

Material Safety Data Sheet

Product Name – M10B Semi-Met Disc Brake Pad - Asbestos Free

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: M10B Semi-Met Disc Brake Pad (Asbestos Free)

EDGE CODE: BX-TM2-FF, BX-BR6-FF, BB-406-FF

OTHER/GENERIC NAMES: Friction Material; Mixture of proprietary ingredients; See Section 3.

PRODUCT USE:

Motor Vehicle Braking Systems

DISTRIBUTOR: Honeywell Friction Materials
234 East Maple Road
Troy, MI 48083

FOR MORE INFORMATION CALL:

(Monday-Friday, 8:00am - 5:00pm
Eastern Standard Time)
Honeywell Friction Materials
Health, Safety & Environmental Quality
(248) 629 - 3670

IN CASE OF EMERGENCY CALL:

(24 Hours/Day, 7 Days/Week)
Spill Response - Chemtrec: 1-800-424-9300
Honeywell Information: 1-800-707-4555

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Brownish-gray solid with no odor. Friction materials are not considered hazardous materials. They will not support combustion but may release irritating and potentially toxic combustion products under fire conditions. Exposure to dust during grinding, sanding or machining may cause eye and respiratory tract irritation. The hazardous components in this product are bound in a resin matrix and are not released during normal handling and use.

POTENTIAL HEALTH HAZARDS

SKIN: None expected under normal use conditions. Contact with dust may cause mild irritation. Some persons may be sensitive to residual uncured phenolic or cashew resins and develop dermatitis-like reactions similar to poison ivy.

EYES: None expected under normal use conditions. Exposure to dust may cause eye irritation.

INHALATION: None expected under normal use conditions. Inhalation of dust may cause irritation or soreness in throat, nose and respiratory tract.

INGESTION: Not an anticipated route of entry.

DELAYED EFFECTS: Ingredients are associated with lung irritation and possible lung injury from prolonged overexposure. However, the potential for exposure from this product is low because the ingredients in friction materials are physically bonded together by a resin polymer matrix.

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Ingredients found on one of the OSHA designated carcinogen lists are listed below.

<u>INGREDIENT NAME</u>	<u>NTP STATUS</u>	<u>IARC STATUS</u>	<u>OSHA LIST</u>
None known			

3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>INGREDIENT NAME</u>	<u>CAS NUMBER</u>	<u>WEIGHT %</u>
Cured Phenolic Resin encapsulating the following:	9003-35-4	Proprietary
Barium Sulfate	7727-43-7	Proprietary
Graphite	7782-42-5	Proprietary
Friction Powder	Proprietary	Proprietary
Para-Aramid Fiber	26125-61-1	Proprietary
Steel Fiber	7439-89-6	Proprietary
Coke	64743-05-1	Proprietary
Iron Oxide	1332-37-2	Proprietary

Trace impurities and additional material names not listed above may also appear in Section 15 towards the end of the MSDS. These materials may be listed for local "Right-To-Know" compliance and for other reasons.

4. FIRST AID MEASURES

** If any of the symptoms persist, seek medical attention immediately.**

SKIN: Wash skin with soap and water after handling parts. Seek medical attention for persistent irritation.

EYES: Flush eyes with cool running water if dust becomes embedded. Seek medical attention if reddening persists.

INHALATION: Remove affected person to fresh air. Seek medical attention if irritation persists.

INGESTION: Not an anticipated route of entry.

ADVICE TO PHYSICIAN: No specialized first aid or medical treatment procedures are required. Treat according to symptoms present.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Use extinguishing media appropriate for the surrounding area.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Toxic and irritating materials may be released in a fire. This friction material product, as shipped, is not considered hazardous, but machining (arcng, grinding, drilling, or chamfering) may create dusts that are combustible and should be considered hazardous. If the product is ground or machined, local exhaust in accordance with the American National Standards Institute Z9.2 is recommended. Refer to the Bendix Brake Aftermarket Technical Bulletin Rebuilder Supplier Vol. No. 80 Sheets 1-4 for additional information.

SPECIAL FIRE FIGHTING PRECAUTIONS/INSTRUCTIONS:

Self Contained Breathing Apparatus (SCBA) and full fire fighting turn-out gear (Bunk Gear) are recommended if articles are involved in a fire.

HAZARDOUS COMBUSTION PRODUCTS: Carbon monoxide, carbon dioxide, ammonia, oxides of nitrogen, phenols, aldehydes, and soot.

