

## Section 1. PRODUCT IDENTIFICATION

**Product Identifiers:** Product Name: Silica Gel Desiccant Spheres with Blue Indicator

CAS number: 7631-86-9

**Product Part Numbers:** 22102, 22108A, 22110, 22110A, 22110B, 23110, 23110A

**Synonyms:** Silica gel blue, Porous form of silicon dioxide blue

**Recommended use:** Desiccant, Laboratory chemicals

**Uses advised against:** No information available

**Details of the Supplier of the Safety Data Sheet:**

**Company:** Sorbent Technologies

5955 Peachtree Corners East

Norcross, GA 30071 USA

**Emergency Telephone Number:** 1-866-767-2832

## Section 2. HAZARD IDENTIFICATION

**Emergency Overview:** Caution! May cause irritation to skin, eyes and respiratory tract.

**GHS Classification of the Substance or Mixture:**

Physical hazards: Not classified.

Health hazards: Serious eye irritation, Category 2A

Environmental hazards: Not classified.

**GHS Label Elements, including Precautionary Statements:**

Signal word: Warning



**Potential Health**

**Effects:** This product contains synthetic silica, not to be confused with crystalline silica such as quartz, diatomaceous earth or other forms naturally occurring form of amorphous silica that contain crystalline forms.

**Eyes:** May cause mild physical irritation, redness and pain.

**Skin:** May cause irritation with dryness and abrasion.

**Ingestion:** No adverse effects expected.

**Inhalation:** May cause irritation of respiratory tract due to drying and abrasive actions of dust. Coughing or shortness of breath may occur in cases of excessive inhalation.

**Chronic Effects:** Repeated exposure may cause symptoms similar to those listed acute effects. Synthetic amorphous silica does not produce silicosis.

**Aggravation of Pre-existing Conditions:** No information found.

**Precautionary statement:**

**Prevention:** Wash thoroughly after handling. Wear eye protection/face protection.

**Response:** **IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

**Storage:** Store away from incompatible materials.

**Disposal:** Dispose of waste and residues in accordance with local authority requirements.

**Carcinogenic Effects:** IARC: Not listed NTP: Not listed OSHA: Not regulated

**Other Hazards Not Otherwise Classified (HNOC):** None known.

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## Section 3. COMPOSITION/INFORMATION ON INGREDIENTS

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### Chemical Characterization:

Chemical characteristics: Amorphous silica gel with blue indicator

Ingredient	CAS No.	EC No.	%
Amorphous silica gel	7631-86-9	231-545-4	>98%
Cobalt chloride	7646-79-9	231-589-4	< 1%

Synonyms: Silica Gel Blue

Note: This is not the same as crystalline silica.

Molecular weight: 60.08 g/mol.

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## Section 4. FIRST AID MEASURES

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### Description of First Aid Measures

Skin: Wash material off skin with soap and water. Seek medical attention if irritation occurs.

Eyes: Immediately flush with copious amounts of water for 15 minutes lifting lower and upper eyelids occasionally. Remove contact lenses, if present and easy to do. Seek medical attention if irritation occurs.

Ingestion: Give one or two glasses of water to drink. Seek medical attention if gastrointestinal symptoms develop.

Inhalation: Remove to fresh air. Seek medical attention if cough or respiratory symptoms develop.

### Most Important Symptoms and Effects, both acute and delayed

Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling and blurred vision.

### Indication of any immediate medical attention and special treatment needed

Notes to Physician: Provide general supportive measures and treat symptomatically. Keep victim under observation. observation. Symptoms may be delayed.

### General Information

Ensure that medical personnel are aware of the materials involved, and take precautions to protect themselves.

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## Section 5. FIRE-FIGHTING MEASURES

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**Fire:** Not considered to be a fire Hazard.

**Explosion:** Not considered to be a fire Hazard.

### Extinguishing Media

Suitable Extinguishing Media: Foam. Dry chemicals. Carbon dioxide (CO<sub>2</sub>)

Unsuitable Extinguishing Media: Do not use water jet as an extinguisher, as this will spread the fire..

Specific hazards arising from the chemical: During fire, gases hazardous to health may be formed.

Flash Point: Not applicable.

Non-flammable: OSHA Method 16CFR1500.44 (Incorporated by reference in 29CFR1920.1200).

Flammability Limits in Air: LFL and UFL, Not applicable.

Auto ignition temperature: Not applicable.

### Protective equipment and precautions for firefighters

General fire Hazard: No unusual fire or explosion hazards noted.

