

QUIETFLEX

Material Name: Silver Jacket Flexduct

Material Safety Data Sheet ID: 091103-SJ

Section 1 – Chemical Product and Company Identification

Product Name: “Rip Stop” Silver Jacket Flexduct 30, 40, 70, 80, and 85 Series

Quietflex Manufacturing Company LP
4518 Brittmoore Road
Houston, Texas 77041 USA
(713) 849-2163
www.quietflex.com

Emergency Contacts:

Emergencies ONLY (after 5am CST and weekends):
CHEMTREC (24 hours everyday): 1-800-424-9300

Environmental, Health, & Safety Information (7am--3pm CST): 1-713-861-2500

Section 2 – Composition / Information on Ingredients

CAS #	Component	Percent (%) by weight
65997-17-3	Glass, oxide chemicals (textile)	50 - 65
25104-55-6	Urea extended phenol-formaldehyde resin (cured)	10 – 18
25038-59-9	Polyester Film (polyethylene terephthalate)	18 - 20
NA	Galvanized Wire	1 - 3
NA	Masking Tape	1 - 2
1163-19-5	Decabromodiphenyl oxide (fire retardant coating)	< 1
1309-64-4	Antimony Trioxide (Tape facing and/or coatings may contain this material)	< 0.1

Component Related Regulatory Information

Glass, oxide chemicals (textile), CAS# 65997-17-3; OSHA PEL 15 mg/m³ Total Dust; 5 mg/m³ Respirable Dust

Urea extended phenol-formaldehyde resin (cured), CAS# 25104-55-6; OSHA PEL None

Polyester Film (polyethylene terephthalate), CAS# 25038-59-9; OSHA PEL None

Decabromodiphenyl oxide, CAS# 1163-19-5; OSHA PEL None

Antimony Trioxide, CAS# 1309-64-4; OSHA PEL 0.5 mg/m³; Note that exposure to airborne antimony trioxide is not expected to occur due to adhesive bonding with the facings of this product, and its intended uses. Exposure limit is given for reference only.

Additional Component Information

No additional information available

Section 3 – Hazards Identification

Appearance and Odor: Fibers incorporated into duct core with bonded metalized polyester film jacket and core that includes fiberglass thread mesh reinforcement with little to no discernable odor.

Emergency Overview: Acrid smoke may be generated in a fire. Exposure to high temperatures may release airborne concentrations of thermal decomposition products such as carbon monoxide, especially in enclosed or poorly ventilated areas.

Potential Health Effects

Inhalation: Dusts and fibers from this product may cause mechanical irritation of the nose, throat, and respiratory tract. Decomposition products caused by overheating the Polyethylene Terephthalate film outer jacket and inner core may cause respiratory irritation.

Skin Contact: Dusts and fibers from this product may cause temporary mechanical irritation to the skin. Molten polymer from polyester film can cause thermal burns. Ends of galvanized support wire can present cut and puncture hazard.

Eye Contact: Dust and fibers from this product may cause temporary mechanical irritation to the eyes. Decomposition products caused by overheating the Polyethylene Terephthalate film outer jacket and inner core may cause irritation to the eyes.

Ingestion: Ingestion of this product is unlikely, however, ingestion may produce gastrointestinal irritation.

Medical Conditions Aggravated by Exposure: Chronic respiratory or skin conditions may temporarily worsen from exposure to this product.

Section 4 – First Aid Measures

Inhalation: If inhaled, remove the affected person to fresh air. If irritation persists, seek medical attention.

Skin Contact: For skin contact, wash with mild soap and running water. Use a washcloth to help remove glass fibers. To avoid further irritation, do not rub or scratch affected areas. Rubbing or scratching may force fibers into the skin. If molten polyester film contacts skin, cool with water. Do not attempt to remove material from skin. If irritation persists, seek medical attention.

Eye Contact: Immediately flush eyes with plenty of running water for a minimum of 15 minutes. If irritation persists, seek medical attention.

Ingestion: Ingestion of this product is unlikely. If it does occur, irritation of the gastrointestinal tract may occur. Rinse mouth with water to remove fibers.

