SAFETY DATA SHEET

Canada Hazardous Products Regulations (SOR/2015-17)

According to the standard(s) listed above, a Safety Data Sheet (SDS) must be provided for hazardous substances or mixtures. This product does not meet the classification criteria according to these standard(s). Therefore, such document is outside the scope of the standard(s) and the requirements for each section do not apply.

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

<table>
<thead>
<tr>
<th>Product name:</th>
<th>CAB-O-SIL® Untreated Fumed Silica</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product code:</td>
<td>M5</td>
</tr>
<tr>
<td>Synonyms:</td>
<td>Silicon Dioxide, Synthetic Amorphous Silica, Pyrogenic (Fumed) Amorphous Silica</td>
</tr>
<tr>
<td>the following grades:</td>
<td></td>
</tr>
</tbody>
</table>

**Recommended use:**
Various, Rheological control, Flow agent, Anti-caking agent, Anti-blocking agent, Anti-settling agent, Spray aid, Thickening agent, Carrier, Viscosity control agent, Glossing or matting agent, Chemical intermediate, Stabilization agent, Filler, Reinforcing agent in: Coatings, Adhesives and/or sealants, Silicone Elastomer, Rubber products, Suspension, Dispersion, Batteries, Cosmetics, Inks and toners, Paints, Hygiene and sanitary products, Other

**Restrictions on use:**
Not Applicable.

**Supplier:**
- Cabot Corporation
  - 4400 North Point Parkway
  - Suite 200
  - Alpharetta, Georgia 30022
  - United States
  - Tel: +1 678 297 1300
  - Fax: +1 978-670-6955
- Cabot Corporation
  - 157 Concord Road
  - Billerica, MA 01821
  - Tel: 1-978-663-3455
  - Fax: 1-978-670-6955

**Emergency Telephone Number:**
24H/7d service
- Canada: CANUTEC 1-613-996-6666
- US: CHEMTREC: 1-800-424-9300 or 1-703-527-3887
- GERMANY: CHEMTREC 0800-181-7059
- UK: CHEMTREC: (+44)-870-8200418
- CHEMTREC China: 4001-204937
- International CHEMTREC: +1 703-741-5970 or +1-703-527-3887

### 2. HAZARDS IDENTIFICATION

**OSHA Regulatory Status:**
This chemical is not considered hazardous by the United States 2012 OSHA Hazard

Label Elements:

Pictogram: None
Signal Word: None
Hazard statements: None
Precautionary Statements: None

Hazards not otherwise classified (HNOC)

None.

Potential health effects

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

Eye Contact: May cause mechanical irritation. Avoid contact with eyes.

Skin Contact: May cause mechanical irritation and skin drying. Avoid contact with skin. No cases of sensitization in humans have been reported.

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: Adverse health effects are not expected. See Section 11.

Carcinogenicity: 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, See Section 11

Medical Conditions Aggravated by Exposure: Asthma, Respiratory disorder
3. COMPOSITION/INFORMATION ON INGREDIENTS

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

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS No</th>
<th>weight-%</th>
<th>Trade secret</th>
</tr>
</thead>
<tbody>
<tr>
<td>Synthetic Amorphous, Pyrogenic Silica</td>
<td>112945-52-5</td>
<td>&gt; 99.9</td>
<td>-</td>
</tr>
</tbody>
</table>

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

Other Information:
The hyphen (-) means “not applicable”

4. FIRST AID MEASURES

FIRST AID MEASURES

Skin Contact: Wash thoroughly with soap and water. Seek medical attention if symptoms develop.

Eye contact: Flush eyes immediately with large amounts of water for 15 minutes. Seek medical attention if symptoms develop.

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.

Most important symptoms and effects, both acute and delayed

Symptoms: The most important known symptoms and effects are described in Section 2 and/or in Section 11.

Indication of any immediate medical attention and special treatment needed

Note to physicians: Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Silica is non-combustible, therefore no extinguishing media needs to be identified.

Unsuitable Extinguishing Media: None.

Specific hazards arising from the chemical: None.

Hazardous combustion products: None.

Protective equipment and

Wear suitable protective equipment. In the event of fire, wear self-contained breathing
6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions: Avoid dust formation. Ensure adequate ventilation. Use personal protective equipment. See also Section 8.

For emergency responders: Use personal protection recommended in Section 8.

Environmental Precautions: Contain spilled product on land, if possible. Local authorities should be advised if significant spillages cannot be contained.

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: 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 labelled containers. See Section 13.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling: 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 discharges. All metal parts of the mixing and processing equipment must be earthed/grounded. Ensure all equipment is electrically earthed/grounded before beginning transfer operations. Fine dust is capable of penetrating electrical equipment and may cause electrical shorts.

General hygiene considerations: Handle in accordance with good industrial hygiene and safety practice

Conditions for safe storage, including any incompatibilities

Storage Conditions: Keep containers tightly closed in a dry and well-ventilated place. Do not store together with volatile chemicals as they may be adsorbed onto product. Store at ambient conditions. Keep in properly labeled containers.

