

# Safety Data Sheet Silica Gel



1. Identification			
Product identifier	Silica Gel		
Product code	49.998, 49.999		
Other means of identification	Packaged Desiccant - BLUE Indicating Silica Gel.		
Recommended use of the chemical and restrictions on use	Silica gel desiccant used to manage moisture. Not recommended for any other use not detailed on product data sheet or label.		
Manufacturer	Flow Dry Technology, Inc. 379 Albert Road PO Box 190 Brookville, OH 45309 USA Tel. 1-937-833-2161 1-800-533-0077 Fax 1-937-833-3208 www.flowdry.com service@flowdry.com	Distributor	TOPRING LTD 1020, boulevard Industriel Granby, Québec Canada J2J 1A4  Tel. 1-800-263-8677 Tel. 450-375-1828 Fax 450-375-1408 www.topring.com
Emergency phone number	Quebec Poison Center: 1-800-463-5060 (toll free in QC) Ontario and Manitoba Poison Centres: 1-800-268-9017 or 419-813-5900 BC Drug and Poison Information Centre: 1-800-567-8911 (toll free in BC) or contact your local poison control centre in the state/province or territory where you live.  Canutec: 613-996-6666 or *666 on a cellular phone (for transportation)		

## 2. Hazard identification

**Summary** 

Avoid contact with skin, eyes and clothing. Avoid breathing dust. Use in a manner that avoids generating dust. Do not ingest. If ingested consult physician immediately and show this Safety Data Sheet. Wear eye protection, gloves and other protective clothing that are adapted to the task being performed and the risks involved.

#### WHMIS 2015/OSHA HCS 2012/GHS



Respiratory sensitizer (Category 1)

Skin sensitizer (Category 1)

Germ cell mutagenicity (Category 2)

Carcinogenicity (Category 2)

Reproductive toxicity (Category 2)

#### **DANGER**

H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled

H317: May cause an allergic skin reaction

H351: Suspected of causing cancer

H341: Suspected of causing genetic defects

H361: Suspected of damaging fertility or the unborn child

P201: Obtain special instructions before use.

P202: Do not handle until all safety precautions have been read and understood.

P261: Avoid breathing dust.

P264: Wash skin thoroughly after handling.

P280: Wear gloves and eye protection.

P284: In case of inadequate ventilation, wear respiratory protection.

P308+313: IF exposed or concerned: Get medical attention.

P302+352: IF ON SKIN: Wash with soap and water.

P333+313: If skin irritation or a rash occurs: Get medical advice or attention.

P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P342+311: If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

P362+364: Take off contaminated clothing and wash before reuse.

P405: Store locked up.

P501: Dispose of contents and container to a licensed chemical disposal agency in accordance with local, regional and national

regulations.

3. Composition/information on ingredients		
Common name	CAS	Weight % content
Silica Gel	63231-67-4	99.7 - 99.95 %
Cobalt Chloride	7646-79-9	0.05 - 0.3 %

4. First-aid measures		
Inhalation	Move person to fresh air. If not breathing, give artificial respiration. If a problem develops or persists, seek medical attention.	
Skin contact	Wash skin with warm water and mild soap. Remove contaminated clothing and wash before reuse. If a problem develops or persists, seek medical attention.	
Eye contact	Flush with water for at least 15 minutes. Remove contact lenses if easy to do. Hold eyelids apart to rinse properly. If a problem develops or persists, seek medical attention.	
Ingestion	DO NOT induce vomiting, unless recommended by medical personnel. Never give anything by mouth if victim is unconscious or convulsing. If victim is conscious wash out mouth with water and give 1-2 glasses of water to drink. If a problem develops or persists, seek medical attention.	
Other	No information available.	
Symptoms	Powder can irritate eyes by mechanical friction. Powder may irritate throat and respiratory system and cause coughing. May cause an allergic reaction of the skin. May cause an allergic respiratory reaction.	
Notes to the physician	Treat symptomatically. If gastric lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.	