Protection of firefighters: Cool containers exposed to heat with water spray and remove container from the fire area if you do so without risk.

Fire Fighting Instructions: Isolate large fires and allow to burn out. Extinguish fire using water fog, fine water spray, carbon dioxide or foam. Avoid stirring up dust clouds.

Fire Fighting Equipment: Fire fighting personnel should wear full protective equipment, including self-contained breathing apparatus (SCBA) for all inside fires and large outdoor fires.

Hazardous Combustion Products: Under certain conditions, any airborne dust be an explosion hazard.

Hazard greater as fineness increases.

Specific methods: Use standard firefighting procedure and consider the hazards of other involved materials.

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## Section 6. ACCIDENTAL RELEASE MEASURES

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### Personal Precautions, Protective Equipment and Emergency Procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Avoid contact with skin and eyes. Avoid dust formation. Avoid breathing vapors, mist or gas. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Silica may be slippery. Do not step on the spilled silica. Evacuate non-essential personnel. Wear suitable protective clothing and gloves. For personal protection, see section 13 of this SDS.

### Environmental Precautions

Avoid discharge into drains, water courses or onto the ground.

### Methods and Material for Containment and Clean-up

If a Spill or Leak Occurs: Stop the flow the flow of material, if this is without risk. Ventilate the contaminated area. Wear appropriate protective equipment and clothing during clean-up. Clean-up spills in a manner that does not disperse dust into the air. Handle in accordance with industrial hygiene and safety practices. These practices include avoiding unnecessary exposure, and removal from eyes, skin, and clothing. The product is immiscible with water and will sediment in water systems. Prevent product from entering drains. Disposal Method: Sweep up or vacuum up and shovel into suitable contains for disposal. Following product recovery, flush area with water. Spent should be disposed of in accordance with State and Federal laws. For waste disposal, see section 13 of this SDS. Container Disposal: Do not reuse empty bags or drums.

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## Section 7. HANDLING AND STORAGE

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### Precautions for Safe Handling

Handling: Use in an area provided with appropriate exhaust ventilation. Avoid prolonged contact with eyes and skin. Do not breath dust. Keep away from ignition sources. Use in well ventilated areas. Protect containers from physical damage. Wash hands after handling. Observe good industrial hygiene practices. Avoid release to the environment.

### Conditions for Safe Storage, Including any Incompatibilities

Storage: Room temperature. Store in cool, dry, ventilated area and in closed containers. Keep away from oxidizers, heat or flames. Store away form ignition sources. Do not store above 24 deg. C. Strongly hygroscopic. Storage class (TRGS 510): Non-combustible Solids

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## Section 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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### Control Parameters

Occupational Exposure Limits: See below.

Biological Limit Values: No biological exposure limits noted for the ingredients.

Component	OSHA PEL	ACGIH TLV	NIOSHI DLH
Amorphous silica gel, (7631-86-9)	80mg/m3/ %SiO2	TWA 3 mg/m3 respirable 10 mg/m3 inhalable (silica, amorphous withdrawn in 2006)	
Cobalt chloride, (7646-79-9)		0.02 mg/m3	

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ACGIH is the American Conference of Governmental Industrial Hygienists

OSHA is the Occupational Safety and Health Administration

NIOSH is the National Institute of Occupational Safety and Health

PEL is the Permissible Exposure Limits established by OSHA.

TLV is the Threshold Limit Value a term ACGIH uses to express the maximum airborne concentration of a material to which most workers can be exposed during a normal daily and weekly work schedule without adverse effects.

## Exposure Controls

Engineering Controls: Provide eye wash station. Use local exhaust to control emissions near the source. Ventilation systems should be configured to prevent exceeding the recommended or regulated exposure limits (i.e. OSHA PELs).

Eye Protection: Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU). Safety glasses with side shields are recommended for any type of handling. Where eye contact or dusty conditions may likely, dust tight goggles are recommended. Have eye washing equipment available.

Skin/Hand protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Avoid skin contact with this product. Wear appropriate dust resistant clothing. Wash contaminated clothing and clean protective equipment before reuse. Wash skin thoroughly after handling.

Full contact material: Nitrile rubber of minimum layer thickness 0.11 mm and break through time 480 minutes.

Body protection: Choose protection in relation to its type, to the concentration and the amount of any dangerous substances, and to the specific work-place. The type of protective equipment must be selected according to the concentration and of the amount of any dangerous substances at the specific workplace.