Note to Physicians: This product is a mechanical irritant, and is not expected to produce any chronic health effects from acute exposures. Treatment should be directed toward removing the source of irritation with symptomatic treatment as necessary.

Section 5 – Fire Fighting Measures

Flash Point: Not applicable

Method Used: Not applicable

Upper Flammability Limit: No applicable

Lower Flammability Limit: Not applicable

Flammability Classification: Non-flammable

Film jacket and core can be combustible only by remaining in contact with a direct flame. If flame source is stationary, the film will shrink away and self extinguish.

Extinguishing Media: Dry chemical, foam, carbon dioxide, and water fog.

Unusual Fire & Explosion Hazards: This product may release acrid smoke during a sustained fire.

Fire Fighting Instructions: Normal fire fighting procedures should be followed to avoid inhalation of smoke and off gasses.

Hazardous Combustion Products: Primary combustion products are carbon monoxide, carbon dioxide, ammonia, and water. Other undetermined compounds could be released in small quantities.

Section 6 – Accidental Release Measures

Containment Procedures: Pick up large pieces. Vacuum dusts and loose fibers. If sweeping is necessary, use dust suppressant such as water. Do not dry sweep dust. Never use compressed air for clean up.

Clean-Up Procedures: Avoid the generation of airborne dust and fibers during clean up activities.

Special Procedures: None.

Section 7 – Handling and Storage

Handling Procedures: Use protective equipment as described in Section 8 of this data sheet when handling this product.

Storage Procedures: Material should be kept dry and sheltered from wind and rain. Store away from ignition sources.

Section 8 – Exposure Controls / Personal Protection

Exposure Guidelines

A. General Product Information

Continuous Filament Fiber Glass: This product is manufactured using a continuous glass filament. Because of the large diameter of these fibers (typically 6 µm to 25 µm), they are non-respirable, and are not associated with respiratory diseases.

B. Exposure Limits

Fiber Glass (fibrous glass) CAS 65997-17-3

ACGIH: 1 f/cc TWA for respirable fibers longer than 5 µm with a diameter less than 3 µm (Listed under “Synthetic vitreous fibers”) (related to Glass wool fibers) 10 mg/m³ TWA (inhalable particulate); 3 mg/m³ TWA (respirable particulate) (related to Particulates not otherwise classified (PNOC))

OSHA: 1 f/cc (respirable) TWA (Voluntary exposure limit established in an agreement between the North American Insulation Manufacturers Association (NAIMA) and OSHA per the Health and Safety Partnership Program (HSPP) agreement for Synthetic Vitreous Fibers (SVF).

Ventilation: Local exhaust ventilation should be utilized as necessary to maintain exposures to below regulatory limits. Dust collection systems should be used in operations where excessive handling of the material is expected.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Respiratory Protection:

Fiber Glass: If thermal decomposition products are not anticipated, a properly fitted NIOSH approved N95 series dust respirator (such as the 3M model 8210) should be used when high dust levels as encountered, the level of glass fibers in the air exceeds the occupational exposure limits, if irritation occurs, or handling the material in poorly ventilated areas.

A careful assessment of the process environment by a Certified Industrial Hygienist (CIH) should be made to determine the appropriate level of respiratory protection required.

Use respiratory protection in accordance with the manufacturers’ instructions, and in accordance with a Respiratory Protection Program in compliance with 29 CFR 1910.134.

Skin Protection: Long sleeves, long pants, and gloves is recommended to protecting against skin contact with the material. Skin balm or barrier cream may be helpful in preventing irritation.

Eye Protection: Protective eyewear such as side-shield glasses or goggles is recommended.

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Section 9 – Physical & Chemical Properties

Appearance: Metallic Jacket with light colored fiberglass

Physical State: Solid

Vapor Pressure: Not applicable

Boiling Point: Not applicable

Specific Gravity: Not applicable

Evaporation Rate: Not applicable

Odor: Slight organic

pH: Not applicable

Vapor Density: Not applicable

Solubility (H₂O): Negligible

Freezing Point: Not applicable

Viscosity: Not applicable

Section 10 – Chemical Stability & Reactivity Information

Stability: This is a stable material

Conditions to Avoid: None expected

Incompatible Materials: None expected

Hazardous Decomposition Products: Primary combustion products are carbon monoxide, carbon dioxide, ammonia, and water. Other undetermined compounds could be released in small quantities.

