



MATERIAL SAFETY DATA SHEET

Prepared in accordance with ISO 11014-1/ ANSI standard
Z400.1-2004

Revision Date: 05/July/2007

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: CAB-O-SPERSE ® PG 022

Synonyms: Silicon Dioxide, Synthetic Amorphous Silica, Pyrogenic (Fumed) Amorphous Silica

Use of the Substance/Preparation: Various, Rheological control, Flow agent, Stability

Supplier:

Cabot Rheinfelden GmbH, Werk Rheinfelden Kronenstrasse 2 79618 Rheinfelden GERMANY Tel: (+49) 7623.7070 Fax: (+49) 7623.707 530	Cabot Carbon, Ltd. Sully Moors Road Sully, Vale of Glamorgan CF64 5RP Wales, UNITED KINGDOM Tel: (+44) 1446.736999 Fax: (+44) 1446.737123	Cabot Corporation 700 E U.S. Highway 36 Tuscola, IL 61953-9643 UNITED STATES Tel: 1-217-253-3370 Fax: 1-217-253-5586	Cabot Corporation 157 Concord Road Billerica, MA 01821 UNITED STATES Tel: 1-978-663-3455 Fax: 1-978-670-6955
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Emergency Telephone Number: UK: (+44) 1446-709 641
Cabot (Rheinfelden): (+49) 7623.7070
US: CHEMTREC 1-800-424-9300 or 1-703-527-3887
US: Other 1-217-253-5595

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW - CAUTION: White slurry. Dried product may be irritating to respiratory tract. Irritating, but will not permanently injure eye tissue. Repeated exposure may cause skin dryness or cracking.

Principle Routes of Exposure: Inhalation, Eye contact, Skin contact

POTENTIAL HEALTH EFFECTS

Eye Contact: May cause mechanical irritation. Irritating, but will not permanently injure eye tissue. Low hazard for usual industrial or commercial handling.

Skin Contact: Repeated exposure may cause skin dryness or cracking.

Inhalation: Dried product may be irritating to respiratory tract. Provide appropriate exhaust ventilation at machinery and at places where dust can be generated. See also Section 8.

Ingestion: Health injuries are not known or expected under normal use. Low hazard for usual industrial or commercial handling.

Carcinogenic Effects: Does not contain any substances greater than 0.1% listed by IARC (International Agency for Research on Cancer), NTP (National Toxicology Program), OSHA (Occupational Safety and Health Administration), ACGIH (American Conference for Governmental Industrial Hygienists) or EU (European Union). See also Section 11.

Target Organ Effects: Lungs

Medical Conditions Aggravated by Exposure: Asthma, Respiratory disorder

Potential Environmental Effects: No special environmental precautions required.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	EINECS Number	Weight %	EU Classification
Water	7732-18-5	231-791-2	80	None
Synthetic Amorphous, Pyrogenic Silica	112945-52-5	*	20	None

* See Section 15.

4. FIRST AID MEASURES

Skin Contact:	Wash thoroughly with soap and water. Seek medical attention if redness, swelling, itching, or burning occurs.
Eye Contact:	Flush eyes immediately with large amounts of water for 15 minutes. Seek medical attention if redness, swelling, itching, burning or visual disturbances occur.
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.
Ingestion:	Do not induce vomiting. If conscious, give several glasses of water. Never give anything by mouth to an unconscious person.
Notes to Physician:	Treat symptomatically.

5. FIRE AND IGNITION INFORMATION

Flash Point:	Not determined
Explosion Limits in Air - Upper (%):	Not determined
Explosion Limits in Air - Lower (%):	Not determined
OSHA Flammability Classification:	Not flammable
Autoignition Temperature:	Not determined
Extinguishing Media:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Special Protective Equipment for Firefighters:	Wear suitable protective equipment. In the event of fire, wear self-contained breathing apparatus.
Specific Hazards:	Product resists ignition and does not promote flame spread.
Hazardous Decomposition and/or Combustion Products:	None.
Risk of Dust Explosion:	This material is an inorganic dust dispersed in water, and will not create nor support conditions that would result in a dust explosion or fire.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Avoid formation of dust and aerosols. Ensure adequate ventilation. Use personal protective equipment. See also Section 8.
Methods for Cleaning Up:	Clean up promptly by vacuum. Use a suitable vacuum cleaner. Pick up and transfer to properly labelled containers. See Section 13.

Environmental Precautions: No special environmental precautions required. Local authorities should be advised if significant spillages cannot be contained.

7. HANDLING AND STORAGE

Handling: Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Do not breathe aerosols or dust from dried material. Provide appropriate exhaust ventilation at machinery and at places where dust can be generated.

