

**SAFETY DATA SHEET**

EFFECTIVE DATE:	May 29, 2015
SDS NUMBER:	M75

SECTION 1 – PRODUCT AND COMPANY INFORMATION

Product Name: SILICA GEL, INDICATING

Product Use: Desiccant, Absorbent

Grades: Silica gel, indicating

Synonyms: Amorphous silica gel, SiO₂, silicon dioxide (amorphous)

Company: Multisorb Technologies

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SECTION 2 – HAZARD IDENTIFICATION

Emergency Overview:

A blue to pink granular material. The silica gel is not combustible. This material is classified as a hazardous mixture according to the Global Harmonized System (GHS).

Pictogram



Signal word

Danger

OSHA Hazards

Carcinogen, Target Organ Effect

GHS classification of the substance or mixture:

Carcinogenicity (Category 1B)
 Reproductive toxicity (Category 1B)
 Acute aquatic toxicity (Category 2)
 Chronic aquatic toxicity (Category 3)

GHS label elements, including precautionary statements:

H350 May cause cancer
 H360F May damage fertility
 H401 Toxic to aquatic life
 H412 Harmful to aquatic life with long lasting effects.

P201 Obtain special instructions before use
 P202 Do not handle until all safety precautions have been read and understood.
 P273 Avoid release to the environment
 P280 Wear protective gloves
 P281 Use personal protective equipment as required.
 P308 + P313 If exposed or concerned: Get medical advice / attention.
 P405 Store locked up.
 P501 Dispose of contents/ container in accordance with local / regional / national / international regulations

Hazardous not otherwise classified (HNOC) or not covered by GHS: None

Potential Health Effects:

Eyes: Dust and or product may cause eye discomfort and irritation seen as tearing and reddening.

Skin: The dust may cause drying of the skin. Silica gel may get hot enough to burn skin when it absorbs moisture rapidly. Use an excess of water to cool the silica gel.

Ingestion: Ingestion is unlikely, however, get medical attention.

Inhalation: Slight irritation is possible but none is expected.

Medical Effects Generally Aggravated by Exposure: Respiratory ailments.

Chronic Effects/Carcinogenicity: May cause eye, skin and mucous membrane irritation and drying.

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT NAME	CAS NUMBER	% BY WEIGHT	EC #	ANNEX #
Indicating silica gel containing cobalt chloride as the moisture indicator	-	100% for the combination	-	-
Synthetic amorphous precipitated silica gel (SiO ₂)	112926-00-8	99.5 – 99.9 %	231-545-4	Not Listed
Cobalt chloride	7646-79-9	.5 % or less	231-589-4	027-004-00-5 Acute Tox.4; Eye Dam. 1; Resp. Sens. 1; Skin Sens. 1; Muta. 2; Carc. 1B; Repr. 1B; Aquatic Acute 1; Aquatic Chronic 1; H302, H317, H318, H334, H341, H350, H360, H410 See section 16 for the text of H-codes(s) and P-phrases(s) mentioned in this section.
This SDS contains valuable information critical to the safe handling and proper use of this product. This SDS should be retained and available for employees and other users of this product.				

SECTION 4 – FIRST AID MEASURES

- Eyes:** Rinse eyes well with water while lifting the eye lids. If irritation persists, consult a physician.
- Skin:** Wash affected area with soap and water.
- Ingestion:** Ingestion is unlikely, however, if it occurs. Get medical attention.
- Inhalation:** Remove the affected person to fresh air and get medical attention if necessary.
- Notes to Physician:** Not applicable

SECTION 5 – FIRE FIGHTING MEASURES

- Flammable Properties:** Not flammable
- Flash Point:** Not applicable **Method:** Not applicable
- Flammable Limits:** Not flammable
- **Lower Flammability Limit:** Not applicable
 - **Upper Flammability Limit:** Not applicable
- Auto-ignition Temperature:** Not applicable
- Hazardous Combustion Products:** Not applicable
- Extinguishing Media:** Use extinguishing media that is appropriate for the surrounding fire.
Silica gel is not combustible.
- Fire Fighting Instructions:** The silica gel is not combustible.
- Unusual Fire and Explosion Hazards:** None

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Spill: Sweep or vacuum up and place the spilled material in a waste disposal container.
Wash with soap and water after handling. Refer to Section 8 for personal protective equipment.

