MATERIAL SAFETY DATA SHEET

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name: **BH – ReflectSleeve 1415®**

Manufacturer:
Federal-Mogul Corporation
26555 Northwestern Highway
Southfield, MI 48033

MSDS# BH-066

24hr Emerg # (Infotrac): 1-800-535-5053
International: 001-352-323-3500
Non-Emerg #: 248-354-9844

SECTION 2: COMPOSITION/INFORMATION ON HAZARDOUS INGREDIENTS

BH – ReflectSleeve 1415® is a flexible, aluminized, low-bulk fiberglass sleeving used to protect components in high temperature areas. It features an outer layer of spiral laminated aluminum film that reflects radiant heat while providing a barrier against moisture and other damaging elements. The inner layer of fiberglass has natural air pockets which increase insulating efficiency. The material is sewn together by aramid or fiberglass thread. Fray is minimized by a high temperature resin and the product is both fluid-and chemical-resistant.

Although several of the ingredients used to formulate this product may be hazardous in the raw state, the manufacturing process results in a solid, infusible form, binding and otherwise, rendering the product inert. The constituents identified below may be present in quantities greater than 1% (0.1% for carcinogens) that may be released from the product by such operations as overheating, burning, machining, abrading, or riveting.

The information in this document provides the minimum criteria for safe usage and handling of this product. Companies using this product should develop their own occupational health program to protect employees from injury or adverse health effects.

Ingredient	CAS No.	% Weight	OSHA PEL	ACGIH TLV (2005)
Continuous filament glass fibers	65997-17-3	90	1 f/cc*	1 f/cc or 5 mg/m^3
Aluminum Foil	7429-90-5	8	15 mg/m^3 (total dust)	10 mg/m^3 (total dust)
Poly(terephthaloychloride)/ p-phenylenediamine (p-Aramide)	26125-61-1	<2	None Established	None Established

* proposed

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

The product is not considered hazardous, but operations (e.g., overheating, burning, machining, abrading, or riveting) that can create airborne dust should be avoided.

POTENTIAL HEALTH EFFECTS

Inhalation: Dust or vapors may cause respiratory irritation.

Skin: Prolonged contact may cause skin irritation.

Eye: Dust particles may cause irritation or corneal injury due to mechanical action.

Ingestion: Not a probable route of entry.

POTENTIAL HEALTH EFFECTS (continued)

Carcinogenicity:

COMPONENT NTP IARC OSHA
Aluminum Foil
No No No
Continuous filament glass fibers
No 3 No
Poly(terephthaloychloride)/ p-phenylenediamine (p-Aramide)
No No No

Symptoms and Effects of Exposure to Selected Individual Components

ALUMINUM FLAKE
Acute - May cause eye irritation, rashes or dermatitis, dizziness, headaches, nausea, vomiting, narcosis, and other nervous system effects.
Chronic – May cause damage to liver, kidney, or other internal organs.

CONTINUOUS FILAMENT GLASS FIBERS
Acute - May cause irritation to skin, eyes, nose, and throat. May cause skin rash, conjunctivitis, coughing and sneezing.
Chronic – Although some studies of fibrous and mineral wool workers have shown a link to lung cancer in humans, those studies have clearly provided no evidence of a link between lung cancer and continuous filament fiberglass exposure.

Poly(terephthaloychloride/p-phenylenediamine (p-aramide)
May cause mild skin, eye, and nasal passage irritation. Overexposure to respirable fibers by inhalation may cause mild irritation to the upper respiratory tract with discomfort and cough. Chronic exposure to fiber dust may cause permanent lung injury.

SECTION 4: FIRST AID MEASURES

Inhalation: Move to fresh air. If irritation persists, seek medical attention.

Eye Contact: Rinse thoroughly with ample amounts of water. If irritation persists, seek medical attention.

Skin Contact: Wash exposed area with soap and cool water. Avoid scratching irritated areas. If irritation persists, seek medical attention.

Ingestion: Not a probable route of entry.

SECTION 5: FIRE FIGHTING MEASURES

This product is self-extinguishing.

Flashpoint: N/A **LEL:** N/A **UEL:** N/A **Autoignition Temperature:** N/A

Extinguishing Media: Use appropriate media for surrounding materials.

Unusual Fire and Explosion Hazards: None known.

