

# Material Safety Data Sheet

## Product Name – OEQF 2000 EE Semi-Metallic

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** OEQF 2000 EE Semi-Metallic

**EDGE CODE:** BX-TM3-EE, BX-BR5-EE, BB-413-EE

**OTHER/GENERIC NAMES:** Friction Material

**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:** Dark gray solid. 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.

**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.

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

INGREDIENT NAME

NTP STATUS

IARC STATUS

OSHA LIST

None known

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**3. COMPOSITION/INFORMATION ON INGREDIENTS**

<u>INGREDIENT NAME</u>	<u>CAS NUMBER</u>	<u>WEIGHT %</u>
Graphite	7782-42-5	Proprietary
Friction Particle	68583-06-2	Proprietary
Steel Fiber	Mixture	Proprietary
Iron Powder	7439-89-6	Proprietary
Barium sulfate	7727-43-7	Proprietary
Magnesium oxide	1309-48-4	Proprietary
Resin and binder	Mixture	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..

**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, oxides of nitrogen, phenols, aldehydes, hydrocarbons and soot.

**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.

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

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### 7. HANDLING AND STORAGE

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**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.

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### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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**ENGINEERING CONTROLS:** This friction material product, as shipped, is not considered hazardous, but machining (arc-ing, 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>
Graphite	2 mg/m <sup>3</sup> TWA respirable fraction	15 mppcf TWA	2.5 mg/m <sup>3</sup> TWA Respirable dust
Friction Particle (as PNOC)	None Established	15 mg/m <sup>3</sup> TWA total dust 5 mg/m <sup>3</sup> TWA respirable fraction	4 mg/m <sup>3</sup> TWA inhalable 1.5 mg/m <sup>3</sup> TWA respirable fraction
Steel Fiber (as PNOC)	None Established	15 mg/m <sup>3</sup> TWA total dust 5 mg/m <sup>3</sup> TWA respirable fraction	4 mg/m <sup>3</sup> TWA inhalable 1.5 mg/m <sup>3</sup> TWA respirable fraction
Iron Powder (as PNOC)	None Established	15 mg/m <sup>3</sup> TWA total dust 5 mg/m <sup>3</sup> TWA respirable fraction	4 mg/m <sup>3</sup> TWA inhalable 1.5 mg/m <sup>3</sup> TWA respirable fraction
Barium sulfate	10 mg/m <sup>3</sup> TWA	15 mg/m <sup>3</sup> TWA total dust 5 mg/m <sup>3</sup> TWA respirable fraction	10 mg/m <sup>3</sup> TWA total dust 5 mg/m <sup>3</sup> TWA respirable fraction
Magnesium oxide	10 mg/m <sup>3</sup> TWA inhalable fraction	15 mg/m <sup>3</sup> TWA total particulate	None
Resin and binder (as PNOC)	None Established	15 mg/m <sup>3</sup> TWA total dust 5 mg/m <sup>3</sup> TWA respirable fraction	4 mg/m <sup>3</sup> TWA inhalable 1.5 mg/m <sup>3</sup> TWA respirable fraction

**9. PHYSICAL AND CHEMICAL PROPERTIES**

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

**FLAMMABLE PROPERTIES**

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

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**10. STABILITY AND REACTIVITY**

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

**INCOMPATIBILITIES:** None known.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Toxic and irritating materials may be released in a fire. At >300°C thermal decomposition may occur generating carbon monoxide, carbon dioxide, oxides of nitrogen, phenols, aldehydes, hydrocarbons and soot.

**HAZARDOUS POLYMERIZATION:** None.

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**11. TOXICOLOGICAL INFORMATION**

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**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

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**12. ECOLOGICAL INFORMATION**

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

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**13. DISPOSAL CONSIDERATIONS**

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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.

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**14. TRANSPORT INFORMATION**

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**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.

**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		None

**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>
Manganese (ingredient in steel fiber)	De Minimus concentration for section 313 is 1.0% (Manganese).

**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:** August 7, 2009

**PREVIOUS ISSUE DATE:** New MSDS

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

All Sections: New MSDS