5. Fire-fighting measures		
Suitable extinguishing media	Use appropriate extinguisher for surrounding fire.	
Specific hazards arising from the chemical	Do not burn.	
Special protective equipment	Firefighters must wear self contained breathing apparatus with full face mask. Firefighting suit may not be efficient against chemicals.	
Special protective actions for fire-fighters	Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply.	

6. Accidental release measures		
Personal precautions, protective equipment and emergency procedures	Do not touch spilled material. Make sure to wear personal protective equipment mentioned in this Safety Data Sheet.	
Environmental precautions	For a large spill, consult the Department of Environment or the relevant authorities.	
Methods and materials for containment and cleaning up	Ventilate the area well. Vacuum or sweep up and place in an appropriate waste disposal container. Avoid conditions that produce dust. Finish cleaning the contaminated surface by rinsing with soapy water.	

7. Handling and	7. Handling and storage		
Precautions for safe handling	Use in well ventilated area. Avoid contact with skin, eyes and clothing. Avoid breathing dust. Use in a manner that avoids generating dust. Wear eye protection, gloves and other protective clothing that are adapted to the task being performed and the risks involved. Generally speaking, working cleanly and following basic precautionary measures will greatly minimize the potential for harmful exposure to this product under normal use conditions. Do not eat, do not drink and do not smoke during use. Wash hands, forearms and face thoroughly after handling this compound. Remove contaminated clothing and wash before reuse.		
Conditions for safe storage, including any incompatibilities	Store in the original container. Store in a cool, dry, well-ventilated area. Keep away from moisture.		
Storage temperature	2 to 45°C (35.6 to 113°F)		

8. Exposure con	trols/pei	rsonal protection		
Immediately Dangerous to Life or Health		3000 mg/m3. oride: 20 mg/m³, value as	cobalt metal.	
Silica Gel TV	VA (8h)	Respirable Dust Respirable Dust Total Dust Respirable Dust Total Dust	1.5 mg/m <sup>3</sup> 3 mg/m <sup>3</sup> 4 mg/m <sup>3</sup> 6 mg/m <sup>3</sup> 10 mg/m <sup>3</sup>	BC ACGIH BC RSST ACGIH , ON
Cobalt Chloride TV	VA (8h)	Value as Metal	0.02 mg/m <sup>3</sup>	ACGIH , BC, ON, RSST
Appropriate engineering controls	Provide sufficient mechanical (general and/or local exhaust) to keep the airborn concentrations of dust below their respective occupational exposure limits.			
Individual protection me	easures			
Eye	Wear safety goggles.	Wear safety glasses with side shields. If there is a risk of contact with eyes, wear chemical splash goggles.		
Hands		Wear nitrile or neoprene gloves. Disposable nitrile gloves can also be used, but discard after single use. Gloves must only be worn on clean hands.		
Skin	Personal protective equipment for the body should be selected based on the task being performed and the risks involved. Wear normal work clothing covering arms and legs as required by employer code.			
Respiratory	A respirator is not required in a well-ventilated area. Where the conditions in the workplace require a respirator, it is necessary to follow a respiratory protection program. Moreover, respiratory protection equipment (RPE) must be selected, fitted, maintained and inspected in accordance with regulations			

	and standard 29 CFR 1910.134 (OSHA), ANSI Z88.2 or CSA Z 94.11 (Canada) and approved by NIOSH/MSHA. For nuisance exposures use type N95 particle respirator.	
Feet	No personal protection measure required.	Ī



Physical state	Granular solid	Flammability	Non-flammable.
Colour	Blue	Flammability limits	N/Ap.
Odour	Odourless	Flash point	N/Ap.
Odour threshold	N/Av.	Auto-ignition temperature	N/Av.
рН	5.5 to 9 @ 5%	Sensibility to electrostatic charges	No
Melting point	>1600°C (2912°F)	Sensibility to sparks and/or friction	No
Freezing point	N/Av.	Vapour density	N/Av. (Air = 1)
Boiling point	N/Av.	Relative density	2.1 kg/L (Water = 1)
Solubility	Insoluble in water.	Partition coefficient n-octanol/water	N/Av.
Evaporation rate	N/Ap.	Decomposition temperature	N/Av.
Vapour pressure	N/Av.	Viscosity	N/Ap.
Percent Volatile	0%	Molecular mass	N/Ap.