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6. ACCIDENTAL RELEASE MEASURES

IN CASE OF SPILL OR OTHER RELEASE: Always wear recommended personal protective equipment. No special precautions are required for intact packaging containing this product. If product is crushed, use respiratory protection equipment. Do not dry sweep product or use compressed air to clean up any residues. Use a wet method or vacuums equipped with High Efficiency Particulate (HEPA) filters to clean up any residues from this product. Wastes should be placed in dust tight containers or sealed plastic bags for disposal. Label Properly.

Spills and releases may have to be reported to Federal and/or local authorities. See Section 15 regarding reporting requirements.

7. HANDLING AND STORAGE

NORMAL HANDLING: Always wear recommended personal protective equipment including respiratory protection if dust is generated. Avoid breathing or creating dust. Although these products do not contain asbestos, it is recommended to follow the OSHA Appendix F to 1910.1001 "Work Practices and Engineering Controls for Automotive Brake and Clutch Inspection, Disassembly, Repair and Assembly - Mandatory".

STORAGE RECOMMENDATIONS: No special requirements.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: This friction material product, as shipped, is not considered hazardous, but machining (arcing, grinding, drilling or chamfering) may create dusts or airborne fibers in excess of the OSHA Permissible Exposure Limits (PEL's) for the respective ingredients and should be considered hazardous.

Packages containing this friction material product should be labeled as follows:

**CAUTION
AVOID CREATING OR BREATHING DUSTS
CONTAINS HAZARDOUS SUBSTANCES
WHICH MAY CAUSE LUNG INJURY.**

Standard industrial hygiene practices, including housekeeping and vacuuming with High Efficiency Particulate (HEPA) filters or wet cleaning work surfaces to prevent dusts from becoming airborne should be implemented and maintained.

PERSONAL PROTECTIVE EQUIPMENT

SKIN PROTECTION: None needed for normal use. In situations where prolonged contact is likely, wear impervious gloves such as rubber.

EYE PROTECTION: None needed for normal use. In situations where prolonged contact is likely, chemical safety goggles are recommended.

RESPIRATORY PROTECTION: None needed for normal use. In situations where dust is likely and the exposure limits are exceeded, a NIOSH approved particulate respirator (N95 or better filters) may be worn. Selection and use of respiratory equipment must be in accordance with OSHA 1910.134 and good industrial hygiene practice.

Other: None needed for normal use. In situations where prolonged contact is likely, wear impervious clothing as needed to prevent contact. A safety shower and eyewash should be available in the immediate work area.

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EXPOSURE GUIDELINES

<u>INGREDIENT NAME</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>	<u>OTHER LIMIT (NIOSH)</u>
Barium Sulfate	10 mg/m ³ TWA total dust	15 mg/m ³ TWA total dust 5 mg/m ³ TWA respirable fraction	5 mg/m ³ TWA Respirable dust 10 mg/m ³ TWA Total dust
Graphite	2 mg/m ³ TWA respirable fraction	15 mppcf TWA	2.5 mg/m ³ TWA Respirable dust
Friction powder	None Established	15 mg/m ³ TWA total dust 5 mg/m ³ TWA respirable fraction	None
Para-Aramid Fiber	None Established	15 mg/m ³ TWA total dust 5 mg/m ³ TWA respirable fraction	None
Steel Fiber	None Established	15 mg/m ³ TWA total dust 5 mg/m ³ TWA respirable fraction	None
Coke	None Established	15 mg/m ³ TWA total dust 5 mg/m ³ TWA respirable fraction	None
Iron Oxide	5 mg/m ³ TWA Respirable fraction	10 mg/m ³ TWA respirable fraction	None

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Brownish-gray solid brake part.		
PHYSICAL STATE:	Solid		
MOLECULAR WEIGHT:	Mixture		
CHEMICAL FORMULA:	Mixture		
ODOR:	None		
SPECIFIC GRAVITY (water = 1.0):	3-3.5 gm/cm ³		
SOLUBILITY IN WATER (weight %):	Insoluble		
pH:	Not applicable.		
BOILING POINT:	Not applicable.		
MELTING POINT:	Not applicable.		
VAPOR PRESSURE:	Not applicable.		
VAPOR DENSITY (air = 1.0):	No volatiles in product.		
EVAPORATION RATE:	Not applicable.	COMPARED TO:	None
% VOLATILES:	None		

FLAMMABLE PROPERTIES

FLASH POINT:	None.
FLASH POINT METHOD:	Not applicable.
AUTOIGNITION TEMPERATURE:	Not established.
UPPER FLAME LIMIT (volume % in air):	Not applicable.
LOWER FLAME LIMIT (volume % in air):	Not applicable.
FLAME PROPAGATION RATE (solids):	Not established.
OSHA FLAMMABILITY CLASS:	Not classified as flammable material by OSHA.