Storage: DO NOT FREEZE. Keep in properly labeled containers. Keep at ambient temperatures.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMITS

Amorphous Silica, The regulatory exposure limits are found under the general silica, CAS RN 7631-86-9:	Australia:	2 mg/m ³ , TWA, Respirable	
	Austria MAK:	4 mg/m ³ , TWA, Inhalable fraction	
	Finland:	5 mg/m ³	
	Germany TRGS 900:	4 mg/m ³ , TWA, Inhalable fraction (a1)	
	India:	10 mg/m ³ , TWA	
	Ireland:	2.4 mg/m ³ , TWA, Respirable dust	
	Norway:	1.5 mg/m ³ , TWA, Respirable dust	
	Switzerland:	4 mg/m ³ , TWA	
	UK WEL:	6 mg/m ³ , TWA, Total inhalable fraction 2.4 mg/m ³ , TWA, Respirable fraction	
	US OSHA PEL:	6 mg/m ³	
	Dust, or Particulates Not Otherwise Specified:	US ACGIH - TLV:	10 mg/m ³ , TWA, Inhalable 3 mg/m ³ , TWA, Respirable
		Belgium:	10 mg/m ³ , TWA, Inhalable 3 mg/m ³ , TWA, Respirable
		China:	8 mg/m ³ , TWA 10 mg/m ³ , STEL
Italy:		10 mg/m ³ , TWA, Inhalable 3 mg/m ³ , TWA, Respirable	
Malaysia:		10 mg/m ³ , TWA, Inhalable 3 mg/m ³ , TWA, Respirable	
Spain:		10 mg/m ³ , VLA, Inhalable 3 mg/m ³ , VLA, Respirable	

(a1) - In its facilities globally, Cabot Corporation manages to the Germany TRGS 900 occupational exposure limit of 4 mg/m³, TWA, Inhalable fraction.

MAK: Maximale Arbeitsplatzkonzentration (Maximum Workplace Concentration)

OEL: Occupational Exposure Limit

PEL: Permissible Exposure Limit

STEL: Short Term Exposure Limit

TLV: Threshold Limit Value

TRGS: Technische Regeln für Gefahrstoffe (Technical Rule for Hazardous Materials)

TWA: Time Weighted Average

US ACGIH: United States American Conference of Governmental Industrial Hygienists

US OSHA: United States Occupational Safety and Health Administration

VLA: Valore Limite Ambientales (Environmental Limit Value)

WEL: Workplace Exposure Limit

ENGINEERING CONTROLS

Provide appropriate exhaust ventilation at machinery and at places where dust can be generated. Ensure adequate ventilation to maintain exposures below occupational limits.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection:	Approved respirator may be necessary if local exhaust ventilation is not adequate.
Hand Protection:	Repeated exposure may cause skin dryness or cracking. Use protective skin cream before handling the product. Wear suitable gloves.
Eye Protection:	Wear eye/face protection. Safety glasses with side-shields. Goggles.
Skin and Body Protection:	Wear suitable protective clothing. No special protective equipment required.
Other:	Handle in accordance with good industrial hygiene and safety practice. Emergency eyewash and safety shower should be located nearby.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	White Slurry
Odor:	None
pH:	3.5 - 4.5
Vapor Pressure:	Similar to water
Boiling Point/Range:	Approximately 100°C
Melting Point/Range:	Approximately 0°C
Water Solubility:	Dispersible
Density:	Not determined
Specific Gravity:	1.10 - 1.14
% Volatile (by Volume):	Similar to water
Evaporation Rate:	Not determined
Viscosity:	<100 Cps
Partition Coefficient (n-octanol/water):	Not determined

10. STABILITY AND REACTIVITY

Stability:	Stable
Hazardous Polymerization:	Hazardous polymerization does not occur.
Mechanical Sensitivity (shock):	Not sensitive to mechanical impact.
Conditions to Avoid:	Do not freeze. Avoid formation of dust and aerosols. Product resists ignition and does not promote flame spread.
Hazardous Decomposition and/or Combustion Products:	None.
Static Discharge Effects:	Avoid formation of dust and aerosols. Low hazard for usual industrial or commercial handling.

11. TOXICOLOGICAL INFORMATION

Information given is based on data on the components and the toxicology of similar products.

ACUTE TOXICITY

Oral LD50: LD50/oral/rat = > 5000 mg/kg.

Inhalation LC50: Due to the product's physical characteristics, no suitable testing procedure is available.

Dermal LD50: LD50/dermal/rabbit = > 2000 mg/kg.

Eye Irritation: Draize score 0.7/110 @ 24 hr. Non-irritating.

Skin Irritation: 0/8. Non-irritating.

SUBCHRONIC TOXICITY

No data are available on the product itself.

CHRONIC TOXICITY

Carcinogenic Effects: Does not contain any substances greater than 0.1% listed by IARC (International Agency for Research on Cancer), NTP (National Toxicology Program), OSHA (Occupational Safety and Health Administration), ACGIH (American Conference for Governmental Industrial Hygienists) or EU (European Union).

