

SAFETY DATA SHEET

Preparation Date: 11/19/2019

Revision date 11/19/2019

Revision Number: G1

1. IDENTIFICATION

Product identifier

Product code: S3421
Product Name: SILICA GEL, INDICATING, GRADE 48

Other means of identification

Synonyms: Silicon Dioxide, chemically prepared.
 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

CAS #: 7631-86-9
RTECS # Not available
CI#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: No information available.
Uses advised against No information available

Supplier: Spectrum Chemical Mfg. Corp
 14422 South San Pedro St.
 Gardena, CA 90248
 (310) 516-8000

Order Online At: <https://www.spectrumchemical.com>
Emergency telephone number Chemtrec 1-800-424-9300
Contact Person: Tom Tyner (USA - West Coast)
Contact Person: Ibad Tirmiz (USA - East Coast)

2. HAZARDS IDENTIFICATION

Classification

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Germ cell mutagenicity	Category 2
Carcinogenicity	Category 1B
Reproductive toxicity	Category 1B

Label elements

Danger

Hazard statements

Suspected of causing genetic defects
 May cause cancer
 May damage fertility or the unborn child



Hazards not otherwise classified (HNOC)

Not Applicable

Other hazards

Not available

Precautionary Statements - Prevention

Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

IF exposed or concerned: Get medical attention

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents and container to an approved waste disposal plant in accordance with local, regional, national and international regulations as applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No	Weight-%
Silicon Dioxide (Amorphous)	7631-86-9	>99
Cobaltous chloride	7646-79-9	<1

4. FIRST AID MEASURES

First aid measures

- General Advice:** National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222.
- Skin Contact:** Wash off immediately with soap and plenty of water removing all contaminated clothing and shoes. Get medical attention if irritation develops.
- Eye Contact:** Flush eyes with water for 15 minutes. Get medical attention if irritation occurs. If symptoms persist, call a physician.
- Inhalation:** Move to fresh air. If breathing is difficult, give oxygen. In case of shortness of breath, give oxygen. Obtain medical attention.
- Ingestion:** Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician if necessary.

Most important symptoms and effects, both acute and delayed

Symptoms Repeated or prolonged exposure may cause dryness or cracking of the skin

Indication of any immediate medical attention and special treatment needed

Notes to Physician: Treat symptomatically.

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media:

The product is not flammable. If it is involved in a fire, extinguish the fire using an agent suitable for the type of surrounding fire.

Unsuitable Extinguishing Media:

No information available.

Specific hazards arising from the chemical

Hazardous combustion products

No information available.

Specific hazards

No information available.

Special Protective Actions for Firefighters

Specific Methods:

No information available

Special Protective Equipment for Firefighters:

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions:

Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Use personal protective equipment.

Environmental precautions

Prevent further leakage or spillage if safe to do so.

Methods and material for containment and cleaning up

Methods for containment

Stop leak if you can do it without risk. Cover with plastic sheet to prevent spreading.

Methods for cleaning up

Sweep up and shovel into suitable containers for disposal. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:

Provide sufficient air exchange and/or exhaust in work rooms. Keep away from incompatible materials.

Safe Handling Advice:

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not ingest. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:

Hygroscopic. Protect from moisture. Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials.

Incompatible Materials:

Strong acids
Strong oxidizing agents
Hydrogen fluoride
Chlorine trifluoride
Oxygen difluoride

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

Component	CAS No	OSHA	NIOSH	ACGIH	AIHA WEEL
Silicon Dioxide (Amorphous)	7631-86-9	20mppcfTWA (80)/(% SiO ₂) mg/m ³ TWA	6 mg/m ³ TWA	None	None
Cobaltous chloride	7646-79-9	None	None	None	None

Canada

Component	CAS No	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec
Silicon Dioxide (Amorphous)	7631-86-9	None	None	None	None
Cobaltous chloride	7646-79-9	None	None	None	None

Australia and Mexico

Component	CAS No	Australia	Mexico
Silicon Dioxide (Amorphous)	7631-86-9	2 mg/m ³ TWA	None
Cobaltous chloride	7646-79-9	None	None

Appropriate engineering controls

Engineering measures to reduce exposure:

Ensure adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

Eye protection: Safety glasses with side-shields.

