



## MATERIAL SAFETY DATA SHEET

### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** BH – ThermFlex 1213®

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

**MSDS#** BH-118

**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 – ThermFlex 1213® is a heat-treated and saturated sleeving material that provides superior protection against conducted and convected heat. Constructed of braided fiberglass, ThermFlex 1213 is used to protect components in high temperature areas, and insulate components that must maintain elevated temperatures to maximize performance. Typical applications include EGR tubes, exhaust system components, wire harnesses, hoses, and fuel and hydraulic lines.

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	85	1 f/cc*	1 f/cc or 5 mg/m <sup>3</sup>
Acrylic latex	Various	7.5	None established	None established
Distilled water	7732-18-5	7	None established	None established
AquaBlak®	Proprietary	0.4	None established	None established

Note: AquaBlak contains up to 50% carbon black.

\* 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 vapor 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
Acrylic latex	No No No
Carbon black (component in AquaBlak <sup>®</sup> )	No 2B No
Continuous filament glass fibers	No 3 No

**Symptoms and Effects of Exposure to Selected Individual Components**

**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.

**SECTION 4: FIRST AID MEASURES**

<b>Inhalation:</b>	Move to fresh air. If irritation persists, seek medical attention.
<b>Eye Contact:</b>	Rinse thoroughly with ample amounts of water. If irritation persists, seek medical attention.
<b>Skin Contact:</b>	Wash exposed area with soap and cool water. Avoid scratching irritated areas. If irritation persists, seek medical attention.
<b>Ingestion:</b>	Not a probable route of entry.

**SECTION 5: FIRE FIGHTING MEASURES**

This product is non-burning, but will begin to soften at temperatures above 730°C.

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

**Extinguishing Media:** Use appropriate media type 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

<b>Boiling Point:</b>	N/A	<b>Vapor Pressure:</b>	N/A
<b>Melting Point:</b>	1,120°C	<b>Vapor Density (air = 1):</b>	N/A
<b>pH:</b>	N/A	<b>% Volatile:</b>	N/A
<b>Specific Gravity:</b>	2.45	<b>Evaporation Rate:</b>	N/A
<b>Water Solubility:</b>	Insoluble	<b>Form, Color, and Odor:</b>	Solid, black, odorless

#### SECTION 10: STABILITY AND REACTIVITY

**Stability:** Stable at normal temperatures and storage conditions

**Incompatibility (Materials/Conditions to Avoid):** None known

**Hazardous Polymerization:** Will not polymerize

**Decomposition Products:** In a sustained fire, binders may begin to decompose and produce oxides of carbon and 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:** AquaBlak® contains up to 50% carbon black, an ingredient known to the State of California to cause cancer, birth defects or other reproductive effects.

**SARA Title III – Section 313 Supplier Notification:** This product does not contain chemicals subject to SARA Title III/CERCLA “reportable quantities” (RQs) and/or “threshold planning quantities” (TPQs) and are classified as “Toxic Chemicals” under the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and 40 CFR 372.

**RCRA Hazardous Waste Code:** Not available.

#### SECTION 15: REGULATORY INFORMATION (CONTINUED)

**CERCLA Hazardous Substances:** Not available.

**OSHA:** OSHA has established a PEL for carbon black (a component of AquaBlak), 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<sup>3</sup>: 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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