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10. STABILITY AND REACTIVITY

NORMALLY STABLE? (CONDITIONS TO AVOID): Product is stable.

INCOMPATIBILITIES: Corrosive substances.

HAZARDOUS DECOMPOSITION PRODUCTS: Toxic and irritating materials may be released in a fire. At >300°C thermal decomposition may occur generating carbon monoxide, phenolics and various hydrocarbons.

HAZARDOUS POLYMERIZATION: None.

11. TOXICOLOGICAL INFORMATION

IMMEDIATE (ACUTE) EFFECTS: Skin and eye irritation may occur on repeated contact to dusts. Inhalation of dust may cause respiratory, nose, and throat irritation.

DELAYED (SUBCHRONIC AND CHRONIC) EFFECTS: . Prolonged inhalation of dust can cause lung injury. These lung injuries may not be recognized until many years after exposure. The potential for such exposure from this product is low because the ingredients in friction materials are physically bonded together by a resin polymer matrix.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: None expected under normal use conditions. Employees with pre-existing respiratory disease may be at increased risk from exposure to dust.

OTHER DATA: None

12. ECOLOGICAL INFORMATION

No ecotoxicity data is available. This product is not anticipated to have an adverse effect on the environment.

13. DISPOSAL CONSIDERATIONS

RCRA

Is the unused product a RCRA hazardous waste if discarded? No
If yes, the RCRA ID number is:

OTHER DISPOSAL CONSIDERATIONS:

Dispose in accordance with all applicable federal, state and local regulations.

The information offered here is for the product as shipped. Use and/or alterations to the product such as mixing with other materials may significantly change the characteristics of the material and alter the RCRA classification and the proper disposal method.

14. TRANSPORT INFORMATION

US DOT HAZARD CLASS: Not Regulated

US DOT ID NUMBER: None

For additional information on shipping regulations affecting this material, contact the information number found in Section 1.

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15. REGULATORY INFORMATION

TOXIC SUBSTANCES CONTROL ACT (TSCA)

TSCA INVENTORY STATUS: Manufactured articles are not subject to TSCA. These products are manufactured with chemicals listed on the TSCA inventory.
OTHER TSCA ISSUES: None

SARA TITLE III/CERCLA

"Reportable Quantities" (RQs) and/or "Threshold Planning Quantities" (TPQs) exist for the following ingredients.

<u>INGREDIENT NAME</u>	<u>SARA/CERCLA RQ (LB)</u>	<u>SARA EHS TPQ (LB)</u>
None known		

Spills or releases resulting in the loss of any ingredient at or above its RQ requires immediate notification to the National Response Center [(800) 424-8802] and to your Local Emergency Planning Committee.

SECTION 311 HAZARD CLASS: Product as shipped - None

SARA 313 TOXIC CHEMICALS:

The following ingredients are SARA 313 "Toxic Chemicals". CAS numbers and weight percents are found in Section 2.

<u>INGREDIENT NAME</u>	<u>COMMENT</u>
Barium Sulfate	De Minimus concentration for section 313 is 1.0% (Barium and Barium Compounds).

STATE RIGHT-TO-KNOW

In addition to the ingredients found in Section 2, the following are listed for state right-to-know purposes.

<u>INGREDIENT NAME</u>	<u>WEIGHT %</u>	<u>COMMENT</u>
None known		

ADDITIONAL REGULATORY INFORMATION: The finished units of friction material shipped to you contain polymer resin encapsulated ingredients. Subsequent processing (arcing, grinding, drilling or chamfering) may create a potential for the release of the ingredients to the atmosphere (e.g. from your dust collection system if you grind our product) or to a landfill (e.g. if you dispose of wetted or pelletized grinding dust or drill chips). If they are of sufficient quantities, you may be required to report such "Releases" on EPA Form "R".

WHMIS CLASSIFICATION (CANADA): Not a controlled product as shipped. Certain processes (e.g., grinding) may cause this article to be considered as a controlled product.

FOREIGN INVENTORY STATUS: As manufactured articles, these products are not subject to chemical notification requirements.

16. OTHER INFORMATION

CURRENT ISSUE DATE: April 10, 2009
PREVIOUS ISSUE DATE:

Product Name – M10B Semi-Met Disc Brake Pad - Asbestos Free

CHANGES TO MSDS FROM PREVIOUS ISSUE DATE ARE DUE TO THE FOLLOWING:

All Sections: New MSDS