SECTION 7 – HANDLING AND STORAGE

Handling: Minimize contact between the worker and the material.
Practice good hygienic work practices.

Storage: Store in a cool, dry location. Keep in sealed containers away from moisture.
The silica gel will readily adsorb moisture.

Incompatibility: Water, fluorine, oxygen difluoride, chlorine trifluoride

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Remove the affected person to fresh air and get medical attention if necessary.

Respiratory Protection: Use NIOSH approved respirator when the air quality levels exceed the TLV's.

Skin Protection: Protective gloves

Eye Protection: Safety glasses

EXPOSURE LIMITS			
COMPONENT NAME	OSHA PEL	ACGIH TLV	OTHER RECOMMENDED LIMITS
Silica gel, amorphous, precipitated and gel	20 mppcf or $\frac{80 \text{ mg}}{\text{m}^3}$ % SiO ₂	Not Applicable	NIOSH TWA $6 \text{ mg} / \text{m}^3$

Switzerland

TWA $4 \text{ mg} / \text{m}^3$ (MAK) (inhalable dust)

Austria

TWA $4 \text{ mg} / \text{m}^3$ (MAK) (inhalable fraction)

Belgium

TWA $10 \text{ mg} / \text{m}^3$

Bulgaria

TWA $10 \text{ mg} / \text{m}^3$ (inhalable fraction)

Finland

TWA $5 \text{ mg} / \text{m}^3$ (silicon dioxide amorphous)

Poland

TWA $10 \text{ mg} / \text{m}^3$ (inhalable fraction)

TWA $2 \text{ mg} / \text{m}^3$ (respirable fraction)

Canada – British Columbia

TWA $4 \text{ mg} / \text{m}^3$ (total)

TWA $1.5 \text{ mg} / \text{m}^3$ (respirable)

Canada – New Brunswick

TWA $10 \text{ mg} / \text{m}^3$

Canada – Ontario

TWA $10 \text{ mg} / \text{m}^3$

Canada – Quebec

TWA $6 \text{ mg} / \text{m}^3$ (respirable dust)

Canada – Saskatchewan

STEL $20 \text{ mg} / \text{m}^3$

TWA $10 \text{ mg} / \text{m}^3$

Exposure Limits			
COMPONENT NAME	OSHA PEL	ACGIH TLV	OTHER RECOMMENDED LIMITS
Cobalt chloride (Cobalt and inorganic compounds as Co)	TWA .1 mg / m ³ (metal dust and fume)	TWA .02 mg / m ³	NIOSH TWA .05 mg / m ³ (metal dust and fume)

Croatia

TWA .1 mg / m³ (as Co)

Finland

TWA .02 mg / m³ (as Co)

Spain

TWA .02 mg / m³ (as Co)

Sweden

LLV .02 mg / m³ (total dust, as Co)

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Blue to pink granular material	VAPOR DENSITY:	Not applicable
ODOR:	None	BOILING POINT:	Not applicable
PHYSICAL STATE:	Solid granule	MELTING POINT:	Not applicable
PH:	Not applicable	SOLUBILITY:	Insoluble in water
VAPOR PRESSURE:	Not applicable	SPECIFIC GRAVITY:	Not applicable
FLAMMABLE:	Not applicable	AUTO-IGNITION POINT:	Not applicable
FLASH POINT:	Not applicable	FLAMMABLE LIMITS:	Not applicable
ODOR THRESHOLD:	None	EVAPORATION RATE:	Not applicable
PARTITION COEFFICIENT N-OCTANOL / WATER:	Not applicable	DECOMPOSITION TEMPERATURE:	Not known
VISCOSITY:	Not applicable		

SECTION 10 – STABILITY AND REACTIVITY

Stability: Stable

Conditions to avoid: Moisture and high humidity environments will reduce the desiccating capacity.