Hazardous Polymerization: Will not occur.

Section 11 – Toxicological Information

Acute and Chronic Toxicity:

A. **General Product Information:** Dust from this product is a mechanical irritant. Temporary irritation of the throat, eyes, and/or skin may be experienced. When this material is subjected to high temperatures during forming processes, formaldehyde gas may be released. Ammonia gas and carbon monoxide may also be released. Formaldehyde is a lung sensitizer, causing an asthma-like allergy. Future exposures may cause allergic reactions characterized by shortness of breath, wheezing, coughing, and chest tightness. Breathing carbon monoxide can cause headaches, nausea, dizziness, and can be fatal at high concentrations.

B. Component Analysis – LD₅₀/LC₅₀:

Urea extended phenol-formaldehyde resin (25104-55-6)

Oral LD₅₀ Rat: 7 gm/kg

Oral LD₅₀ Mouse: 7 gm/kg

Antimony trioxide (1309-64-4)

Oral LD₅₀ Rat: 34600 mg/kg

C. Component Analysis – LD₅₀/LC₅₀ for Chemicals Which May be Released During Use

Ammonia (7664-41-7)

Inhalation LC₅₀ Rat: 2000 ppm/4H

Inhalation LC₅₀ Mouse: 4230 ppm/4H

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Carbon Monoxide (630-08-0)

Inhalation LC50 Rat: 1807 ppm/4H
Inhalation LC50 Mouse: 2444 ppm/4H

Decabromodiphenyl oxide (1163-19-5)

Oral LD50 Rat: >5 gm/kg

Formaldehyde (50-00-0)

Flow-through LC50 Fathead Minnow: 24.1 mg/L (96 hr)
Flow-through LC50 Bluegill: 0.10 mg/L (96 hr)

Fiber Glass Wool: In October 2001, the International Agency for Research on Cancer (IARC) classified fiber glass wool as a Group 3 “not classifiable as to its carcinogenicity to humans”. The 2001 decision was based on human studies and animal research that have not shown an association between inhalation exposure to dust from fiber glass wool and the development of respiratory disease. This classification replaces the IARC finding in 1987 of a Group B designation “possibly carcinogenic to humans”.

In May 1997, the American Conference of Governmental Industrial Hygienists (ACGIH) adopted an A3 carcinogen classification for glass wool fibers. The ACGIH A3 classification considers glass wool to be carcinogenic in experimental animal at exceptionally high doses that is not truly representative of what would be expected in actual worker exposures. The organization also reviewed epidemiological data and reached the opinion that they do not indicate an increased risk of cancer in human exposure. The ACGIH concluded that based on all available scientific data, glass wool is not likely to cause cancer in humans except in cases where uncommon or unlikely routes and exceptionally high levels of exposure exist.

Carcinogenicity:

OSHA, ACGIH, NTP, and IARC carcinogen lists have been checked for those components with CAS registry numbers.

Antimony trioxide (1309-64-4)

ACGIH: A2 – suspected human carcinogen (production)
IARC: monograph 47, 1989 (Group 2B (possibly carcinogenic to humans))

Decabromodiphenyl oxide (1163-19-5)

IARC: monograph 71, 1999; monograph 48, 1990 (Group 3(not classifiable))

Fiber Glass Wool (Fibrous Glass) (65997-17-3)

ACGIH: A3 – animal carcinogen (related to respirable glass wool fibers)
IARC: Group 3 – “not classifiable as to its carcinogenicity to humans” (related to respirable glass wool fibers)
NTP: Reasonably anticipated to be human carcinogen (related to glass wool) (possible select carcinogen)

Section 12 – Ecological Information

Component Analysis – Ecotoxicity – Aquatic Toxicity

Antimony trioxide (1309-64-4)

96 Hr LC50 fathead minnow: 833.0 mg/L
96 Hr LC50 bluegill: 530 mg/L

Section 13 – Disposal Considerations

US EPA Waste Number & Descriptions

- A. **General Product Information:** Disposal of this material is not expected to be characteristic of a hazardous waste under RCRA.
- B. **Component Waste Numbers:** No EPA waste Numbers as expected to be applicable to this product.