Respiratory Protection: Follow the OSHA respiratory regulations found in 29 CFR 1910.134 or European Standard EN149. Keep dust exposure to a minimum with engineering and administrative controls. Use appropriate NIOSH/MSHA approved particulate respirators if necessary. Observe respirator use limitations specified by NIOSH/MSHA or the manufacturer. Use type N95 (US) or type P1 (EN 143) dust masks for nuisance levels of dust.

## General Industrial Hygiene Considerations

Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco. Safety shower and eye wash should be available close to work areas.

## Environmental Exposure Controls

No special environmental precautions required.

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## Section 9. PHYSICAL AND CHEMICAL PROPERTIES

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### Information on Basic Physical and Chemical Properties

Physical State:	Solid
Appearance:	Blue spherical beads
Odor:	Odorless
Odor Threshold:	Not available
pH:	3—8 (5% slurry)
Melting Point/Range:	1598 deg. C
Boiling Point/Range:	1608 deg. C
Flash Point:	Not applicable
Evaporation Rate:	Not applicable
Flammability (solid, gas);	Not applicable
Flammability or Explosive Limits	
Upper:	No data available
Lower:	No data available
Vapor Pressure:	Not applicable
Vapor Density:	Not applicable
Relative Density:	2.20 at 25 deg. C (water =1) Approximate
Solubility (water):	Insoluble
Solubility (solvents):	Insoluble
Partition Coefficient; n-octanol/water:	Not applicable
Autoignition Temperature:	No information available
Decomposition Temperature:	No information available
Viscosity:	Not applicable
Bulk density:	0.5 to 0.8 g/m <sup>3</sup>
Explosive properties:	Not explosive
Oxidizing properties:	Not oxidizing

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## Section 10. STABILITY AND REACTIVITY

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### Reactivity

None known based on the information available.

### Chemical Stability

This product is stable under the specified conditions of storage, shipment and use. Avoid storing at high temperatures or in direct sunlight. Do not store above 24 deg. C.

### Possibility of Hazardous Reactions

No data available.

### Conditions to Avoid

Exposure to moisture, extreme heat, and incompatibles.

### Incompatible Materials

Reacts with hydrogen fluoride, fluoride, oxygen difluoride, chlorine trifluoride, strong acids, strong bases and oxidizers.

### Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating gases and vapors such as silicon oxides.

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## Section 11. TOXICOLOGICAL INFORMATION

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### Information on Toxicological Effects

#### Acute Toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Silicon dioxide	>5000 mg/kg (rat) IUCLID (2000)	>5000 mg/kg (rabbit)	>0.139 mg/l/4h IUCLID (2000)
Cobalt chloride	418 mg/kg (rat)	No data available	No data available

Toxicologically Synergistic Products: No information available

#### Delayed and Immediate Effects as well as Chronic Effects from Short and Long Term Exposure

Irritation: Rabbit irritating.

Sensitization: Over 10 years exposure, worker did not have any skin sensitization.

**Carcinogenicity** Table below indicates if each agency has listed any ingredient as a Carcinogen.

Component	CAS-No.	IARC	NTP	ACGIH	OSHA
Amorphous silica gel	7631-86-9	Not listed	Not listed	Not listed	Not listed
Cobalt chloride	7646-79-9	Group 2B	Not listed	Not listed	Not listed

**Mutagenic Effects:** Animal testing did not show any mutagenic effects.

**Reproductive Effects:** Animal testing did not show any hazardous effects.

**Developmental Effects:** No information available.

**Teratogenicity:** No information available.

**Specific Target Organ Toxicity (STOT)-single exposure:** None known.

**Specific Target Organ Toxicity (STOT)-repeated exposure:** None known.

**Aspiration:** No information available

**Symptoms / Effects, Both Acute and Delayed:** No information available.

**Endocrine Disruptor Information:** No information available.

**Other Adverse Effects:** The toxicological properties have not been fully investigated.

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## Section 12. ECOLOGICAL INFORMATION

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### Toxicity

No toxicity limit of solubility. Do not empty into drains.

Ingredient	Test	Result	Species	Exposure
Amorphous silica	LC50/96h/fish	>10000 mg/l	Fish	96h
Amorphous silica	EC50/24h/daphnia	=1000 mg/l	Daphnia magna	24h
Amorphous silica	EC50/72h/algae	>10000 mg/l	Algae	72h
Cobalt chloride	LC50/96h/Carp	0.33 mg/l	Carp	96h
Cobalt chloride	EC50/24h/daphnia	1.1 to 1.6 mg/l	Daphnia magna	48h
Cobalt chloride	EC50/72h/algae	0.52 mg/l	Algae	96h
Cobalt chloride	Mortality NOEC	<0.05 mg/l	water flea	7 day

### Persistence/ Degradability

No information available.

