

MSDS SHEET FOR DESSICANT BEADS

1. PRODUCT IDENTIFICATION

Name: Blue Silica Gel
Synonyms: Silica, amorphous; Silica, precipitated and gel (CAS # 112926-00-8) (OSHA)
CAS No: Not applicable
Molecular Weight: Not applicable
Chemical Formula: SiO₂, XH₂O + CoCl₂
Product Codes: See detail drawing

2. COMPOSITION/INFORMATION on INGREDIENTS

<u>Ingredient</u>	<u>CAS NO</u>	<u>Percent</u>	<u>Hazardous</u>	<u>R Phrases</u>
Silica Gel	63231-67-4	> 99.7%	Yes	
Cobalt Chloride	7646-79-9	< 0.3%	Yes	R22,R36,R42/43

3. HAZARDS IDENTIFICATION

Emergency Overview

Toxic (See hazard warning label)

Safety Data Ratings (Provided here for your convenience)

Health rating: Moderate

Flammability Rating: None

Reactivity Rating: None

Contact Rating: Slight

Lab Protective Equip: Goggles, lab coat, vent hood, proper gloves

Storage Color Code: Orange (General Storage)

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

Inhalation: May cause dryness and irritation to mucous membranes, nose, and throat.

Symptoms:

May include coughing, sore throat and wheezing.

Ingestion: No adverse effects expected

Skin Contact: May cause irritation with dryness and abrasion.

Eye Contact: May cause irritation, redness and pain.

Chronic Exposure: Repeated exposure may cause symptoms similar to those listed for acute effects.

Synthetic amorphous silica does not produce silicosis> Prolonged exposure to cobalt has been shown to cause cancer in laboratory animals.

Aggravation of Pre-existing Conditions: No information found.

4. FIRST AID MEASURES

Inhalation: Move to fresh air. Get immediate medical attention for any breathing problems.

Ingestion: Drink several glasses of water to dilute. If large amounts were swallowed seek immediate medical attention.

Skin Contact: Immediately flush skin with soap and water for at least 15 minutes. Remove contaminated clothes and shoes. Wash clothing before reusing. Thoroughly clean shoes before reusing. Seek immediate medical attention if irritation develops.

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eye lids occasionally. Seek immediate medical attention if irritation persists.

5. FIRE FIGHTING MEASURES

Fire: Not considered to be a fire hazard.

Explosion: Not considered to be an explosion hazard.

Fire Extinguishing Media: Use any means suitable for extinguishing surrounding fire.

Special information: Use protective clothing and breathing equipment appropriate for the surrounding fire.

6. ACCIDENTAL RELEASE MEASURES

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Sweep up and containerize for reclamation or disposal. Vacuuming or wet sweeping may be used to avoid dust dispersal. Regulations require reporting spills and releases to soil, water and air in excess of reportable quantities.

7. HANDLING AND STORAGE

Keep in a tightly closed container, stored in a cool, dry, ventilated area and labeled accordingly. Protect against physical damage. When pouring into a container of flammable liquid, ground both containers electrically to prevent a static electric spark. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

Airborne Exposure Limits:

Silica (synthetic, amorphous):

- OSHA Permissible Exposure Limit (PEL)
- 80/ (%SiO₂) mg/m³ (TWA) for amorphous silica, including natural diatomaceous earth.
- ACGIH Threshold Limit Value (TLV) - 10 mg/m³ (TWA) for amorphous precipitated silica and amorphous silica gel.

For Inorganic Cobalt Compounds:

- ACGIH Threshold Limit Value (TLV) – 0.02 mg/m³ (TWA) as Co, A3: Animal carcinogen.

Ventilation Systems: A system of local and /or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, Industrial ventilation. A manual of Recommended practices, most recent edition, for details.

Personal Respirators: If the exposure limit is exceeded, a half –face dust/mist respirator must be worn suitable for the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest.

Warning: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Respirators must meet the requirements of European Standard EN149 FF3SL. Suitable for use under COSHH, CAW, CLAW and IRR.

Skin Protection: Wear protective gloves and clean body-covering clothing.

Eye Protection: Use chemical safety goggles. Maintain eye wash fountain.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Blue crystals.

Odor: Odorless

Solubility: Silica gel base is insoluble in water: cobalt chloride may leach out.

Specific Gravity: 2.1

PH: 5.5-9.0 (in 5% slurry) %

Volatiles by volume @ 21° C (70° F): 0

Boiling Point: No information found

Melting Point: No information found

Vapor density: (Air=1): No information found

Vapor pressure: (mm Hg): No information found

Evaporation Rate (BuAc=1): No information found

10. STABILITY AND REACTIVITY

Stability: Stable under ordinary conditions of use and storage.

Hazardous Decomposition Products: Oxides of carbon and silicone may be formed when heated to decomposition.

Hazardous Polymerization: Will not occur.

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

Conditions to avoid: Moisture, extreme heat and incompatibles.

11. TOXICOLOGICAL INFORMATION

Toxicological Data: no LD50/LC50 information found relating to normal routes of occupational exposure.

Carcinogenicity: Cobalt and its compounds have been shown to cause cancer in laboratory animals.

12. ECOLOGICAL INFORMATION

Environmental Fate: For Silica Gel (synthetic amorphous): When released into the soil, the material is not expected to biodegrade. When released into water, this material is not expected to biodegrade.

Environmental Toxicity: For Silica Gel (synthetic amorphous): This material is not expected to be toxic to aquatic life.

13. DISPOSAL CONSIDERATIONS

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. Local disposal regulation may differ from national disposal regulations.

14. TRANSPORT INFORMATION

Not regulated.

15. REGULATORY INFORMATION

-----\ Chemical Inventory Status- Part 1 \-----

Ingredient	EC
Silica Gel (63231-64-4)	NO
Cobalt (II) Chloride (7646-79-9)	NO

-----\Federal, State & International Regulations – Part 1 \-----

	--SARA 302--		----SARA 313 ----	
Ingredient	RQ	TPQ	List	Chemical
Catg.				
Silica Gel (63231-67-4)	No	No	No	No
Cobalt (II) Chloride (7646-79-9)	No	No	No	Cobalt compound

-----\Federal, State & International Regulations – Part 2 \-----

	--RCRA--		--TSCA--	
Ingredient	CERCLA	261.33	8 (d)	
Silica Gel (63231-67-4)	No	No	No	
Cobalt (II) Chloride (7646-79-9)	1	No	No	

Poison Schedule: No information found

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

EC Classification: Carcinogenic

R Phrases R 49 May cause cancer by inhalation R42/43 may cause sensitization by inhalation and skin contact.

S Phrases: S22-Do not breathe dust.

S53-Avoid exposure – obtain special instructions before use.

S45-In case of accident or if you feel unwell, seek medical attention.

S60- This material and /or its container must be disposed of as hazardous waste.

S2- Keep out of reach of children.





EINECS Listing: Preparation – all components listed

16. OTHER INFORMATION

Label Hazard Warning: Toxic

Label Precautions:

Avoid contact with eyes, skin and clothing

Avoid breathing dust.

Keep container closed.

Use with adequate ventilation.

Wash thoroughly after handling.

Label First Aid: If inhaled, move to fresh air. Get medical attention of any breathing difficulty. In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. Get medical attention if irritation develops or persists.

Product use: Transformer Breathers, Tank Vent Dryers, Drum Vent Dryers, Air Drying Applications and Laboratory Reagent.