



MEDICAL-AID CO.,LTD.  
メディカル・エイド株式会社

1-11, 3-Chome Technostage, Izumi-shi  
Osaka, 594-1144, Japan  
TEL:81-725-53-3270 / FAX:81-725-53-5337

## Material Safety Data Sheet

Effective date :5-17-96

MSDS No:0021\_  
Revision date : 3-10-02

### Section 1. Product Identification

**Product Name:** Silver Fiber **CAS Number:** SDO 000  
**Chemical Formula:** Proprietary **General use:** Conductive Fiber  
**Other Designations:** PC50000 series

### Section 2. Composition/Ingredients Information

Ingredient Name	CAS Number	%Wt or Vol
Silver	7440-22-4	>8 to<25
Nylon	25038-54-4	>75 to<92

### Section 3. Hazard Identification

**Primary Entry Route:** Skin contact

**Acute Effects:**

Ingestion: Toxic, contains silver (defined by 40 CFR pt372)  
Inhalation: irritate, avoid breathing dust  
Eyes: None noted  
Skin: None noted

Health	1
Flammability	1
Reactivity	0

**Carcinogenicity:** None noted

**Chronic Effects:** None noted

### Section 4. First Aid Measures

Handle in accordance with good industrial hygiene and safety practices. These practices include avoiding unnecessary exposure and removal of the material from eyes, skin and clothing.

### Section 5. Fire-Fighting Measures

**Flash Ignition Temperature:** 581°F (ASTM D1929-77)

**Auto Ignition Temperature:** 905°F

**Extinguishing Media:** Water or Class A Extinguisher

**Special Firefighting Precaution:** Firefighters should wear full protective clothing including self-contained breathing apparatus. Equipment should be decontaminated after use.

**Special Fire Hazards:** Combustible thermoplastic may melt, drip, and produce heavy black smoke.

### Section 6. Accidental Release

Sweep up and place into containers for appropriate disposal. See disposal considerations below.

## Section 7. Handling and Storage

**Storage Requirements:** Store in a cool dry place recommended.

**Handling Precautions:** Silver fibers do not present an inhalation hazard during routine shipping and handling. Under aggressive physical manipulation (Carding, Weaving, High Speed operations, etc.) the potential exists for the generation of respirable silver/nylon fibers and dust. See toxicological information below for potential toxic effects.

**Regulatory Requirements:** None

## Section 8. Personal Protection Equipment Measures

**Ventilation:** Provide natural or mechanical ventilation to control exposure levels below airborne exposure limits. Exhaust system should meet NFPA 91 Standard.

**Respiratory Protection:** Use NIOSH/MSHA approved respiratory protection equipment when airborne exposure limits are exceeded. Observe respirator use limitations specified by the manufacturer or NIOSH/MSHA. A Respiratory protection program must comply with 29 CFR 1910.134

### Airborne Exposure Limits:

Silver Fiber

OSHA PEL: None Established

ACGIH TLV: None Established

Silver (Component)

OSHA PEL: 8hr TWA - 0.01 ppm (fume/dust)

STEL: - 2.0 ppm (fume/dust)

ACGIH TLV: 8hr TWA -0.20 ppm (fume/dust)

Nylon (Component)

OSHA PEL: 8hr TWA - 15.0 ppm (fume/dust)

STEL: - N/A

ACGIH TLV: 8hr TWA -10 ppm (fume/dust)

**Protective Clothing:** None required.

**Comments:** Good industrial hygiene should be practiced to avoid eye and skin contact.

## Section 9. Physical and Chemical Properties

**Physical State:** Solid

**Appearance:** metallic silver fiber

**Odor:** None

**Solubility:** Insoluble in water

## Section 10. Stability and Reactivity

**Stability:** Stable

### Incompatibility:

Nylon - None

Silver - Hydrogen peroxide decomposes violently on contact.

Exposure to acetylene may form explosive acetylide.

Exposure to ammonia may form explosive fulminate.

**Hazardous Polymerization:** Does not occur.

**Hazardous Decomposition Products:** Above 660°F CO, CO<sub>2</sub>, HCN, NO<sub>x</sub>, Ag<sub>2</sub>O and soot may occur.

## Section 11. Toxicological Information

The potential effects of exposure to metals dust generated under aggressive use conditions are discussed below:

Silver – excessive absorption and accumulation of silver in the body can cause argyria, a cosmetic change (bluish-gray discoloration of the skin, mucous membranes and eyes). Localized argyria may be due to penetration of the skin by metallic silver particles. Generalized argyria may follow prolonged inhalation or swallowing of silver dusts. Silver foil or silver discs under the skin of rats has produced local tumors.

### Section 12. Ecological Information

**Ecotoxicity:** Not Determined

**Environmental Fate:**

Environmental Transport: Not Determined

Environmental Degradation: Not Determined

Soil Adsorption/Mobility: Not Determined

### Section 13. Disposal Consideration

Silver Fiber is not a Hazardous Waste as Defined by 40 CFR 261. Dispose of waste materials by metal recovery, incineration, sanitary landfill or other method in accordance to local, state, or federal laws. Silver is a CERCLA listed substance. Consult your attorney or regulatory official for information on disposal.

### Section 14. Transportation Information

**DOT Shipping Name:** None, Non Hazardous      **Packing Group:** None

**DOT Hazard Class:** NA, Non Regulated      **Label:** None

**ID Number:** None

**Special Provisions:** None

### Section 15. Regulatory Information

**USEPA**

RCRA Hazardous Waste: None, Non-Hazardous

RCRA Hazard Classification: None

CERCLA Hazardous Substance: Listed; under criteria of (50 CFR 13456)

CERCLA Reportable Quantity: Not listed

SARA EHS: Not listed

SARA 313/312: This product contains the following substances that are defined as toxic chemicals under, and subject to reporting requirements of title III of 40 CFR part 372: Silver CAS# 7440-22-4

OSHA: Silver is considered a hazardous substance under criteria of (29 CFR1910.1200)

TSCA: Not Listed; This product contains substances that are considered toxic under 15 CFR Part 12.2602: Silver CAS# 7440-22-4

Air Contaminant: Not listed

**State Regulations**

None noted

### Disclaimer

The information set forth herein has been gathered from standard reference materials. Test data is to the best knowledge and belief of Sauquoit Industries, Inc. accurate and true. Such information is offered solely for your consideration, investigation and verification. It is not suggested or guaranteed that the safety precautions or procedures mentioned are the only ones that exist. Sauquoit Industries Inc. makes no warranties, express or implied, with respect to the use of such information or the use of the specific material identified herein in combination with any other material or process and assumes no responsibility therefore.