Mutagenic Effects: Not mutagenic in AMES Test, unscheduled DNA synthesis, chromosomal aberration in Chinese hamster ovary (CHO) cells.

Reproductive Toxicity: Did not show teratogenic effects in animal experiments. According to experience not expected.

Sensitizing Effects: A delayed contact hypersensitivity study in guinea pigs utilizing the Magnusson and Kligman Maximization technique was performed. No sensitization responses were observed.

Synergistic Materials: None reasonably foreseeable.

12. ECOLOGICAL INFORMATION

Information given is based on data on the components and the toxicology of similar products.

Aquatic Toxicity: Fish (Brachydanio rerio) ECO (96 hours): > 10,000 mg/l; (Method: OECD 203)
Daphnia magna ECO (24 hours): > 10,000 mg/l; (Method: OECD 202)

ENVIRONMENTAL FATE

Mobility: Not expected to migrate.

Bioaccumulation: According to experience not expected.

Persistence / Degradability: The methods for determining biodegradability are not applicable to inorganic substances.

Distribution to Environmental Compartments: Not determined.

13. DISPOSAL CONSIDERATIONS

Disclaimer: Information in this section pertains to the product as shipped in its intended composition as described in Section 2 of this MSDS. Contamination or processing may change waste characteristics and requirements. Regulations may also apply to empty containers, liners or rinsate. State/provincial and local regulations may be different from federal regulations.

RCRA Classification (40 CFR 261): Not a hazardous waste.

Unused and Uncontaminated Product: Can be burned in suitable incineration plants or disposed of in a suitable landfill in accordance with the regulations issued by the appropriate federal, provincial, state and local authorities.

14. TRANSPORT INFORMATION

Not classified as dangerous in the meaning of transport regulations.

15. REGULATORY INFORMATION

Regulatory information is found under the general silica: CAS RN 7631-86-9, EINECS RN 231-545-4.

Hazard Classification

United States - OSHA (29 CFR 1910.1200): Not hazardous.

Mexico - NOM-018-STPS-2000: Refer to HMIS Rating in Section 16.

Canada - WHMIS Classification (CPR, SOR/88-66): Not controlled.

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

Chemical Name	WHMIS Ingredient Disclosure List:
Synthetic Amorphous, Pyrogenic Silica	General Silica, CAS RN 7631-89-9, is Listed

International Inventories

All components of this product are listed on or exempt from the following inventories:

- YES - Australian Inventory of Chemical Substances (AICS)
- YES - Canadian Domestic Substances List (DSL)
- YES - Chinese Inventory
- YES - European Inventory of Existing Commercial Chemical Substances (EINECS)
- YES - Japanese Existing and New Chemical Substances (ENCS)
- YES - Korean Existing Chemicals List (KECL)
- YES - New Zealand Hazardous Substances and New Organisms Act (HSNO)
- YES - Philippine Inventory of Chemicals and Chemical Substances (PICCS)
- YES - United States Toxic Substances Control Act (TSCA) Inventory

U.S. Federal Regulations

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

Clean Air Act Amendments of 1990 (CAA, Section 112, 40 CFR 82): This product contains a component(s) listed as a Hazardous Air Pollutant, Flammable Substance, Toxic Substance, or Class 1 or 2 Ozone Depletor.

Clean Water Act (CWA, 40 CFR 116) Priority Pollutants: This product contains a listed Priority Pollutant(s).

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA, 40 CFR 302): This product contains a listed Hazardous Substance(s).

Superfund Amendments and Reauthorization Act, Title III (SARA):

SARA Section 302 (40 CFR 355) Extremely Hazardous Substances: No components are listed as extremely hazardous chemicals under SARA Section 302.

SARA Sections 311/312 (40 CFR 370) Hazard Category: This product does not meet any of the MSDS Requirement definitions for a hazardous material under SARA Sections 311/312. Reporting may be required if the material is present at any one time in amounts equal to or greater than 10,000 pounds.

SARA Section 313 (40 CFR 372) Toxics Release Inventory: Does not contain any of the substances identified under Section 313 as toxic chemicals in excess of the de minimis concentrations necessary to be subject to the supplier notification requirements.

Pharmaceutical Information: Not permitted

U.S. State Regulations

California Proposition 65: This product is not listed on California Proposition 65.

US Coalition of NorthEastern Governors (CONEG) Metals List: Not determined.

16. OTHER INFORMATION

HMS Rating

HMS Index:	* - chronic, 0 - minimal, 1 - slight, 2 - moderate, 3 - serious, 4 - severe
Health:	1
Flammability:	0
Physical Hazard:	0

Additional Contacts:

Prepared by:	Cabot Corporation - Safety, Health and Environmental Affairs
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Reason for Revision:	Revisions throughout

Disclaimer:

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