10. Stability and reactivity	
Reactivity	Hygroscopic (absorb humidity).
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions (including polymerizations)	A dangerous reaction will not occur.
Conditions to avoid	Keep away from moisture.
Incompatible materials	Hydrofluoric acid.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. Toxicolo	gical informat	tion
Numerical measures of toxicity	Silica Gel Inge Skin Cobalt Chloride Inge	5 5
	Skin	>2000 mg/kg Rat LD50
Likely routes of exposure	Skin, eyes, inhalation	າ.
Delayed, immediate and chronic effects	Eye contact	Powder can irritate eyes by mechanical friction. Eye Irritation/Corrosion, Rabbit (OECD TG 405): tests performed with each ingredient of this mixture gave not irritating to slightly irritating results.
	Skin contact	May cause an allergic reaction of the skin. Prolonged or repeated contact may cause slight skin irritation. The mechanical friction can increase skin irritation. Skin Irritation/Corrosion, Rabbit (OECD 404): tests performed with each ingredient of this mixture gave not irritating results.
	Inhalation	Powder may irritate throat and respiratory system and cause coughing. May cause an allergic respiratory reaction with symptoms similar to asthma such as wheezing and chest tightness. The severity of symptoms may vary depending on exposure conditions.
	Ingestion	May cause gastrointestinal irritation with nausea and vomiting.
	Respiratory or skin sensitization	May cause an allergic skin and respiratory reactions. Several studies report that cobalt and cobalt salts produce positive responses of respiratory sensitizer (asthma) and skin sensitizer in workers exposed to these products.
	IARC/NTP	Common name IARC NTP
	Classification	Cobalt Chloride 2B R  IARC: 1- Carcinogenic; 2A- Probably carcinogenic; 2B- Possibly carcinogenic.  NTP: K- Known to be carcinogens; R- Reasonably anticipated to be carcinogens.
	Carcinogenicity	Contains a substance that can cause cancer based on animal data. The risk of cancer depends on duration and level of exposure.
	Mutagenicity	Cobalt chloride (CAS no 7646-79-9) exhibited positive genotoxicity on DNA in many mammalian cells In Vitro tests, indicating a mutagenic potential (EPA).
	Reproductive toxicity	Chronic administration of cobalt chloride (CAS no 7646-79-9) to male mice and rat in drinking water reduced fertility. The administration in drinking water to female mice and rat before or during pregnancy caused embryotoxicity and decrease in total and live births (EPA).
	Specific target organ toxicity - single exposure	No target organ is listed.
	Specific target organ toxicity - repeated exposure	No target organ is listed.
Interactive effects	No information available for this product.	
Other information	mg/kg. The acute tox	ute toxicity estimates (ATE) of the mixture were calculated to be greater than 2000 cicity estimate (ATE) by inhalation of the dust mixture was calculated to be greater than e is not classified according to GHS. These values are not classified according to SHA HCS 2012.

12. Ecological information		
Ecological toxicity	Mixture LC50 N.Dis N/Av.	
Persistence	No information available for this product.	
Degradability	The term biodegradability, as such, is not applicable to inorganic compounds.	

Bioaccumulative potential	No bioaccumulation.
Mobility in soil	Insoluble in water. The product is a mixture whose ingredients have a very low mobility in the soil.
Other adverse effects	This chemical does not deplete the ozone layer.

# 13. Disposal considerations

## Container



Important! Prevent waste generation. Use in full. Waste product may be send to landfill. Dispose via a licensed waste disposal contractor. Observe all federal, state/provincial and municipal regulations. If necessary consult the Department of Environment or the relevant authorities.