### Bioaccumulation Potential

No data available.

### Mobility in Soil

No information available.

### Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

### Other Adverse Effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.  
Can be toxic to aquatic life.

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## Section 13. DISPOSAL CONSIDERATIONS

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### Disposal Methods

Product: Collect and reclaim or dispose in sealed containers at a licensed or waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Waste from Residues/unused products: Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner.

Contaminated Packaging: Since emptied containers may retain product residue, follow label warnings even after container is emptied. Local regulations may be more stringent than state or federal requirements. Empty containers should be taken to an approved waste handling site for recycling or disposal.

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## Section 14. TRANSPORTATION INFORMATION

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Land: **DOT (US):** Not regulated  
**ADR/RID (EU):** Not regulated  
**TDG (Canada):** Not regulated

Water: **IMO/IMDG:** Not regulated  
Air: **IACO/IATA:** Not regulated

### Special Precautions for User

No information available

## Section 15. REGULATORY INFORMATION

### Safety, Health and Environmental Regulations/ Legislation Specific for the Substance or Mixture International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	IECSC	KECL
Amorphous silica	X	X	-	235-545-4	-		X	X	X	X	X
Cobalt chloride	X	X	-	231-589-4	-		X	X	X	X	X

X indicates listed (yes)

- indicates not listed (no)

DSL—Canada

NDSL—Canada

EINECS—European Union

IECSC—China

KECI—Korea Existing Chemicals Inventory

MITI—Japan Ministry of International Trade and Industry

ENCS—Japan Existing and New Chemical Substances

PICCS—Philippines Inventory of Chemical and Chemical Substances

### U.S. Federal Regulations

TSCA: CAS# 7631-86-9; 7646-79-9 is listed on the TSCA inventory

CERCLA Hazardous Substances and Corresponding RQs: None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances: None of the chemicals in this product have a TPQ.

SARA Codes: CAS# 7631-86-9; 7646-79-9

SARA 311/312 Hazardous Categorization:

Acute Health Hazard: Yes

Chronic Health Hazard: Yes

Fire Hazard: No

Sudden Release of Pressure: No

Reactive Hazard: No

SARA Section 313: Cobalt chloride 7646-79-9

Clean Air Act:

This material does not contain any hazardous air pollutants, Class 1 Ozone depletors or Class 2 Ozone depletors.

### U.S. Department of Homeland Security (DHS)

This product does not contain any DHS chemicals.

### States Right-to-Know

Amorphous silica CAS# 7631-86-9; 7646-79-9

California Prop 65: Not listed. This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

Massachusetts: Listed.

New Jersey Right to Know: Listed

Pennsylvania: Listed.

Florida: Listed

Rhode Island: Not listed

Illinois: Not listed

Connecticut - Hazardous Air pollutants: Not listed

### Canadian Classification

WHMIS: D2b Toxic materials.

DSL: Listed.

**EEC Council Directives relating to the classification, packaging, and labeling of dangerous substances and preparations.**

Risk and Safety Phrases: S22: Do not breath dust  
S24/25: Avoid contact with skin and eyes.  
R36: Irritating to eyes.

### International Regulations

EINECS Silica Gel 231-545-4

DSCL (EEC) R36/37/38—Irritating to eyes, respiratory system and skin.

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## Section 16. OTHER INFORMATION

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### **NFPA (National Fire Protection Association) Rating (USA):**

Health : 2  
Flammability: 0  
Instability: 0  
Others: none

### **HMIS (Hazardous Materials Identification System )Rating (USA):**

Health Hazard: 2  
Chronic Health Hazard: \*  
Flammability: 0  
Physical Hazard: 0  
Personal Protection: E (safety glasses, gloves, dust respirator)

0 = Minimal hazard, 1 = Slight hazard, 2 = Moderate hazard, 3 = Severe hazard, 4 = Extreme hazard

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*SDS REVISION SUMMARY: Revision 001 11/13/2024 replaces revision 000 dated 05/30/2019.*

*This document has been updated to comply with the U.S. OSHA HazCom 2012 Standard replacing the current Legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)*