SECTION 1: IDENTIFICATION

Product Identifier

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

Product Name: SOLTEX FS2100P, FS2120P.

Intended Use of the Product  Various, Rheological control, Flow agent, Thickening agent, Glossing or Matting agent, Reinforcing agent in: Coatings, Adhesives and/or sealants, Inks, Silicone Elastomer, Rubber products, Suspension, Dispersion, Paints, Cosmetics, Hygiene and Sanitary products, Other.

SECTION 2: HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

GHS-US/CA Classification: This chemical is considered hazardous by the US 2012 OSHA Hazardous Communication Standard (29 CFR 1910.1200)

Combustible dust

Label Elements

GHS-US/CA Labeling

Hazard Pictograms (GHS-US/CA) : None.


Hazard Statements (GHS-US/CA) : May form combustible dust concentrations in air.

Precautionary Statements (GHS-US/CA) : Keep away from all ignition sources including heat, sparks, and flame.

Prevent dust accumulations to minimize explosion hazard.

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

Potential Environmental Effects: None known. See Section 12.

Hazards not otherwise classified (HNOC)

Do not expose to temperatures above 150°C. Hazardous products of combustion can include carbon monoxide and carbon dioxide.
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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms: Silicon Dioxide, Synthetic Amorphous Silica, Pyrogenic (Fumed) Amorphous Silica
Name: Soltex Hydrophobic Fumed Silica FS2110D.

<table>
<thead>
<tr>
<th>Name</th>
<th>Product Identifier</th>
<th>Weight %</th>
<th>GHS Ingredient Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Siloxanes and Silicones, di-Me, reaction products with silica</td>
<td>(CAS No) 67762-90-7</td>
<td>100</td>
<td>Combustible dust</td>
</tr>
</tbody>
</table>

SECTION 4: FIRST AID MEASURES

Description of First-aid Measures

Inhalation: If coughing, 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.

Contact skin/eyes: Wash thoroughly with soap and water. Seek medical attention if symptoms develop. Flush eyes immediately with large amounts of water for 15 minutes. Seek medical attention if symptoms develop.

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.

SECTION 5: FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water. Dry chemical. Carbon dioxide (CO2). Foam. A fog is recommended if water is used.

Unsuitable Extinguishing Media: DO NOT USE high pressure media which could cause formation of a potentially explosible dust-air mixture.

Specific hazards arising from the chemical: May release formaldehyde when heated to high temperatures in the presence of air. Formaldehyde is a known skin and lung sensitizer and is regulated as a carcinogen.


Protective equipment and Precautions for firefighters: Wear suitable protective equipment. In the event of fire, wear self-contained breathing apparatus.

Risk of Dust Explosion: Dust may form explosive mixture in air. See also Section 9.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions: Avoid dust formation. Remove all sources of ignition. 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: If the spilled material contains dust or has the potential to create dust, use explosion-proof vacuums and/or cleaning systems suitable for combustible dusts. 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. Dry sweeping is not recommended. Pick up and transfer to properly labelled containers. See Section 13.

SECTION 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. Dust may form explosible mixture in 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
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beginning transfer operations. Fine dust is capable of penetrating electrical equipment and may cause electrical shorts.

**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.

Dust deposits should not be allowed to accumulate on surfaces, as these may form an exploisable mixture if they are released in the atmosphere in sufficient concentrations.

**Incompatible materials:**
None known.

**SECTION 8: EXPOSURE CONTROLS/PERSOAL PROTECTION**

**Exposure guidelines:**
There are no exposure limits identified for this product. Exposure limits for components are stated below.

**Amorphous Silica, The regulatory exposure limits are found under the general silica, CAS RN 7631-86-9:**

- **Australia:** 2 mg/m³, TWA, Respirable
- **Austria MAK:** 4 mg/m³, TWA, Inhalable fraction
- **Finland:** 5 mg/m³
- **Germany TRGS 900:** 4 mg/m³, TWA, Inhalable fraction
- **India:** 10 mg/m³, TWA
- **Ireland:** 2.4 mg/m³, TWA, Respirable dust
- **Norway:** 1.5 mg/m³, TWA, Respirable dust
- **Switzerland:** 4 mg/m³, TWA
- **UK WEL:** 6 mg/m³, TWA, Inhalable fraction / 2.4 mg/m³, TWA, Respirable fraction
- **US OSHA PEL:** 6 mg/m³ (54 FR2701)

**Dust, or Particulates Not Otherwise Specified:**

- **Belgium:** 10 mg/m³, TWA, Inhalable / 3 mg/m³ TWA, Respirable
- **China:** 8 mg/m³, TWA / 10 mg/m³, STEL
- **France:** 10 mg/m³, TWA Inhalable dust / 5 mg/m³, TWA Respirable dust
- **Italy:** 10 mg/m³, TWA, Inhalable / 3 mg/m³, TWA, Respirable
- **Malaysia:** 10 mg/m³, TWA, Inhalable / 3 mg/m³, TWA, Respirable
- **Spain:** 10 mg/m³, VLA, Inhalable / 3 mg/m³, VLA, Respirable
- **US ACGIH - PNOS:** 10 mg/m³, TWA, Inhalable / 3 mg/m³, TWA, Respirable
- **US OSHA - PEL:** 15 mg/m³, TWA, Total dust / 5 mg/m³, TWA, Respirable

**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.
SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Solid</td>
</tr>
<tr>
<td>Appearance</td>
<td>White powder</td>
</tr>
<tr>
<td>Odor</td>
<td>None</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not applicable</td>
</tr>
<tr>
<td>pH</td>
<td>4.0-7.0</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Melting Point/Freezing Point</td>
<td>1700°C (NIOSH Pocket Guide to Chemical Hazards)</td>
</tr>
<tr>
<td>Boiling Point/Boiling Range</td>
<td>2230°C (NIOSH Pocket Guide to Chemical Hazards)</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Auto-ignition Temperature</td>
<td>&lt;=750°C. ASTM E-1491 Dust Cloud Due to the low density of this product and the volume of the dispersion vessel, testing at a concentration above 600g/m³ were unable to be performed. For this reason, the MAIT is reported less than or equal to 750°C. Higher concentrations may produce ignitions below 750°C (MAIT - Minimum Auto-Ignition Temperature)</td>
</tr>
<tr>
<td>Minimum Ignition Temperature</td>
<td>&gt;450°C. ASTM E-2021 Dust layer Neither of the tests conducted at a temperature of 450°C (the upper limit of the apparatus) met the criteria for ignition based on temperature rise. For this reason, the MIT was reported as &gt; 450°C</td>
</tr>
<tr>
<td>Minimum Ignition Energy</td>
<td>&gt;1 J. ASTM E-2019</td>
</tr>
<tr>
<td>Ignition Energy</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not available</td>
</tr>
<tr>
<td>Explosion Limit in Air-Lower (g/m³)</td>
<td>300&lt;MEC&lt;400 (g/m³). ASTM E-1515 (MEC - Minimum Explosible Concentration)</td>
</tr>
<tr>
<td>Explosion Limit in Air-Upper (g/m3)</td>
<td>Not available</td>
</tr>
<tr>
<td>Maximum Absolute Explosion Pressure</td>
<td>5.22 bar/sec. ASTM E-1226 (20L Sphere Test)</td>
</tr>
<tr>
<td>Maximum Rate of Pressure Rise</td>
<td>140 bar/sec. ASTM E-1226 (20L Sphere Test)</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Density</td>
<td>Not available</td>
</tr>
<tr>
<td>Bulk Gravity</td>
<td>Not available</td>
</tr>
<tr>
<td>Specific Gravity at 20°C</td>
<td>Not available</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>Slightly soluble (According to OECD 105)</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td>Not available</td>
</tr>
<tr>
<td>Partition Coefficient (N-Octanol/Water)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>&gt;400°C (Bulk Powder test- Diffusion cell)</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Oxidizing Properties</td>
<td>No oxidizing properties</td>
</tr>
<tr>
<td>Softening Point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>VOC Content (%)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Kst Value</td>
<td>38. ASTM E-1226 (20L Sphere Test)</td>
</tr>
<tr>
<td>Dust Explosion Classification</td>
<td>ST1. Weak Explosion ASTM E-1226</td>
</tr>
</tbody>
</table>

End point is listed "not applicable" due to the inherent properties of the substance
"Not available" indicates testing has not been performed

SECTION 10: STABILITY AND-reactivity

Stability: Stable under recommended handling and storage conditions.
Stable up to >400°C. No exotherm (BulkPowder test - Diffusion cell).

Reactivity: Not reactive.

Possibility of hazardous reactions: None under normal processing.

Conditions to avoid: Do not expose to temperatures above 150°C. Keep away from heat and sources of ignition. Avoid dust formation. May release formaldehyde when heated to high temperatures in the presence of air. Formaldehyde is a known skin and lung sensitizer and is regulated as a carcinogen.

Hazardous polymerization: Hazardous polymerization will not occur.

Incompatible materials: None known.
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Explosion data: See Section 9.

Sensitivity to Mechanical Impact: None

Sensitivity of Static Discharge: Dust may form exploisible mixture in air. Avoid dust formation. 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.


SECTION 11: TOXICOLOGICAL INFORMATION

Information given is based on data obtained from this substance or from similar substances.

Acute toxicity

Oral LD50: LD50/oral/rat = > 5000 mg/kg. No deaths occurred and no signs of toxicity were seen during the observation periods after single oral administration of the substance (OECD 423).

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

Dermal LD50: No data is available on the product itself.

Skin corrosion/irritation: Primary irritation index = 0/8 @ 24 hr. Not classified as an irritant (OECD 404).

Serious eye damage/eye irritant: 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. Contains no known sensitizers. May release formaldehyde when heated to high temperatures in the presence of air. Formaldehyde is a known skin and lung sensitizer and is regulated as a carcinogen.

Mutagenicity: Not mutagenic in Ames test. Negative in the chromosome aberration test in Chinese hamster ovary (CHO) cells.

Carcinogenicity: No data are available on the product itself.

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.

Treated Synthetic Amorphous Silica: No evidence of cancer in rats exposed for 24 months at 100 mg/kg/d (diet). (ECETOC JACC Report 051 - Synthetic Amorphous Silica, September 2006).

Reproductive and Developmental Toxicity: No effects on reproductive organs have been reported in animal toxicity studies. No developmental effects observed on progeny in dietary study (doses of 0 or 500 mg/kg/d). (ECETOC JACC Report 051 - Synthetic Amorphous Silica, September 2006).

TOT-single exposure: Specific target organ toxicity is not expected after single oral, single inhalation, or single dermal exposure.

STOT-single exposure: No data are available on the product itself.

Treated Synthetic Amorphous Silica: Repeated dose toxicity: oral (rat), 5 to 8 weeks, no significant treatment-related adverse effects at doses of up to 2000 mg/kg/d. (ECETOC JACC Report 051 - Synthetic Amorphous Silica, September 2006).

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.

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

Based on industrial experience and available data, no aspiration hazard is expected.
SECTION 12: ECOLOGICAL INFORMATION

Information given is based on data from similar substances.

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).

Pollutant potential

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.

Distribution to Environmental Compartments: Not available.

Other adverse effects: Not available.

SECTION 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.

Unused and Uncontaminated Product: Product, as supplied, should be disposed of in accordance with the regulations issued by the appropriate federal, state and local authorities. Same consideration should be given to containers and packaging.

SECTION 14: TRANSPORT INFORMATION

DOT

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

ICAO (air)

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

IATA

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

IMDG

UN/ID no Not regulated
Proper Shipping Name Not regulated
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
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SECTION 15: REGULATORY INFORMATION

This chemical is considered hazardous by the US 2012 OSHA Hazardous Communication Standard (29 CFR 1910.1200)

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**
- **Acute Health Hazard**: No
- **Chronic Health Hazard**: No
- **Sudden release of pressure hazard**: No
- **Reactive Hazard**: No
- **Fire hazard**: Yes

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.

**US State Regulations**

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

**US 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>X</td>
<td>X</td>
<td>X</td>
<td>-</td>
</tr>
</tbody>
</table>

**Canada - WHMIS Classification (HPR, SOR/2015-17)**
See Section 2 for Hazard Classification. This chemical is considered hazardous.
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.
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International Regulations
Listed on the EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on the Canadian DSL (Domestic Substances List)/NDSL (Non-Domestic Substances List)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on TCSI (Taiwan Chemical Substance Inventory)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the United States TSCA (Toxic Substances Control Act) Section 8(b) inventory

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision Date  : 07/18/2019
Other Information  : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada's Hazardous Products Regulations (HPR).

References:
National Technical Information Service, Springfield, VA. p. 277

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.