14. Transport inf	ormation
UN Number	UN N/A
UN Proper Shipping Name	Not regulated by TDG (Canada) and 49 CFR DOT (USA).
Environmental hazards	This material does not contain marine pollutant.
Special precautions for user	No information available for this product.
TDG - Transportation of	Dangerous Goods (Canada)
Transport hazard class(es)	Not regulated
Packing group	Not regulated
Emergency response guidebook 2016	
IATA - International Air	Transport Association
Classification	Not regulated

# These transportation classifications are provided as a customer service. As the shipper YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging. In addition, if a domestic exemption exists, it is the responsibility of the shipper to define the application of it.

# 15. Regulatory information

## **CANADA**

Common name	CAS	CEPA	DSL	NDSL	NPRI
Silica Gel	63231-67-4		Χ		
Cobalt Chloride	7646-79-9		Χ		X

- CEPA: List of Toxic Substances Managed Under Canadian Environmental Protection Act
- DSL: Domestic Substances List Inventory
- NDSL: Non-Domestic Substances List Inventory
- NPRI: National Pollutant Release Inventory Substances

### **UNITED STATE OF AMERICA**

Common name CAS	TSCA	CER CLA	EPCRA 313	EPCRA 302/304		CAA 112(b) HAP			CWA Prio.
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Silica Gel	63231-67-4	Х								
Cobalt Chloride - TSCA: Toxic Subst	7646-79-9	Χ								
- CERCLA: Compreh - EPCRA 313: Emerg - EPCRA 302/304: E - CAA 112(b) HON: 0 - CAA 112(b) HAP: 0 - CAA 112(r): Clean A - CWA 311: Clean W - CWA Priority: Clear	nensive Environm gency Planning a imergency Planni Clean Air Act - Ha Clean Air Act - Ha Air Act - Regulate /ater Act - List of n Water Act - Pric	nd Comm ng and Co azardous zardous / ed Chemid Hazardou	nunity Right ommunity I Organic Na Air Pollutar cals for Acc is Substand	t-to-Know Right-to-k ational En nts lists po cidental R	Act, Sect (now Act, nission Stabilutants	ion 313 To Section 30 andard for	oxic Chem 02/304 Ext	icals remely Ha	azardous S	Substances
No ingredients listed.										
Other regulations	WHMIS 198 D2A Class D2A		ic material	causing o	other toxic	effects				
	н	/IIS	NFP	A						

HeathFlamabilityReactivity

(X) Protective Equipment

Date (YYYY-MM-DD)	Flow Dry Technology, Inc. 2017-04-20
Version	01
Other information	REFERENCES: - Service du répertoire toxicologique de la Commission des normes, de l'équité, de la santé et de la sécurité du travail (CNESST), http://www.reptox.csst.qc.ca - Haz-Map, Information on Hazardous Chemicals and Occupational Diseases, http://hazmap.nlm.nih.gov/index.php - TOXNET Databases, Toxicology Data Network, NIH U.S. National Library of Medicine, http://toxnet.nlm.nih.gov/ - The National Center for Biotechnology Information, National Institutes of Health (NIH), U.S. National Library of Medicine, www.ncbi.nlm.nih.gov - NIOSH Pocket Guide to Chemical Hazards, Centers for Disease Control and Prevention, NIOSH Publications, 2007, http://www.cdc.gov/niosh/npg/npg.html - Testing Status of Agents at NTP, National Toxicology Program, http://ntp.niehs.nih.gov  ACGIH: American Conference of Governmental Industrial Hygienists AIHA: American Industrial Hygiene Association HMIS: Hazardous Materials Identification System NFPA: National Fire Protection Association OSHA: Occupational Safety and Health Administration (USA) NIOSH: National Institute for Occupational Safety and Health

NTP: National Toxicology Program

RSST: Règlement sur la santé et la sécurité du travail (Québec)

GHS: Globally Harmonized System

IARC: International Agency for Research on Cancer IDLH: Immediately Dangerous to Life or Health STEL: Short Term Exposure Limit (15 min)

TWA: Time Weighted Averages

WHMIS: Workplace Hazardous Materials Information System

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