Incompatibility: Water, fluorine, oxygen difluoride, chlorine trifluoride

Hazardous Decomposition Products: None

Hazardous Polymerization: Will not occur

Reactivity: None

SECTION 11 – TOXICOLOGICAL INFORMATION

IARC: Amorphous silica gel IARC - 3 (Unclassifiable as to Carcinogenicity in Humans)
Cobalt chloride IARC – 2B – (Possibly carcinogenic to humans)

Animal Toxicology: Tests for DOT Hazard classification
(Tests Conducted on finely ground silica gel)

1 - hour LC50 (rat) > 2 mg / l
48 - hour oral LD50 (rat) est. > 31,600 mg / kg
48 - hour dermal LD50 (rabbit) est. > 2,000 mg / kg
Considered an ocular irritant

Human Toxicology: Silica gel is a synthetic amorphous silica not to be confused with crystalline silica. Epidemiological studies indicate low potential for adverse health effects. In the activated form, silica gel acts as a desiccant and can cause a drying irritation of the mucous membranes and skin in cases of severe exposure. Multisorb Technologies knows of no medical conditions that are abnormally aggravated by exposure to silica gel.

SECTION 12 – ECOLOGICAL INFORMATION

Environmental: Not available

Ecotoxicity: *Freshwater Algae Data 72 hour EC50 Selenastrum capricomutum: 440mg / L
* Freshwater Fish Species Data 96 hour LC50Brachydanio rerio: 5,000 mg / L (static)
* Water Flea Data 48 hour EC50 Ceriodaphnia: 7,600 mg / L

*Silica, amorphous

Persistence and degradability: Not available

Bioaccumulative potential: Not available

Mobility in soil: Not available

Other adverse effects: Not available

SECTION 13 – DISPOSAL INFORMATION**Disposal Information:**

Materials of a hazardous nature that contact the product during normal use may be retained on the product. The user of the product must identify the hazards associated with the retained material in order to assess the waste disposal options. Dispose according to federal, state, provincial and local regulations.

SECTION 14 – TRANSPORTATION INFORMATION

U.S. Department of Transportation Shipping Name: Not classified as a hazardous material. Not regulated.

SECTION 15 – REGULATORY INFORMATION (NOT MEANT TO BE ALL INCLUSIVE - SELECTED REGULATIONS REPRESENTED)

TSCA Listed: Yes

OSHA: See section 8

NIOSH: See section 8

Animal tests conducted in 1976 - 1978. 18 month exposure at 15 mg / m³ showed silica deposition in respiratory macrophages and lymph nodes, minimum lung impairment, no silicosis.

ACGIH: See section 8

DOT: Not classified as a hazardous material.

SECTION 16 – OTHER INFORMATION**Text of H-codes(s) and P-phrase(s) mentioned in section 3**

Acute Tox.	Acute toxicity
Aquatic acute	Acute aquatic toxicity
Aquatic Chronic	Chronic aquatic toxicity
Carc.	Carcinogenicity
Eye Dam.	Serious eye damage
H302	Harmful if swallowed
H317	May cause allergic skin reaction
H318	Causes serious eye damage
H334	May cause allergy or asthma symptoms or breathing difficulties if Inhaled.
H341	Suspected of causing genetic defects
H350	May cause cancer
H360	May damage fertility or the unborn child
H410	Very toxic to aquatic life with long lasting effects
Muta.	Germ cell mutagenicity
Repr.	Reproductive toxicity
Resp. Sens.	Respiratory sensitization
Skin Sens.	Skin sensitization

HMIS – HAZARDOUS MATERIALS IDENTIFICATION SYSTEM

HMIS RATING	
Health:	1
Flammability:	0
Physical:	0

The HMIS rating information is intended solely for the use of individuals trained in the HMIS rating system.

The NPCA specifically recommends that preparers of SDS should not place HMIS PPE designation codes on the SDS or labels that leave the facility as it is not known the conditions under which the customer will use this product.

Date of Preparation: May 29, 2015

This data and recommendations presented in this data sheet concerning the use of our product and the materials contained therein are believed to be correct but does not purport to be all inclusive and shall be used only as a guide. However, the customer should determine the suitability of such materials for his purpose before adopting them on a commercial scale. Since the use of our products is beyond our control, no guarantee, expressed or implied is made, and no responsibility assumed for the use of this material or the results to be obtained there from. Information on this form is furnished for the purpose of compliance with Government Health and Safety Regulations and shall not be used for any other purposes. Moreover, the recommendations contained in this data sheet are not to be construed as a license to operate under, or a recommendation to infringe any existing patents, nor should they be confused with state, municipal or insurance requirements, or with national safety codes.