Skin and body protection: Long sleeved clothing

Chemical resistant apron
Gloves

Respiratory protection: In well ventilated areas or if used in a fume hood, respiratory protection is not normally required.

Hygiene measures: Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Solid	Appearance: Beads.	Color: Blue.
Odor: Odorless.	Taste Tasteless.	Formula No information available
Molecular/Formula weight (g/mole): No information available	Flammability (solid, gas) no data available	Flashpoint (°C/°F): No information available
Flash Point Tested according to: Not applicable	Autoignition Temperature (°C/°F): No information available	Lower Explosion Limit (%): No information available
Upper Explosion Limit (%): No information available	Melting point/range(°C/°F): No information available	Decomposition temperature(°C/°F): No information available
Boiling point/range(°C/°F): No information available	Bulk density: No information available	Density (g/cm3): No information available
Specific gravity: 2.1-2.2	pH No information available	Vapor pressure @ 20°C (kPa): No information available
Evaporation rate: No information available	Vapor density: No information available	VOC content (g/L): No information available
Odor threshold (ppm): No information available	Partition coefficient (n-octanol/water): No information available	Viscosity: No information available
Miscibility: No information available	Solubility: Insoluble in water Insoluble in Ethanol Insoluble in acids except hydrofluoric acid Soluble in hot KOH or NaOH solutions	

10. STABILITY AND REACTIVITY

Reactivity

Hygroscopic. It absorbs moisture from the air
Reactive with strong acids
Vinyl acetate vapor may react vigorously in contact with Silica gel

Chemical stability

Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid: Heat. Incompatible materials. Exposure to moist air. Exposure to moisture.

Incompatible Materials: Strong acids
Strong oxidizing agents
Hydrogen fluoride
Chlorine trifluoride
Oxygen difluoride

Hazardous decomposition products: No information available.

Other Information
Corrosivity: No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:
Ingestion. Inhalation.

Acute Toxicity

The following values are calculated based on chapter 3.1 of the GHS document
Component Information

Silicon Dioxide (Amorphous)	
CAS No	7631-86-9

LD50/oral/rat = 7900 mg/kg Oral LD50 Rat
LD50/oral/mouse = No information available
LD50/dermal/rabbit = > 2000 mg/kg Dermal LD50 Rabbit
LD50/dermal/rat = No information available
LC50/inhalation/rat = > 2.2 mg/L Inhalation LC50 Rat 1 h
LC50/inhalation/mouse = No information available
Other LD50 or LC50 information = No information available

Cobaltous chloride	
CAS No	7646-79-9

LD50/oral/rat = 80 mg/kg Oral LD50 Rat
LD50/oral/mouse = No information available
LD50/dermal/rabbit = No information available
LD50/dermal/rat = No information available
LC50/inhalation/rat = No information available
LC50/inhalation/mouse = No information available
Other LD50 or LC50 information = No information available

Product Information

LD50/oral/rat =
Value - Acute Toxicity = No information available

LD50/oral/mouse =
Value - Acute Tox = No information available

LD50/dermal/rabbit

Value - Acute Toxicity = No information available mg/kg

LD50/dermal/rat

VALUE - Acute Tox = No information available

LC50/inhalation/rat

VALUE-Vapor = No information available

VALUE-Gas = No information available

VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse

VALUE-Vapor = No information available

VALUE - Gas = No information available

VALUE - Dust/Mist = No information available

Symptoms**Skin Contact:** May cause dryness of the skin in cases of severe exposure.**Eye Contact:** This product, which is the form of beads or pellets, is not expected to get into the eyes and cause eye irritation.**Inhalation** This material is in the form of beads and is unlikely to cause respiratory tract irritation.**Ingestion** Health injuries are not known or expected under normal use. Not expected to be a health hazard.**Aspiration hazard** No information available.**Delayed and immediate effects as well as chronic effects from short and long-term exposure****Chronic Toxicity** Repeated or prolonged skin contact may cause dryness and cracking of the skin.**Sensitization:** No information available.**Mutagenic Effects:** Suspected of causing genetic defects**Carcinogenic effects:** May cause cancer.

