



SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)
Canada Hazardous Products Regulations (SOR/2015-17)

Revision date 31-Jul-2024

Revision Number 3

1. Identification

Product identifier

Product Name CAB-O-SPERSE® 4012K Fumed Silica Dispersion

Other means of identification

Product Code(s) 4012K

Synonyms Silicon Dioxide, Synthetic Amorphous Silica, Pyrogenic (Fumed) Amorphous Silica, Aqueous dispersion

Recommended use of the chemical and restrictions on use

Recommended use Various, Rheological control, Flow agent, Stabilization agent

Restrictions on use None known.

Details of the supplier of the safety data sheet

Cabot Business & Technology Center
157 Concord Road
Billerica, Massachusetts
01821
United States
Tel: +1 978 663 3455
Fax: +1 978 663 5471

Cabot Corporation
4400 North Point Parkway
Suite 200
Alpharetta, Georgia
30022
United States
Tel: +1 678 297 1300
Fax: +1 678 297 1245

Initial Supplier Identifier
Données relatives au fournisseur

Univar Solutions Canada Ltd.

64 Arrow Road
North York, ON M9M 2L9
Telephone: 1-866-686-4827

Emergency telephone number

Emergency Telephone US: CHEMTREC : 1-800-424-9300 or +1-703-527-3887
International CHEMTREC: +1 703-741-5970 or +1-703-527-3887

2. Hazard(s) identification

Classification

This product is not considered hazardous by either the US 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200) or the Canadian Workplace Hazardous Material Information System (WHMIS 2015)

Label elements

Signal word
None

Hazard statements
None

Precautionary statements
None

Other information

May cause skin and eye irritation. Dried product may be irritating to respiratory tract.

3. Composition/information on ingredientsSubstance

Not applicable.

Mixture

Synonyms Silicon Dioxide, Synthetic Amorphous Silica, Pyrogenic (Fumed) Amorphous Silica, Aqueous dispersion

Chemical name	CAS No.	Weight-%	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)
Water	7732-18-5	>85	-	-
Synthetic Amorphous, Pyrogenic Silica	112945-52-5	<15	-	-

Additional information

Regulatory information is found under the general silica: CAS RN 7631-86-9

The hyphen (-) means "not applicable"

4. First-aid measuresDescription of first aid measures

Inhalation	If cough, shortness of breath or other breathing problems occur, move to fresh air. Seek medical attention if symptoms persist. If necessary, restore normal breathing through standard first aid measures.
Eye contact	In case of eye contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if symptoms occur.
Skin contact	Wash skin with soap and water. Get medical attention if symptoms occur.
Ingestion	Do NOT induce vomiting. Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

Symptoms See Section 11 for additional Toxicological Information.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. Fire-fighting measures

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Carbon dioxide (CO2). Foam. Dry chemical. Water.
Unsuitable extinguishing media	None.
Specific hazards arising from the chemical	None.

Hazardous combustion products	None
Explosion data	
Sensitivity to mechanical impact	None.
Sensitivity to static discharge	None.
Special protective equipment and precautions for fire-fighters	In case of fire: Wear self-contained breathing apparatus. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	Avoid formation of dust and aerosols. Ensure adequate ventilation. Use personal protection equipment. See section 8.
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Environmental precautions

Environmental precautions	Contain spilled product on land, if possible. Local authorities should be advised if significant spillages cannot be contained.
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Methods and material for containment and cleaning up

Methods for containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Soak up with inert absorbent material. If dried: Clean up promptly by vacuum. Use of a vacuum with high efficiency particulate air (HEPA) filtration is recommended. Do not create a dust cloud by using a brush or compressed air. Pick up and transfer to properly labeled containers. See section 13.