Special Fire-Fighting Procedure: Wear self-contained breathing apparatus when extinguishing a fire.

SECTION 6: ACCIDENTAL RELEASE MEASURES

If dust is generated, remove the dust by vacuuming or wet-mopping. Vacuums used for this purpose should be equipped with HEPA filters. Do not use compressed air to blow dust from surfaces.

SECTION 7: HANDLING AND STORAGE

Store in a cool, dry place. If dust is generated during shipping, remove the dust from the container by vacuuming or wet-mopping. Vacuums used for this purpose should be equipped with HEPA filters. Do not use compressed air to blow dust from surfaces.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation Protection: Any operation which may produce dust, including machining, grinding, riveting, or abrading this product, should be adequately exhausted to prevent inhalation of dust.

Respiratory Protection: Use a NIOSH-approved respirator if there is a potential for exposure to exceed applicable PELs or TLVs. (See 29 CFR 1910.134, OSHA Respiratory Protection Standard.)

Skin Protection: If skin irritation occurs, gloves and other protective garments may be worn. For cutting operations, gloves and loose-fitting clothing are recommended to be worn.

Eyes: Wear safety glasses or goggles when cutting the material.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point:	N/A	**Vapor Pressure:**	N/A
Melting Point:	500°F	**Vapor Density (air = 1):**	N/A
pH:	N/A	**% Volatile:**	N/A
Specific Gravity:	2.2	**Evaporation Rate:**	N/A
Water Solubility:	Insoluble	**Form, Color, and Odor:**	Solid, aluminum color, odorless

SECTION 10: STABILITY AND REACTIVITY

Stability:	Stable at normal temperatures and storage conditions.
Incompatibility (Materials/Conditions to Avoid):	Strong oxidizing agents
Hazardous Polymerization:	Will not polymerize.
Decomposition Products:	Thermal decomposition will occur at temperatures above 250°C and may produce carbon monoxide, carbon dioxide, and oxides of nitrogen.

SECTION 11: TOXICOLOGICAL INFORMATION

Inhalation:	Refer to Section 3
Skin:	Refer to Section 3
Eye:	Refer to Section 3
Ingestion:	Refer to Section 3
Acute:	None known
Chronic:	None known

SECTION 12: ECOLOGICAL INFORMATION

Not available.

SECTION 13: DISPOSAL CONSIDERATIONS

Federal and state law regulates disposal of scrap material or dust as solid waste. Contact local regulatory agencies for guidance.

SECTION 14: TRANSPORTATION INFORMATION

Proper Shipping Name:	Not regulated
Hazard Class:	N/A
Identification Number:	N/A
Packing Group:	N/A
Shipping Label:	None
Additional Marking Requirement:	None

SECTION 15: REGULATORY INFORMATION

U.S. TSCA:	The chemicals used to manufacture this product are listed on the U.S. Toxic Substances Control Act (TSCA) Inventory.
California Proposition 65:	This product does not contain ingredients known to the State of California to cause cancer, birth defects or other reproductive effects.
SARA Title III – Section 313 Supplier Notification:	This product contains aluminum, a chemical subject to SARA Title III/CERCLA "reportable quantities" (RQs) and/or "threshold planning quantities" (TPQs) and/or is classified as a "Toxic Chemical" under the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and 40 CFR 372.

SECTION 15: REGULATORY INFORMATION (CONTINUED)

RCRA Hazardous Waste Code:	Not available.
CERCLA Hazardous Substances:	Not available.
OSHA:	OSHA has established a PEL for aluminum, but not for the product.
WHMIS Classification:	Not available.

SECTION 16: OTHER INFORMATION

Abbreviations:

CAS No.:	Chemical Abstract Services Number
OSHA PEL:	U.S. Occupational Safety and Health Administration, Permissible Exposure Limit
ACGIH TLV:	American Conference of Governmental Industrial Hygienists, Threshold Limit Value (2005)
f/cc:	Fibers per cubic centimeter of sampled air
mg/m^3:	Milligrams of contaminant per cubic meter of sampled air, on a weight-to-volume basis
N/A:	Not Applicable
IARC:	International Agency for Research on Cancer
NTP:	National Toxicology Program
HEPA:	High-efficiency particulate air
NIOSH:	National Institute of Occupational Safety and Health

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