Component	CAS No	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
Silicon Dioxide (Amorphous)	7631-86-9	Group 3 - Not classifiable - Monograph 68 [1997] Supplement 7 [1987]	Not listed	Not listed	Not listed	Not listed	Not listed
Cobaltous chloride	7646-79-9	Group 2B - Possibly carcinogenic to humans - Monograph 52 [1991] Cobalt and Cobalt compounds	Not listed	Not listed	Present	Not listed	Not listed

ACGIH (American Conference of Governmental Industrial Hygienists)

IARC (International Agency for Research on Cancer)
 Group 3 - Not classifiable as to its carcinogenicity to humans
 NTP (National Toxicology Program)

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

Reproductive toxicity May damage fertility or the unborn child

Reproductive Effects: No information available

Developmental Effects: No information available

Teratogenic Effects: No information available

Specific Target Organ Toxicity

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Target Organs: No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: Aquatic environment.

Silicon Dioxide (Amorphous) - 7631-86-9

Algae/aquatic plants 440 mg/L EC50 Pseudokirchneriella subcapitata 72 h

Fish 5000 mg/L LC50 Brachydanio rerio 96 h static 1

Crustacea 7600 mg/L EC50 Ceriodaphnia dubia 48 h

Persistence and degradability: No information available

Bioaccumulative potential: No information available.

Mobility in soil No information available

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:

Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:

Empty containers should be taken for local recycling, recovery or waste disposal

Component	CAS No	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Silicon Dioxide (Amorphous)	7631-86-9	None	None	None	None
Cobaltous chloride	7646-79-9	None	None	None	None

14. TRANSPORT INFORMATION

DOT

UN-No: Not Regulated

Product code: S3421

Product name: SILICA GEL,
INDICATING, GRADE 48

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Proper Shipping Name: No information available
Hazard Class No information available
Subsidiary Class No information available
Packing group: No information available
Emergency Response Guide Number No information available
Marine Pollutant No data available
DOT RQ (lbs): No information available
Special Provisions No Information available
Symbol(s): No information available
Description: No information available

TDG (Canada)

UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class No information available
Subsidiary Risk: No information available
Packing Group: No information available
Marine Pollutant No Information available
Description: No information available

ADR

UN Number Not regulated
Proper Shipping Name: No information available
Transport hazard class(es) No information available
Packing group No information available
Subsidiary Risk: No information available

IMDG

UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available
Marine Pollutant No information available

RID

UN Number Not Regulated
Proper Shipping Name: No information available
Transport hazard class(es) No information available
Subsidiary Risk: No information available
Packing group No information available

ICAO (air)

UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class No information available
Subsidiary Risk: No information available
Packing Group: No information available

IATA

UN Number Not Regulated
Proper Shipping Name: No information available
Transport hazard class(es) No information available
Subsidiary Risk: No information available
Packing group No information available
Precautionary Statements - Response No information available

Special Provisions

No information available

15. REGULATORY INFORMATION

International Inventories

Component	CAS No	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	China IECSC	Australia (AICS)	EINECS-No.
Silicon Dioxide (Amorphous)	7631-86-9	PresentACTIVE	Present KE-31032	Present	Present (1)-548	Present	Present	Present 231-545-4
Cobaltous chloride	7646-79-9	PresentACTIVE	Present KE-06095	Present	Present (1)-207	Present	Present	Present 231-589-4

U.S. Regulations

Silicon Dioxide (Amorphous)

Massachusetts RTK: Present

Pennsylvania RTK: Present

Minnesota - Hazardous Substance List: Present

California Directors List of Hazardous Substances: Present

FDA - Direct Food Additives 21 CFR 172.230, 21 CFR 172.480, 21 CFR 173.340

FDA - 21 CFR - Total Food Additives 160.105, 160.185, 172.230, 172.480, 173.340, 175.105, 175.300, 175.320, 176.170,

- List Sourced from EAFUS 176.180, 176.200, 176.210, 177.1200, 177.2250, 177.2420, 177.2600, 178.3297, 182.90, 73.1, 73.575

Cobaltous chloride

FDA - 21 CFR - Total Food Additives 189.120 (prohibited)

- List Sourced from EAFUS

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Component	CAS No	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
Silicon Dioxide (Amorphous)	7631-86-9	Not Listed	Not Listed	Not Listed	Not Listed
Cobaltous chloride	7646-79-9	Listed	Not Listed	Not Listed	Not Listed

CERCLA/SARA

Component	CAS No	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting de minimis
Silicon Dioxide (Amorphous)	7631-86-9	None	None	None	None	None
Cobaltous chloride	7646-79-9	None	None	None	None	None

U.S. TSCA

Component	CAS No	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Silicon Dioxide (Amorphous)	7631-86-9	Not Applicable	Not Applicable
Cobaltous chloride	7646-79-9	Not Applicable	Not Applicable

Canada

WHIMIS 2015 - GHS Classifications

WHMIS 2015 Hazard Classification Information:

Not a dangerous product according to HPR classification criteria.