7. Handling and storage

Precautions for safe handling

Advice on safe handling	Avoid contact with skin and eyes. Avoid the formation of dust from dried product, aerosols and/or mists. Do not breathe aerosols or dust from dried material. Provide appropriate exhaust ventilation at machinery and at places where dust can be generated.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions	Do not freeze. Store at ambient conditions. Keep in properly labeled containers.
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8. Exposure controls/personal protection

Control parameters

Exposure Limits	There are no exposure limits identified for this product. Exposure limits for components or similar components are stated below.
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Chemical name	Amorphous Silica 7631-86-9
OSHA PEL	(vacated) TWA: 6 mg/m ³

Appropriate engineering controls

Engineering controls	Ensure adequate ventilation to maintain exposures below occupational limits. Provide appropriate local exhaust ventilation at machinery and at places where dust can be generated. Ensure that eyewash stations and safety showers are close to the workstation location.
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Individual protection measures, such as personal protective equipment

Eye/face protection	Wear eye/face protection. Wear safety glasses with side shields (or goggles).
Hand protection	Wear protective gloves to prevent soiling of hands. Use protective barrier cream before handling the product.
Skin and body protection	Wear suitable protective clothing. Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace.
Respiratory protection	Approved respirator may be necessary if local exhaust ventilation is not adequate.
Environmental exposure controls	In accordance with all local legislation and permit requirements.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state	Liquid
Appearance	dispersion; Slurry
Color	white
Odor	None
Odor threshold	Not applicable

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	10 - 10.5	In-house testing
Melting point / freezing point	~0 °C	Information on water
Boiling point / boiling range	~100 °C	Information on water
Flash point		Not applicable
Evaporation rate		No data available
Flammability (solid, gas)		Not applicable
Flammability Limit in Air		Not applicable
Vapor pressure		Similar to water
Relative vapor density		No data available
Relative density	1.066 - 1.074	at 20°C
Water solubility	dispersible	
Solubility(ies)		No data available
Partition coefficient		Not applicable
Autoignition temperature		Not applicable
Decomposition temperature		Not applicable
Kinematic viscosity		No data available
Dynamic viscosity	1 - 100 cP	In-house testing
<u>Other information</u>		
Explosive properties		Non-explosible
Oxidizing properties		No Oxidizing properties
Bulk density		Not applicable

10. Stability and reactivity

Reactivity	Not reactive.
Chemical stability	Stable under normal conditions. Stable under recommended storage conditions.
Possibility of hazardous reactions	None under normal processing.

Hazardous polymerization	Hazardous polymerization does not occur.
Conditions to avoid	Do not freeze.
Incompatible materials	None known
Hazardous decomposition products	None known

11. Toxicological information

Information given is based on data on the components. Product, as formulated, has not been tested.

Product Information Information given is based on Synthetic Amorphous Silica.

Acute toxicity

Oral LD50	> 5000 mg/kg (rat). No deaths occurred and no signs of toxicity were seen during the observation periods after single oral administration of silica(OECD 401).
Dermal LD50	> 2000 mg/kg (rabbit). Very slight transient erythema in one animal. No signs of systemic or organ toxicity (OECD 402).
Inhalation LC50	Due to the product's physical characteristics, no suitable testing procedure is available.
Skin corrosion/irritation	Primary irritation index = 0/8 @ 24 hr. Not classified as an irritant (OECD 404).
Serious eye damage/eye irritation	Draize score 1.0/110 @ 24 hr. Not classified as an irritant in rabbit studies (OECD 405). High dust concentrations may cause mechanical irritation.
Respiratory or skin sensitization	No experimental animal data are available. No cases of sensitization in humans have been reported.
Germ cell mutagenicity	Synthetic Amorphous Silica: Not mutagenic in AMES Test. Negative in the unscheduled DNA synthesis assay. Negative in the chromosome aberration test in Chinese hamster ovary (CHO) cells.
Carcinogenicity	Synthetic Amorphous Silica: No evidence of carcinogenicity was observed in multiple animal species following repeated oral or inhalation exposure to amorphous silica. Similarly, epidemiology studies show no evidence of carcinogenicity in workers who manufacture amorphous silica.
Reproductive toxicity	Synthetic Amorphous Silica: No effects on reproductive organs or fetal development have been reported in animal toxicity studies.
STOT - single exposure	Specific target organ toxicity is not expected after single oral, single inhalation, or single dermal exposure.
STOT - repeated exposure	Synthetic Amorphous Silica: Repeated dose toxicity: oral (rat), 2 weeks to 6 months, no significant treatment-related adverse effects at doses of up to 8% silica in the diet. Repeated dose toxicity: inhalation (rat), 13 weeks, Lowest Observed Effect Level (LOEL) = 1.3 mg/m³ based on mild reversible effects in the lungs. Repeated dose toxicity: inhalation (rat), 90 days, LOEL = 1 mg/m³ based on reversible effects in the lungs and effects in the nasal cavity. Repeated dose toxicity using SAS 400 m²/g: inhalation (rat), 90 days, fully reversible inflammation related to clearance processes following recovery period. NOAEC (lung) based on histopathology and inflammatory marker is 5 mg/m³ Based on available data, a STOT-RE classification is not warranted.
Aspiration hazard	No data are available on the product itself.
Other adverse effects	No information available.

