement concerning the international carriage of dangerous goods by road | IMDG: International maritime dangerous goods code | IATA: International Air Transport Association | ICAO: International Civil Aviation Organisation | LD50: Lethal Dose 50

Disclaimer: The information contained in this safety data sheet is based on sources, technical knowledge and current legislation, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product; it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within Suraj Chemicals' awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

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