Incompatible materials: None known.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure guidelines: The table below is a summary. Please see the specific legislation for complete information.
<table>
<thead>
<tr>
<th>Country</th>
<th>Exposure Limit</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Australia</strong></td>
<td>2 mg/m³, TWA, Respirable</td>
<td></td>
</tr>
<tr>
<td><strong>Austria MAK</strong></td>
<td>4 mg/m³, TWA, Inhalable fraction</td>
<td></td>
</tr>
<tr>
<td><strong>Finland</strong></td>
<td>5 mg/m³</td>
<td></td>
</tr>
<tr>
<td><strong>Germany TRGS 900</strong></td>
<td>4 mg/m³, TWA, Inhalable fraction</td>
<td></td>
</tr>
<tr>
<td><strong>India</strong></td>
<td>10 mg/m³, TWA</td>
<td></td>
</tr>
<tr>
<td><strong>Ireland</strong></td>
<td>2.4 mg/m³, TWA, Respirable dust</td>
<td></td>
</tr>
<tr>
<td><strong>Norway</strong></td>
<td>4 mg/m³, TWA</td>
<td></td>
</tr>
<tr>
<td><strong>Switzerland</strong></td>
<td>6 mg/m³, TWA, Inhalable fraction</td>
<td>2.4 mg/m³, TWA, Respirable fraction</td>
</tr>
<tr>
<td><strong>UK WEL</strong></td>
<td>2.4 mg/m³, TWA, Respirable fraction</td>
<td></td>
</tr>
<tr>
<td><strong>US OSHA PEL</strong></td>
<td>6 mg/m³ (54 FR2701)</td>
<td></td>
</tr>
</tbody>
</table>

**NOTE:**

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

**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.

**Personal protective equipment [PPE]**

**Respiratory Protection:** Approved respirator may be necessary if local exhaust ventilation is not adequate.

**Hand Protection:** Wear protective gloves to prevent skin drying. Use protective barrier cream before handling the product. Wash hands and other exposed skin with mild soap and water.

**Eye/face Protection:** Wear eye/face protection. Wear safety glasses with side shields (or goggles).

**Skin and Body Protection:** Wear suitable protective clothing. Wash clothing daily. Work clothing should not be allowed out of the workplace.

**Other:** Handle in accordance with good industrial hygiene and safety practice. Emergency eyewash and safety shower should be located nearby.

**Environmental exposure controls:** In accordance with all local legislation and permit requirements as applicable for dusts.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks • Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Solid</td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>Powder</td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>White</td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not Applicable</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>3.6-4.5</td>
<td>In-house testing</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>1700 °C</td>
<td>NIOSH Pocket Guide to Chemical Hazards</td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>2230 °C</td>
<td>NIOSH Pocket Guide to Chemical Hazards</td>
</tr>
<tr>
<td>Evaporation Rate</td>
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<td>Not Applicable</td>
</tr>
<tr>
<td>Vapor pressure</td>
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</tr>
<tr>
<td>Vapor Density</td>
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<td>Not Applicable</td>
</tr>
<tr>
<td>Density</td>
<td>2.2 g/cm³</td>
<td>@ 20 °C</td>
</tr>
<tr>
<td>Bulk Density</td>
<td>30 - 150 kg/m³</td>
<td>DIN/ISO 787:11</td>
</tr>
<tr>
<td>Specific Gravity at 20°C:</td>
<td>2.2</td>
<td>According to OECD 105</td>
</tr>
<tr>
<td>Water solubility</td>
<td>Slightly soluble</td>
<td>No information available</td>
</tr>
<tr>
<td>Solubility(ies):</td>
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</tr>
<tr>
<td>Partition Coefficient</td>
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</tr>
<tr>
<td>(n-octanol/water):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decomposition temperature</td>
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<td>Not Applicable</td>
</tr>
<tr>
<td>Viscosity</td>
<td></td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Kinematic viscosity</td>
<td></td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Dynamic viscosity</td>
<td></td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Oxidizing Properties</td>
<td></td>
<td>No oxidizing properties</td>
</tr>
<tr>
<td>Softening point</td>
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<td>Not Applicable</td>
</tr>
<tr>
<td>VOC content (%)</td>
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</tr>
<tr>
<td>% Volatile (by Volume)</td>
<td></td>
<td>Not Applicable</td>
</tr>
<tr>
<td>% Volatile (by Weight)</td>
<td></td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Surface Tension</td>
<td></td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>
10. STABILITY AND REACTIVITY

Reactivity: Not reactive. Substance is an inert inorganic solid.

Stability: Stable under recommended handling and storage conditions.

Possibility of hazardous reactions: None under normal processing.

Hazardous polymerization: Hazardous polymerization does not occur.

Conditions to avoid: None known.

Incompatible materials: None known.

Explosion data
Will not cause dust explosion. See also Section 9.

Sensitivity to Mechanical Impact: None.