Component
Cobaltous chloride
7646-79-9 (<1)

WHMIS 2015 Hazard Classification
Acute toxicity - Oral - Category 4: H302 Harmful if swallowed.;
Serious Eye Damage/Eye Irritation - Category 2: H319 Causes serious eye irritation.;
Respiratory sensitizers - Category 1: H334 May cause allergic or asthmatic symptoms or breathing difficulties if inhaled.;
Skin sensitizers - Category 1: H317 May cause allergic skin reaction.;
Carcinogenicity - Category 2: H351 Suspected of causing cancer.;
Specific target organ toxicity - Repeated exposure - Category 1: H372 Causes damage to organs through prolonged or repeated exposure.

Canada Hazardous Products Regulation This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

DSL/NDSL

Component	CAS No	Canada (DSL)	Canada (NDSL)
Silicon Dioxide (Amorphous)	7631-86-9	Present	Not Listed
Cobaltous chloride	7646-79-9	Present	Not Listed

Component	CAS No	CEPA Schedule I - Toxic Substances
Silicon Dioxide (Amorphous)	7631-86-9	Not listed
Cobaltous chloride	7646-79-9	Not listed
Component	CAS No	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Silicon Dioxide (Amorphous)	7631-86-9	Not listed
Cobaltous chloride	7646-79-9	Not listed

EU Classification

EU GHS - SV - CLP 1272/2008

Component	CAS No	EU GHS - SV - CLP (1272/2008)
Silicon Dioxide (Amorphous)	7631-86-9	
Cobaltous chloride	7646-79-9	Acute toxicity - Oral - Acute Tox. 4: H302 Harmful if swallowed. (Minimum classification); Respiratory sensitizers - Resp. Sens. 1: H334 May cause allergic or asthmatic symptoms or breathing difficulties if inhaled.; Skin sensitizers - Skin Sens. 1: H317 May cause allergic skin reaction.; Germ cell mutagenicity - Muta. 2: H341 Suspected of causing genetic defects.; Carcinogenicity - Inhalation - Carc. 1B: H350 May cause cancer by inhalation.; Reproductive Toxicity - Repr. 1B: H360F May damage fertility. (Hazard statements H360 and H361 indicate a general concern for effects on both fertility and development: May damage/Suspected of damaging fertility or the unborn child; According to the criteria, the general hazard

		statement can be replaced by the hazard statement indicating the specific effect of concern in accordance with section 1.1.2.1.2; When the other differentiation is not mentioned, this is due to evidence proving no such effect, inconclusive data or no data and the obligations in Article 4(3) shall apply for that differentiation); Hazardous to aquatic environment - acute hazard - Aquatic Acute 1: H400 Very toxic to aquatic life. (M Factor: 10); Hazardous to aquatic environment - chronic hazard - Aquatic Chronic 1: H410 Very toxic to aquatic life with long lasting effects. (M Factor: 10)027-004-00-5 Carcinogenicity - Carc. 1B: H350 May cause cancer by inhalation. (C >= 0.01 %)027-004-00-5
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EU - CLP (1272/2008)

R-phrase(s)

S-phrase(s)

Component	CAS No	Classification	Concentration Limits:	Safety Phrases
Silicon Dioxide (Amorphous)	7631-86-9		No information	
Cobaltous chloride	7646-79-9	Xn; R22 R42/43 Carc.Cat.2; R49 N; R50-53 Repr.Cat.2; R60 Muta.Cat.3; R68	0.01%<=C<1% T;R49 1%<=C<25% T;R49-42/43 25%<=C T;R49-22-42/43	S53 S45 S60 S61

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:

Not dangerous

16. OTHER INFORMATION

Preparation Date: 11/19/2019
Revision date 11/19/2019
Prepared by: Sonia Owen

Disclaimer:

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this

SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet