

Section 1 - Chemical Product and Company Identification**Product Name** Silica Insulation Fibers**CAS#** 7631-86-9**Generic Name** Silica Fibers**Formula** SiO₂**Chemical Name:** Amorphous Silica**Hazard Label** SPGF-01**Manufacturer Information**Johns Manville
Performance Materials Division
P.O. Box 5108
Denver, CO 80127 USATelephone: 303-978-2000 8:00AM-5:00PM M-F
Internet Address: <http://www.jm.com>
Emergency: 800-424-9300 (Chemtrec, In English)**Trade Names:** Q-Fiber® Amorphous High-Purity Silica Fiber; Q-Fiber® Bulk; Q-Fiber® Felt**Section 2 - Composition / Information on Ingredients**

CAS #	Component	Percent
7631-86-9	Amorphous Silica Fibers	>98.5

Additional Component Information

Average fiber diameter = 0.3-0.8 microns

The World Health Organization (WHO) and the National Institute for Occupational Safety and Health (NIOSH) classify fibers with diameters <3 microns as respirable (able to be inhaled into the lower lung).

Section 3 - Hazards Identification**Emergency Overview**

APPEARANCE AND ODOR: White, binderless silica fibers in bulk or blanket form. No significant odor.

Application: Filtration media, in papers, and as insulation in aerospace vehicles.

Inhalation of excessive amounts of dust from the product may cause temporary upper respiratory irritation and/or congestion--remove individual to fresh air.

Potential Health Effects**Summary**

Breathing dust from this product may cause a scratchy throat, congestion, and slight coughing. Getting dust or fibers on the skin, or in the eyes may cause itching, rash, or redness. Additional health and safety information is provided in Section 11 of this material safety data sheet.

Inhalation

Irritation of the upper respiratory tract (scratchy throat), coughing, and congestion may occur in extreme exposures.

Skin

Temporary irritation (itching) or redness may occur.

Ingestion

This product is not intended to be ingested (eaten). If ingested, it may cause temporary irritation to the gastrointestinal (digestive) tract.

Eyes

Temporary irritation (itching) or redness may occur.

Ears

Temporary irritation (itching) or redness may occur.

Primary Routes of Entry (Exposure)

Inhalation (breathing dust), skin, and eye contact.

Target Organs

Nose (nasal passages), throat, lungs, skin, eyes.

Medical Conditions Aggravated by Exposure

Pre-existing chronic respiratory, skin, or eye diseases or conditions.

Section 4 - First Aid Measures

First Aid: Inhalation

Remove to fresh air. Drink water to clear throat, and blow nose to remove dust.

First Aid: Skin

Wash gently with soap and water to remove dust. Wash hands before eating or using the restroom.

First Aid: Ingestion

Product is not intended to be ingested or eaten. If this product is ingested, irritation of the gastrointestinal (GI) tract may occur, and should be treated symptomatically. Rinse mouth with water to remove fibers, and drink plenty of water to help reduce the irritation. No chronic effects are expected following ingestion.

First Aid: Eyes

Do not rub or scratch your eyes. Dust particles may cause the eye to be scratched. Flush eyes with large amounts of water for 5-15 minutes. If irritation persists, contact a medical professional.

First Aid: Ears

Wash exposed skin with soap and water. If irritation develops in the inner ear, seek medical attention.

Section 5 - Fire Fighting Measures

Flash Point: Not applicable

Upper Flammable Limit (UFL): Not applicable

Auto Ignition: Not determined

Rate of Burning: Not determined

General Fire Hazards

There is no potential for spontaneous fire or explosion.

Extinguishing Media

Carbon dioxide (CO₂), water, water fog, dry chemical.

Fire Fighting Equipment/Instructions

No special procedures are expected to be necessary for this product. Normal fire fighting procedures should be followed to avoid inhalation of smoke and gases.

Method Used: Not applicable

Lower Flammable Limit (LFL): Not applicable

Flammability Classification: Not determined

Section 6 - Accidental Release Measures

Containment Procedures

Pick up large pieces. Vacuum dusts. If sweeping is necessary, use a dust suppressant such as water. Do not dry sweep dust accumulation or use compressed air for clean-up. These procedures will help to minimize potential exposures.

Clean-Up Procedures

Avoid the generation of dusts during clean-up.

Section 7 - Handling and Storage

Handling Procedures

Avoid breathing dusts from this material. Use protective equipment as described in Section 8 of this material safety data sheet when handling uncontained material.

Storage Procedures

Warehouse storage should be in accordance with package directions, if any. Material should be kept clean, dry, and protected from moisture.

Section 8 - Exposure Controls / Personal Protection

A: Component Exposure Limits

ACGIH, OSHA, and NIOSH have not developed exposure limits for any of this product's components.

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment: Eyes/Face

Safety glasses with sideshields are recommended to keep dust out of the eyes.

Personal Protective Equipment: Ears

Use ear protection (earplugs, hood, or earmuffs) to prevent airborne dust or fibers from entering the ear, if necessary.

Personal Protective Equipment: Skin

Leather or cotton gloves should be worn to prevent skin contact and irritation.

Personal Protective Equipment: Respiratory

A respirator should be used if ventilation is unavailable, or is inadequate for keeping dust and fiber levels below the applicable exposure limits. In those cases, use a NIOSH-certified disposable or reusable particulate respirator with an efficiency rating of N95 or higher (under 42 CFR 84) when working with this product. For exposures up to five times the established exposure limits use a quarter-mask respirator, rated N95 or higher; and for exposures up to ten times the established exposure limits use a half-mask respirator (e.g., MSA's DM-11, Racal's Delta N95, 3M's 8210), rated N95 or higher. Operations such as sawing, blowing, tear out, and spraying may generate airborne fiber concentrations requiring a higher level of respiratory protection. For exposures up to 50 times the established exposure limits use a full-face respirator, rated N99 or higher.

Ventilation

In fixed manufacturing settings, local exhaust ventilation should be provided at areas of cutting to remove airborne dust and fibers. General dilution ventilation should be provided as necessary to keep airborne dust and fibers below the applicable exposure limits and guidelines. The need for ventilation systems should be evaluated by a professional industrial hygienist, while the design of specific ventilation systems should be conducted by a professional engineer.

Personal Protective Equipment: General

Wear a cap, a loose-fitting, long-sleeved shirt and long pants to protect skin from irritation. Exposed skin should be washed with soap and water after handling product. Clothing should be washed separately from other clothes, and the wash machine should be rinsed thoroughly (run empty for a complete wash cycle). This will reduce the chance of silica fiber transfer to other clothing.

Section 9 - Physical & Chemical Properties

Appearance: White, binderless silica fibers in bulk or blanket form. Physical State: Solid Vapor Pressure: Not determined Boiling Point: Not determined Solubility (H₂O): Nil Freezing Point: Not applicable Percent Volatile: 0	Odor: No significant odor pH: Not determined Vapor Density: Not determined Melting Point: >704°C/1300 Specific Gravity: variable Evaporation Rate: Not applicable VOC: Not determined
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Section 10 - Chemical Stability & Reactivity Information

Chemical Stability

This product is not reactive. This is a stable material.

Hazardous Polymerization

Will not occur.

Section 11 - Toxicological Information

Acute Toxicity**A: General Product Information**

Dust from this product is a mechanical irritant, which means that it may cause temporary irritation or scratchiness of the throat, and/or itching of the eyes and skin.

B: Component Analysis - LD50/LC50**Amorphous Silica Fibers (7631-86-9)**

Oral LD50 Rat: >5000 mg/kg; Dermal LD50 Rabbit: >2000 mg/kg

Component Carcinogenicity**Amorphous Silica Fibers (7631-86-9)**

IARC: Group 3 - Not Classifiable (IARC Monograph 68, 1997; Supplement 7, 1987)

Section 12 - Ecological Information
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Ecotoxicity**A: General Product Information**

No data available for this product.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

Amorphous Silica Fibers (7631-86-9)

96 Hr LC50 Brachydanio rerio: 5000 mg/L [static]
72 Hr EC50 Selenastrum capricornutum: 440 mg/L
48 Hr EC50 Ceriodaphnia dubia: 7600 mg/L

Section 13 - Disposal Considerations

US EPA Waste Number & Descriptions**A: General Product Information**

This product, as supplied, is not regulated as a hazardous waste by the U.S. Environmental Protection Agency (EPA) under Resource Conservation and Recovery Act (RCRA) regulations. Comply with state and local regulations for disposal. If you are unsure of the regulations, contact your local Public Health Department, or the local office of the EPA.

B: Component Waste Numbers

No EPA Waste Numbers are applicable for this product's components.

Disposal Instructions

Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.

Section 14 - Transportation Information
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Shipping Name: This product is not classified as a hazardous material for transport.

Section 15 - Regulatory Information
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US Federal Regulations**A: General Product Information**

SARA 311/312: This product is not classified as hazardous under SARA 311/312.

B: Component Analysis

None of this products components are listed under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), or CERCLA (40 CFR 302.4).

State Regulations**A: General Product Information**

Other state regulations may apply. Check individual state requirements.

B: Component Analysis - State

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS #	CA	FL	MA	MN	NJ	PA
Amorphous Silica Fibers	7631-86-9	Yes	No	Yes	Yes	Yes	Yes

Other Regulatory Information**A: General Product Information**

No information available for the product.

B: TSCA Status

This product and its components are listed on the TSCA 8(b) inventory.

None of the components listed in this product are listed on the TSCA Export Notification 12(b) list.

C: Component Analysis - Inventory

Component	CAS #	TSCA	DSL	EINECS
Amorphous Silica Fibers	7631-86-9	Yes	Yes	Yes

Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CAS #	Minimum Concentration
Amorphous Silica Fibers	7631-86-9	1 %

Section 16 - Other Information

Other Information

Prepared for:
Johns Manville
Performance Materials Division

Material Name: Micro-Fiber Aerospace Products**Material Safety Data
Sheet ID: 1104**

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Prepared by:
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The information herein is presented in good faith and believed to be accurate as of the effective date given. However, no warranty, expressed or implied, is given. It is the buyer's responsibility to ensure that its activities comply with Federal, State or provincial, and local laws.

Date	MSDS #	Reason
08/01/00	1104-1.0000	New MSDS authoring system.
01/20/03	1104-1.0001	Update Sect. 11, IARC Carcinogenicity to Group 3, not classifiable.
11/04/03	1104-1.0002	Section 1 product names: Moved Unbonded Microfiber to MSDS 1015. Moved Micro-Strand 253 to MSDS 1105. Deleted Micro-Strand 753.
03/10/06	1104-1.0003	Section 1 removed High Purity Micro-Quartz from trade names. Section 2 updated composition for silica fibers. Minor edits throughout.

This is the end of MSDS # 1104