

MATERIAL SAFETY DATA SHEET

X-Static® Silver Nylon Cloth

FIRST AID (GET MEDICAL ATTENTION IF SYMPTOMS PERSIST)

EYES: NONE NEEDED
SKIN: NONE NEEDED
INHALATION: NONE NEEDED
INGESTION: NONE NEEDED

HEALTH: 1 FLAMMABILITY: 1 REACTIVITY: 0 PRECAUTIONS: NONE

To be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident.

DISTRIBUTED BY: ACOR Orthopaedic, Inc.
18530 S. Miles Pkwy.
Cleveland, OH 44128

EMERGENCY NUMBER: 216-662-4500

PHYSICAL DATA

Odor: none
Appearance: silver fabric

REACTIVITY

Stability: stable
Materials to avoid: hydrogen peroxide, acetylene, ammonia
Hazardous polymerization will not occur.

FIRE FIGHTING

Decomposition point: 350°C
Decomposition products: carbon monoxide, carbon dioxide, hydrogen cyanide, nitrous oxides
Flash point: 305°C
Combustion products: silver oxide

PERSONAL PROTECTION

Handling / storing: general storage
Eyes: none required
Skin: none required
Ventilation: general

HEALTH HAZARD DATA - NOT HAZARDOUS

Route of entry: eyes, skin, ingestion
Eye contact: non-irritating
Skin absorption: non-irritating
Ingestion: excessive quantities cause argyria
Toxicology: none reported

No significant eye, skin, ingestion or inhalation hazard when good personal hygiene practices are followed.

SPILLS & DISPOSAL

Fiber is not biodegradable; do not flush to drains.

This product is not a federal hazardous waste according to U.S. EPA regulation 40 CFR 261.

If material cannot be salvaged, dispose of in accordance with all local, state and federal regulations.



Distributor's Name:
Acor Orthopaedic, Inc.
18530 South Miles Parkway
Cleveland, Ohio 44128

Telephone: 216-662-4500
Emergency : 216-662-4500

MATERIAL SAFETY DATA SHEET

Product Name: X-Static[®] silver coated nylon fiber

PRODUCT IDENTIFICATION

Chemical Name:	N/A
DOT Proper shipping name:	N/A
DOT Hazard Class/ID No.:	N/A
DOT Label:	N/A
U.S Freight Classification:	N/A
Reportable Quantity (RQ)	N/A
Under Dot (49 CFR) & CERCLA Regulations:	N/A

SARA Notification

Hazard Categories under
criteria of SARA Title III
rules (40 CFR Part 370): N/A

Section 313 Hazardous Chemical(s):

This product contains the following substances that are defined as toxic chemicals under and subject to the reporting requirements of, Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

Silver, CAS No. 7440-22-4 (listed as silver compounds)

In addition, these components are considered hazardous chemicals under the criteria of the OSHA Hazard Communication standard (29 CFR 1910.1200)

PRECAUTIONARY MEASURES AND FIRST AID

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.

OCCUPATIONAL CONTROL PROCEDURES

Eye Protection: "X-Static[®]" silver coated nylon fiber does not cause significant eye irritation or eye toxicity requiring special protection. Use good industrial practice to avoid eye contact.

Skin Protection: "X-Static[®]" silver coated nylon fiber does not present a significant skin concern requiring special protection. Use good industrial hygiene practice.

Respiratory Protection: Avoid breathing dust or fiber particles. Use NIOSH/MSHA approved respiratory protection equipment when airborne exposure limits (see below) are exceeded. Consult respirator manufacturer to determine appropriate type equipment for given application. Observe respirator use limitations specified by NIOSH/MSHA or the manufacturer. Respiratory protection programs must comply with 29 CFR 1910.134.

Ventilation: Provide natural or mechanical ventilation to control exposure levels below airborne limits (see below). If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment. Consult NFPA Standard 91 for design of exhaust systems.

Airborne Exposure Limits:

Product: "X-Static[®]" silver coated nylon fiber.

OSHA PEL: None established

ACGIH TLV: None established

Component: Silver (0.1-40 Percent of product)

OSHA PEL/8-hr time-weighted avg: 0.01 ppm (fume & dust)

STEL/...: 2 ppm (fume & dust)

ACGIH TLV/...: 0.2 ppm (fume & dust)

Component: Nylon (60-99.9 Percent of product)

OSHA PEL/8-hr time-weighted avg: 15 ppm (fume & dust)

ACGIH TLV/...: 10 ppm (fume & dust)

FIRE PROTECTION INFORMATION

Flash Ignition Temperature:

Nylon – 581 degrees Fahrenheit (Method ASTM D1929-77)

Silver – N/A

Auto Ignition Temperature:

Nylon – 905 degrees Fahrenheit

Silver – N/A

Extinguishing Media: Water or other Class A extinguishing agent

Special Firefighting Procedure: Fire fighters and others who may be exposed to products of combustion should wear full protective clothing including self contained breathing apparatus. Equipment should be thoroughly decontaminated after use.

Unusual Fire and Explosion Hazards: Combustible thermoplastic material and may melt and drip and produce heavy black smoke.

REACTIVITY DATA

Stability:

Nylon - Stable

Silver - Stable

Incompatibility:

Nylon - None

Silver - Hydrogen Peroxide decomposes violently on contact

- Acetylene forms explosive acetylide

- Ammonia forms fulminate-like explosive compound

Hazardous Decomposition Products:

Nylon - Above 660°F CO, CO₂, HCN, NO_x and soot may occur.

Silver - Above melt point fumes of silver oxide may occur.

Hazardous Polymerization:

Nylon - Does not occur

Silver - Does not occur

HEALTH EFFECTS SUMMARY

Effects of Exposure

X-Static[®] silver coated nylon fibers consist of a continuous nylon fiber substrate with a metallic surface coating. Skin contact is expected to be the primary route of occupational exposure to X-Static[®] although airborne respirable fibers may occur and must be protected against. Occupational exposure to this material has not been reported to cause significant adverse health effects. Due to its chemical and physical properties, X-Static[®] does not appear to possess any toxicological properties which would require special handling other than good industrial hygiene and safety practices. X-Static[®] is not expected to present an inhalation hazard during routine shipping or handling. Under aggressive conditions of physical manipulation (carding, weaving, etc.), there is a potential for generation of respirable fibers and metal dusts. If respirable metal dusts are generated, see Toxicological data below for potential toxic effects of silver and copper.

Toxicological Data

For potential health effects of exposure to any metal dusts generated under aggressive use conditions of silver, a summary of effects reported in the scientific literature on silver is discussed below:

Silver

Excessive absorption and accumulation of silver in the body has been known cause argyria, a cosmetic change (bluish-gray discoloration of the skin, mucous membranes and eyes). Argyria may follow prolonged inhalation of silver dusts or swallowing of silver salts.

Additional Information

Threshold Limit Values (TLV's) have been established by the American Conference of Governmental Industrial Hygienists for silver. For further information on these materials, please refer to the current edition of the Documentation of the *Threshold Limit Values and Biological Exposure Indices*.

PHYSICAL STATE

Appearance: A solid coated fiber

Odor: None

Color: Metallic silver

SPILL, LEAK & DISPOSAL INFORMATION

Waste Disposal: X-Static[®] silver coated fabric is not a "hazardous waste" as that term is defined in 40 CFR 261 "Identification and Listing of Hazardous Waste". Dispose of waste by recovery of metals, incineration, sanitary landfill or other method in accordance with all applicable local, state and federal laws and regulations.

Spill or Leakage Procedures: Sweep up and place into containers for disposal as appropriate.

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Number: MSDS0203

Supersedes: New

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