

Material Safety Data Sheet

Silica Gel Desiccant Grade

ACC# 45402

Section 1 - Chemical Product and Company Identification

MSDS Name: Silica Gel Desiccant Grade

Catalog Numbers: S160-10, S160-200LB, S160-212, S160-25LB, S160-500, S160-5LB, S161-10, S161-200LB, S161-212, S161-50, S161-500, S162-212, S162-500, S689-212, S689-5LB, S707-212, S707-5LB

Synonyms: Amorphous silica; Synthetic amorphous silica; amorphous silicon dioxide; Silica gel

Company Identification:

Fisher Scientific
1 Reagent Lane
Fair Lawn, NJ 07410

For information, call: 201-796-7100

Emergency Number: 201-796-7100

For CHEMTREC assistance, call: 800-424-9300

For International CHEMTREC assistance, call: 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
7631-86-9	Silica, amorphous	>99	231-545-4
7646-79-9	Cobaltous chloride	0.9	231-589-4

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: clear blue solid.

Warning! Possible cancer hazard. May cause cancer based on animal data. May cause irritation.

Target Organs: None.

Potential Health Effects

Eye: Dust may cause mechanical irritation. Exposure to solid may cause pain and redness.

Skin: Dust causes mechanical irritation. Excessive drying of the skin may result from repeated or prolonged contact.

Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea. Expected to be a low ingestion hazard.

Inhalation: Dust is irritating to the respiratory tract.

Chronic: Possible cancer hazard based on tests with laboratory animals. Cobalt dichloride is an IARC Group 2B chemical.

Section 4 - First Aid Measures

Eyes: Get medical aid. Immediately flush eyes with plenty of water for at least 15 minutes.

Skin: Get medical aid if irritation develops or persists. Flush skin with plenty of soap and water.

Ingestion: Never give anything by mouth to an unconscious person. Get medical aid. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Extinguishing Media: Substance is noncombustible; use agent most appropriate to extinguish surrounding fire.

Flash Point: Not applicable.

Autoignition Temperature: Not applicable.

Explosion Limits, Lower: Not available.

Upper: Not available.

NFPA Rating: (estimated) Health: 2; Flammability: 0; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up or absorb material, then place into a suitable clean, dry, closed container for disposal. Avoid generating dusty conditions. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation.

Storage: Store in a cool, dry place. Keep containers tightly closed.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Silica, amorphous	none listed	6 mg/m ³ TWA 3000 mg/m ³ IDLH	none listed
Cobaltous chloride	0.02 mg/m ³ TWA (as Co) (listed under Cobalt, inorganic compounds).	none listed	none listed

OSHA Vacated PELs: Silica, amorphous: No OSHA Vacated PELs are listed for this chemical. Cobaltous chloride: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear dust-proof goggles.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Solid

Appearance: clear blue

Odor: odorless

pH: 2.3-7.4 (suspension)

Vapor Pressure: Negligible

Vapor Density: 2.08

Evaporation Rate: Not available.

Viscosity: Not available.

Boiling Point: 2230 deg C

Freezing/Melting Point: 1710 deg C

Decomposition Temperature: Not available.

Solubility: Insoluble in water.

Specific Gravity/Density: 2.2-2.6

Molecular Formula: SiO₂

Molecular Weight: 60.0843

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Incompatible materials, dust generation.

Incompatibilities with Other Materials: Fluorides, hydrochloric acid, strong oxidizers, vinyl acetate.

Hazardous Decomposition Products: Silicon dioxide.

Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#:

CAS# 7631-86-9: EU8655000; VV7565000

CAS# 7646-79-9: GF9800000

LD50/LC50:

CAS# 7631-86-9:

Draize test, rabbit, eye: 25 mg/24H Mild;

CAS# 7646-79-9:

Oral, mouse: LD50 = 80 mg/kg;

Oral, rat: LD50 = 80 mg/kg;

Oral, rat: LD50 = 418 mg/kg;

Carcinogenicity:

CAS# 7631-86-9: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 7646-79-9:

- **ACGIH:** A3 - Confirmed animal carcinogen with unknown relevance to humans (listed as 'Cobalt, inorganic compounds').
- **California:** Not listed.
- **NTP:** Not listed.
- **IARC:** Group 2B carcinogen (listed as Soluble cobalt (II) salts).

Epidemiology: Amorphous silica has been tested for carcinogenicity in a variety of animal studies by a number of routes. Most tests were either negative or inadequate because of poorly defined physiochemical characteristics of the silica.

Teratogenicity: No data available.

Reproductive Effects: No data available.

Mutagenicity: No data available.

Neurotoxicity: No data available.

Other Studies:

Section 12 - Ecological Information

Ecotoxicity: Water flea Daphnia: >1000mg/l; 24 Hrs.; OECD 202 No data available.

Environmental: Because of its low water solubility, amorphous silica gel is expected to cause little oxygen depletion in aquatic systems. It is expected to have a low potential to affect aquatic organisms. It is expected to be resistant to biodegradation but is unlikely to bioconcentrate.

Physical: No information available.

Other: No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	Not regulated as a hazardous material	No information available.
Hazard Class:		
UN Number:		
Packing Group:		

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 7631-86-9 is listed on the TSCA inventory.

CAS# 7646-79-9 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

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 # 7646-79-9: immediate, delayed, reactive.

Section 313

This material contains Cobaltous chloride (listed as Cobalt compounds), 0.9%, (CAS# 7646-79-9) which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

Clean Air Act:

CAS# 7646-79-9 (listed as Cobalt compounds) is listed as a hazardous air pollutant (HAP).

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 7631-86-9 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

CAS# 7646-79-9 can be found on the following state right to know lists: Pennsylvania, (listed as Cobalt compounds), Minnesota, (listed as Cobalt, inorganic compounds).

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations European Labeling in Accordance with EC Directives

Hazard Symbols:

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Risk Phrases:

R 49 May cause cancer by inhalation.
R 52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases:

S 24/25 Avoid contact with skin and eyes.
S 53 Avoid exposure - obtain special instructions before use.

WGK (Water Danger/Protection)

CAS# 7631-86-9: 0
CAS# 7646-79-9: 2

Canada - DSL/NDSL

CAS# 7631-86-9 is listed on Canada's DSL List.
CAS# 7646-79-9 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of Not controlled..

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

CAS# 7631-86-9 is listed on the Canadian Ingredient Disclosure List.
CAS# 7646-79-9 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 11/11/1997

Revision #5 Date: 10/03/2005

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.