Disposal Instructions: Dispose of waste material in accordance with all applicable Local, State, and Federal regulatory requirements.

Section 14 – Transportation Information

US DOT Information: This product is not classified as a hazardous material for transport.

Section 15 – Regulatory Information

US Federal Regulations

- A. **General Product Information:** No information available for this product
- B. **Component Analysis:** This material contained one of more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 302.4):

Antimony trioxide (1309-64-4) CERCLA: 1000 lb final RQ; 454 kg final RQ

Decabromodiphenyl oxide (1163-19-5) SARA 313: 1.0 % de minimis concentration

The following is provided to aid to assist with SARA Section 311 and 312 reporting requirements:

SARA 311/312

Acute Health Hazard: Yes
Chronic Health Hazard: Yes
Fire Hazard: No
Sudden Release of Pressure Hazard: No
Reactive Hazard: No

- C. **Clean Air Act:** The following components appear on the 1990 Clean Air Act – List of Hazardous Air Pollutants: None

State Regulations

- A. **General Product Information:** No additional information available.
- B. **Component Analysis – State**

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This product contains components that appear on one or more of the following state hazardous substance lists:

Component	CAS #	CA	MA	MN	PA	TX	FL
Fiber Glass (fibrous glass) (¹ related to mineral wool fiber)	65997-17-3	Yes ¹	Yes ¹	Yes ¹	Yes ¹	No	No
Decabromodiphenyl oxide	1163-19-5	No	Yes	Yes	Yes	No	No
Antimony trioxide	1309-64-4	Yes	Yes	Yes	Yes	No	No

The State of California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) includes this statement:

"WARNING! This product contains a chemical known to the state of California to cause cancer".

Other Regulations

A. **General Product Information:** No additional information available.

B. Component Analysis – Inventory

Component	CAS #	TSCA	DSL	EINECS
Fiber Glass (fibrous glass)	66997-17-3	Yes	Yes	Yes
Urea extended phenol-formaldehyde (resin)	25104-55-6	Yes	Yes	No
Polyethylene Terephthalate (film)	25038-59-9	Yes	Yes	No
Decabromodiphenyl oxide (fire retardant)	1163-19-5	Yes	Yes	Yes
Antimony trioxide (fire retardant)	1309-64-4	Yes	Yes	Yes

C. Component Analysis – WHMIS IDL

Component	CAS #	Minimum Concentration
Fiber Glass (fibrous glass)	65997-17-3	1% item 798 (884) related to fibrous glass
Antimony trioxide (fire retardant)	1309-64-4	1%; English item 126; French Item 1691

WHMIS Status: Controlled

WHMIS Classification: D2A – Carcinogenicity
D2B – Irritation

Section 16 – Other Information**Other Hazard Ratings****HMIS Hazard Rating**

Acute Health: 1

Flammability: 0

Reactivity: 0

HMIS Personal Protection: to be supplied by user depending on handling and application.**NFPA Hazard Rating**

Acute Health: 2

Flammability: 2 (packaging)

Reactivity: 0

NFPA Unusual Hazards: This product meets NFPA 90A and 90B Standards**Manufacturers Statement**

The information contained within this material safety data sheet is presented in good faith, and believed to be accurate as of the effective date of issue, but the manufacturer makes no warranty, expressed or implied, with respect to the information contained in this document. The manufacturer makes no representations and assumes no liability for any direct, incidental, or consequential damages resulting from its use.

The manufacturer recommends consulting a Certified Industrial Hygienist (CIH) regarding specific personal protective measures to be implemented in end use handling and processing applications.

Revision Summary

This MSDS was developed for the "Rip Stop" Silver Jacket Flexduct product. September 2003

Additional copies of this MSDS may be obtained by calling (713) 841-2163. Requests may also be made through our website at www.quietflex.com.

This is the end of MSDS 091103-SJ