Sensitivity to Static Discharge: This material is an inorganic dust and will not create nor support conditions that would result in a dust explosion or fire. 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.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral LD50: LD50/oral/rat = > 5000 mg/kg. No deaths occurred and no signs of toxicity were seen
Inhalation LC50: Due to the product's physical characteristics, no suitable testing procedure is available during the observation periods after single oral administration of silica (OECD 401).

Dermal LD50: LD50/dermal/rabbit = >2000 mg/kg. Very slight transient erythema in one animal. No signs of systemic or organ toxicity (OECD 402).

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.

Sensitization: No experimental animal data are available. No cases of sensitization in humans have been reported.

Mutagenicity: 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: 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: No effects on reproductive organs or fetal development have been reported in animal toxicity studies.

STOT - single exposure: Based on available data, specific target organ toxicity is not expected after single oral, single inhalation, or single dermal exposure.

STOT - repeated exposure: 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.

Based on available data, a STOT-RE classification is not warranted.

Aspiration Hazard: Based on industrial experience and available data, no aspiration hazard is expected.

12. ECOLOGICAL INFORMATION

Aquatic Toxicity: Fish (Brachydanio rerio) LC50 (96 h): >10,000 mg/l; (Method: OECD 203) No acute toxicity to Daphnia with EL and EL₅₀ ranging from >1000 to 10,000 mg/L (OECD 202)

ENVIRONMENTAL FATE

Persistence and degradability: The methods for determining biodegradability are not applicable to inorganic substances

Bioaccumulation: Not expected due to physicochemical properties of the substance.
13. DISPOSAL CONSIDERATIONS

Disclaimer: Information in this section pertains to the product as shipped in its intended composition as described in Section 3 of this SDS. 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: Unused product is not a hazardous waste under U.S. RCRA, 40 CFR 261.

Disposal considerations: Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION

DOT

<table>
<thead>
<tr>
<th>UN/ID no</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Proper Shipping Name</td>
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<tr>
<td>Hazard Class</td>
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<tr>
<td>Packing group</td>
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ICAO (air)

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<th>UN/ID no</th>
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<tbody>
<tr>
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</tr>
<tr>
<td>Hazard Class</td>
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<tr>
<td>Packing group</td>
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</table>

IATA

<table>
<thead>
<tr>
<th>UN/ID no</th>
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<tbody>
<tr>
<td>Proper Shipping Name</td>
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<td>Hazard Class</td>
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<td>Packing group</td>
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</table>

IMDG

<table>
<thead>
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<th>Not regulated</th>
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</thead>
<tbody>
<tr>
<td>Proper Shipping Name</td>
<td>Not regulated</td>
</tr>
</tbody>
</table>
Hazard Class | Not regulated
---|---
Packing group | Not regulated

**RID**

UN/ID no | Not regulated
Proper Shipping Name | Not regulated
Hazard Class | Not regulated
Packing group | Not regulated

**ADR**

UN/ID no | Not regulated
Proper Shipping Name | Not regulated
Hazard Class | Not regulated
Packing group | Not regulated

---

**15. REGULATORY INFORMATION**

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

**Hazard Classification**


Canada - WHMIS Classification (HPR, SOR/2015-17) See Section 2 for Hazard Classification. This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the M/SDS contains all the information required by the Hazardous Products Regulations.

**International Inventories**

- **TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory | Complies
- **DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List | Complies
- **EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances | Complies
- **ENCS** - Japan Existing and New Chemical Substances | Complies
- **IECSC** - China Inventory of Existing Chemical Substances | Complies
- **KECL** - Korean Existing and Evaluated Chemical Substances | Complies
- **PICCS** - Philippines Inventory of Chemicals and Chemical Substances | Complies
- **AICS** - Australian Inventory of Chemical Substances | Complies
- **NZIoC** - New Zealand Inventory of Chemicals | Complies
- **TCSI** - Taiwan Chemical Substance Inventory | Complies

**US Federal Regulations**

**TSCA Section 12(b) Export Regulations:**
This product does not contain any chemicals which require export notification under TSCA 12(b).

**SARA Section 302 (40 CFR 355) Extremely Hazardous Substances:**
No components are listed as extremely hazardous substances under SARA Section 302.
SARA 311/312 Hazard Categories
See GHS classification in section 2 for applicable SARA 311/312 hazard categories under the revised 40 CFR 370 (June 13, 2016).

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.

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.

U.S. State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
<th>Louisiana</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silica 7631-86-9</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>-</td>
</tr>
</tbody>
</table>

16. OTHER INFORMATION

Pharmaceutical Use:
Not recommended

Food Additive Use:
Not recommended

References:

Contacts:
Disclaimer:
The information set forth is based on information that Cabot Corporation believes to be accurate. No warranty, expressed or implied, is intended. The information is provided solely for your information and consideration and Cabot assumes no legal responsibility for use or reliance thereon. In the event of a discrepancy between the information on the non-English document and its English counterpart, the English version shall supersede.

Prepared by: Cabot Corporation - Safety, Health and Environmental Affairs
Revision date: 02-Dec-2018

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End of Safety Data Sheet