12. Ecological information

Product, as formulated, has not been tested Information given is based on data on the components

Ecotoxicity	Synthetic Amorphous Silica: Fish (Brachydanio rerio) LC50 (96 h): > 10,000 mg/l; (Method: OECD 203). No acute toxicity to Daphnia with EL and EL ₅₀ ranging from >1000 to 10,000 mg/L (OECD 202).
Persistence and degradability	The methods for determining biodegradability are not applicable to inorganic substances.
Bioaccumulation	Not expected due to physicochemical properties of the substance.
Mobility	Not expected to migrate.
Other adverse effects	No information available.

13. Disposal considerations

Waste treatment methods

Waste from residues/unused products	Dispose of in accordance with federal, state and local regulations. Dispose of waste in accordance with environmental legislation.
Contaminated packaging	Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable.

14. Transport information

<u>DOT</u>	Not regulated
<u>TDG</u>	Not regulated
<u>MEX</u>	Not regulated
<u>ICAO (air)</u>	Not regulated
<u>IATA</u>	Not regulated
<u>IMDG</u>	Not regulated
<u>RID</u>	Not regulated
<u>ADR</u>	Not regulated
<u>ADN</u>	Not regulated

15. Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

International Inventories

TSCA	Complies
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Chemical name	CAS No.	US TSCA Inventory listing	US TSCA inactive/active designation
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Chemical name	CAS No.	US TSCA Inventory listing	US TSCA inactive/active designation
Synthetic Amorphous, Pyrogenic Silica	112945-52-5	Present	Active

DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AIIC	Complies
TCSI	Complies
NZIoC	Complies

Note:

Regulatory information is found under the general silica: CAS RN 7631-86-9

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AIIC - Australian Inventory of Industrial Chemicals

TCSI - Taiwan Chemical Substance Inventory

NZIoC - New Zealand Inventory of Chemicals

US Federal RegulationsTSCA Section 12(b) Export Regulations

This product does not contain any components that are subject to TSCA 12(b) Export Notification.

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

Clean Air Act Amendments of 1990 (CAA, Section 112, 40 CFR 82)

This product does not contain any components listed as a Hazardous Air Pollutant, Flammable Substance, Toxic Substance, or Class 1 or 2 Ozone Depletor.

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State RegulationsCalifornia Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Synthetic Amorphous, Pyrogenic Silica 112945-52-5	-	X	X

16. Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Key literature references and sources for data used to compile the SDS

NIOSH Pocket Guide to Chemical Hazards, September 2005. "Silica, amorphous". DHHS (NIOSH) Publication No. 2005-149. National Technical Information Service, Springfield, VA. p. 277

Prepared By Cabot Corporation - Safety, Health and Environmental Affairs.

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Revision Note Revisions to Section(s): 8

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End of Safety Data Sheet