



# MATERIAL SAFETY DATA SHEET

Prepared in accordance with the National Occupational Health & Safety Commission (NOHSC: 2011(2003)), EC Directive 1907/2006/EC, Article 31

Revision Date: 30/September/2008

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

**Product Name:** CAB-O-SIL® M-5P Untreated Fumed Silica

**Synonyms:** Untreated Fumed Silica, Silicon Dioxide, Synthetic Amorphous Silica, Pyrogenic (Fumed) Amorphous Silica, Colloidal Silicon Dioxide, Colloidal Anhydrous Silica, Light Anhydrous Silicic Acid

**Use of the Substance/Preparation:** Rheological control, Flow agent, Reinforcing agent in: Coatings, Adhesives, Various

**Supplier:** Cabot Corporation  
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Victoria 3228  
AUSTRALIA  
Tel: (+61 3) 5264 8520  
Fax: (+61 3) 5264 8521

**Emergency Telephone Number:** 1800 068 688 or USA CHEMTREC: 0011 1-703-527-3887 or 0011 1-800-424-9300

## 2. HAZARDS IDENTIFICATION

**Indication of danger:** Hazardous according to the Worksafe Australia designated list of hazardous substances.  
  
Xn - Harmful.

**Principle Routes of Exposure:** Inhalation, Skin contact, Eye 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:** Dust 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/ELINCS Number	Weight %	EU Classification
Synthetic Amorphous, Pyrogenic Silica	112945-52-5	*	100	None

\* See Section 15.

### 4. FIRST AID MEASURES

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

### 5. FIRE-FIGHTING MEASURES

<b>Extinguishing Media:</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Special Protective Equipment for Firefighters:</b>	Wear suitable protective equipment. In the event of fire, wear self-contained breathing apparatus.
<b>Specific Hazards:</b>	Product resists ignition and does not promote flame spread.
<b>Hazardous Decomposition and/or Combustion Products:</b>	None.
<b>Risk of Dust Explosion:</b>	This material is an inorganic dust and will not create nor support conditions that would result in a dust explosion or fire.

### 6. ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions:</b>	Avoid dust formation. Remove all sources of ignition. Ensure adequate ventilation. Use personal protective equipment. See also Section 8.
<b>Methods for Cleaning Up:</b>	Clean up promptly by vacuum. Use a suitable vacuum cleaner. Do not create a dust cloud by using a brush or compressed air. Pick up and transfer to properly labelled containers. See Section 13.
<b>Environmental Precautions:</b>	No special environmental precautions required. Local authorities should be advised if significant spillages cannot be contained.

### 7. HANDLING AND STORAGE

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<b>Handling:</b>	Avoid contact with skin and eyes. Avoid dust formation. Do not breathe dust. Provide appropriate exhaust ventilation at machinery and at places where dust can be generated. Do not create a dust cloud by using a brush or compressed air. Take precautionary measures against static discharge. All metal parts of the mixing and processing equipment must be earthed/grounded. Ensure all equipment is electrically earthed/grounded before beginning transfer operations.
<b>Storage:</b>	Keep containers tightly closed in a dry, cool and well-ventilated place. Do not store together with volatile chemicals as they may be adsorbed onto product. Keep at ambient temperatures.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### EXPOSURE LIMITS

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

(a1) - In its facilities globally, Cabot Corporation manages to the Germany TRGS 900 occupational exposure limit of 4 mg/m<sup>3</sup>, 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 Ambientale (Environmental Limit Value)

**WEL:** Workplace Exposure Limit

## **ENGINEERING CONTROLS**

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

## **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**

<b>Appearance:</b>	White Powder
<b>Odor:</b>	None
<b>pH:</b>	4.0
<b>Density:</b>	2.2 g/cm <sup>3</sup> @ 20°C
<b>Specific Gravity:</b>	Not applicable
<b>Boiling Point/Range:</b>	2230°C
<b>Melting Point/Range:</b>	1700°C
<b>Vapor Pressure:</b>	Not determined
<b>Water Solubility:</b>	Insoluble
<b>% Volatile (by Volume):</b>	Not applicable
<b>Evaporation Rate:</b>	Not determined
<b>Viscosity:</b>	Not determined
<b>Partition Coefficient (n-octanol/water):</b>	Not applicable
<b>Flash Point:</b>	Not determined
<b>Method:</b>	Not applicable
<b>Explosion Limits in Air - Upper (%):</b>	Not determined
<b>Explosion Limits in Air - Lower (%):</b>	Not applicable
<b>Autoignition Temperature:</b>	Not determined

## **10. STABILITY AND REACTIVITY**

<b>Stability:</b>	Stable
<b>Hazardous Polymerization:</b>	Hazardous polymerization does not occur.

**Mechanical Sensitivity (shock):** Not sensitive to mechanical impact.

**Conditions to Avoid:** Keep away from heat and sources of ignition. Avoid dust formation. Product resists ignition and does not promote flame spread.

**Hazardous Decomposition and/or None.**

**Combustion Products:**

**Static Discharge Effects:** Take precautionary measures against static discharges. Avoid dust formation. All metal parts of the mixing and processing equipment must be earthed/grounded. Ensure all equipment is electrically earthed/grounded before beginning transfer operations. This material is an inorganic dust and will not create nor support conditions that would result in a dust explosion or fire.

## 11. TOXICOLOGICAL INFORMATION

### 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

**Aquatic Toxicity:** Fish (*Brachydanio rerio*) NOEC (96 hours): = 10,000 mg/l; (Method: OECD 203)  
Daphnia magna NOEC(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

Can be landfilled or incinerated, when in compliance with local regulations.

### 14. TRANSPORT INFORMATION

Not classified as dangerous in the meaning of transport regulations.

- US Department of Transportation
- Canadian Transport of Dangerous Goods Regulation
- European Transport of Dangerous Goods Regulation
- GGVS, GGVE, RID, ADR, IMDG Code, ICAO-TI
- United Nations (no UN number)

### 15. REGULATORY INFORMATION

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

**Indication of danger:** Hazardous according to the Worksafe Australia designated list of hazardous substances.

Xn - Harmful.

#### **EU Food Contact Information**

Listed as E551 on and is authorized for use according to EC-Directive 95/2/EC and its various amendments and adaptations. Meets all required purity criteria according to the Joint FAO/WHO Expert Committee on Food Additives (JECFA).

#### **Pharmaceutical Use**

The use of this product meets all the requirements as described in the United States Pharmacopoeia and National Formulary (USP-NF), European Pharmacopoeia, British National Formulary (BNF), Deutsches Arzneibuch (DAB, Germany) and Japanese Formulary.

#### **Cosmetic Use:**

Listed by the Cosmetic, Toiletry and Fragrance Association (CTFA) for use in cosmetics and personal care products.

#### **California Proposition 65:**

This product is not listed on California Proposition 65.

#### **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)

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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

**Germany Water Endangering Class (WGK) Class**

**Chemical Name**

Synthetic Amorphous,                      nwg (not water endangering): 849  
Pyrogenic Silica

**Switzerland Giftklasse (Poison Class)Toxic Category**

**Chemical Name**

Synthetic Amorphous,                      -- (tested and found to be not toxic): G-8311  
Pyrogenic Silica

<b>16. OTHER INFORMATION</b>
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**EU Local Contacts:**

See Section 1.

**Prepared by:** Cabot Corporation - Safety, Health and Environmental Affairs  
**Revision Date:** 30/September/2008  
**Previous Revision Date:** None  
**Reason for Revision:** New format

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