



MATERIAL SAFETY DATA SHEET (MSDS)

1. Product and Company Information

Product Name: Drum Brake Lining (Non-Asbestos)
Product Edgecode: Edgecode
Manufacturer/Supplier: Brake Parts Inc.
Address: 4400 Prime Parkway
 McHenry, IL 60050
Telephone: 1-815-363-9000
Date of MSDS Revision: 8/1/14

Product Use Overview: These products are intended for use as automotive or truck friction components and are not considered to be hazardous. The ingredients listed below are bound in a non-friable resin matrix, therefore, personal exposure during the normal handling and use is considered minimal. The warnings expressed on this MSDS have been provided to communicate the hazardous nature associated with exposure to the individual components. We have provided this information regardless of the risk of exposure and have considered this during both normal use and foreseeable misuse. Using good work practices will minimize the risk of adverse health effects from overexposure to the hazardous components. As supplied, this friction material does not require sanding, drilling or other machining operations.

2. Hazards Identification

Emergency Overview:

Drum brake lining products are not considered hazardous products. They will not support combustion but may release irritating and potentially toxic combustion products under fire conditions. Breathing dust generated during sanding or grinding may cause respiratory irritation. Prolonged overexposure may result in lung disease or damage. The hazardous components in this product are bound in a resin matrix and are not released during normal handling in finished form.

3. Composition / Information on Ingredients

May contain some or all of the following:

| <u>Hazardous Components</u> | <u>CAS Number</u> | <u>Weight Pct.</u> |
|-------------------------------------|-------------------|--------------------|
| Cured Organic Resins | Mixture | < 20% |
| Barium Sulfate | 7727-43-7 | < 20% |
| Graphite | 7782-42-5 | < 10% |
| Iron | 7439-89-6 | < 5% |
| Copper | 7440-50-8 | < 5% |
| Zinc | 7440-66-6 | < 5% |
| Carbon | 1333-86-4 | < 5% |
| Calcium Carbonate | 1317-65-3 | < 20% |
| Mica | 12001-26-2 | < 2% |
| Talc | | < 1% |
| Fibrous glass (continuous Filament) | 65997-17-3 | < 15% |
| Zirconium | 7440-67-7 | < 1% |
| Steel Fiber | 12597-69-2 | < 1% |
| Ferric Oxide | 1309-37-1 | < 1% |
| Magnesium Oxide | 1309-48-4 | < 1% |
| Feldspar | 12168-80-8 | < 1% |
| Vermiculite | 1318-00-9 | < 1% |

PEL - OSHA Permissible Exposure Limit; TLV - ACGIH Threshold Limit Value; TWA - Time Weighted Average

4. First Aid Measures

Eye: Do not rub eyes. Flush immediately with large amounts of water. Eyelids should be held away from the eyeball to ensure thorough rinsing. If irritation persists or for foreign body in the eye, get immediate medical attention.

Skin: Wash area of contact gently with soap and water. Launder contaminated clothing before reuse. Get medical attention if irritation persists.

Inhalation: If symptoms develop, remove person from source of exposure to fresh air. Get medical attention if irritation persists.

Ingestion: Not a potential route of exposure.

5. Firefighting Measures

Extinguishing Media: Use any media suitable for the surrounding fire.

Special Fire Fighting Procedures: Avoid breathing combustion products if product is involved in a fire.

Unusual Fire and Explosion Hazards: The organic resins may burn at high temperatures, however, this material will not support combustion.

Combustion Products: Combustion products from organic resins may include carbon monoxide, carbon dioxide, nitrogen oxides, sulfur dioxide, aldehydes, phenols, cyanide, ammonia and various hydrocarbons.

6: Accidental Release Measures

Pick up large pieces. Use HEPA vacuum to clean up any dust. Wet dust with water where sweeping is necessary. Personal safety and exposure recommendations described elsewhere in this data sheet apply to exposure during clean up of spilled material. Refer to Section 13 for disposal considerations. Refer to Section 15 for Release Reporting information, if applicable.

7. Handling and Storage

Handling: Avoid generating and breathing dust. Do not grind, sand, drill or machine these parts. Follow good housekeeping to prevent accumulation of dust on floors, machinery and equipment. Do not dry sweep dust. Wet dust with water before sweeping or use a HEPA vacuum to collect dust and clean equipment. Do not use compressed air for cleaning. Wash thoroughly after work using soap and water.

These products do not contain asbestos, however, the OSHA Asbestos Standard (29CFR 1910.1001) Appendix F, "Work Practices and Engineering Controls for Automotive Brake and Clutch Inspection, Disassembly, Repair and Assembly", contains guidance on minimizing employee exposure during brake operations. Brake Parts, Inc. recommends that these work practices and engineering controls be implemented even when working with non-asbestos brakes.

Storage: Keep product dry.

8. Exposure Controls / Personal Protection

| <u>Hazardous Components</u> | <u>Exposure Limits</u> |
|-------------------------------------|--|
| Cured Organic Resins | None Established |
| Barium Sulfate | 5 mg/m3 PEL-TWA (respirable dust) 15 mg/m3 PEL-TWA (total dust) 10 mg/m3 TLV-TWA (total dust) |
| Graphite | 5 mg/m3 PEL-TWA (respirable dust) 2 mg/m3 TLV-TWA (respirable dust) |
| Iron | 10 mg/m3 PEL-TWA (fume as iron oxide) 5 mg/m3 TLV-TWA (respirable) (as iron oxide) |
| Copper | 1 mg/m3 PEL/TLV-TWA (as dust) |
| Zinc | 5 mg/m3 PEL-TWA (as ZnO respirable dust) 15 mg/m3 PEL-TWA (as ZnO total dust) 2 mg/m3 TLV-TWA (as ZnO respirable dust) 10 mg/m3 TLV-STEL (as ZnO respirable dust) |
| Carbon | 3.5 mg/m3 PEL-TWA 3 mg/m3 TLV-TWA (inhalable fraction) |
| Calcium Carbonate | 5 mg/m3 PEL-TWA (respirable dust) 15 mg/m3 PEL-TWA (total dust) |
| Mica | 20 mppcf PEL-TWA 3 mg/m3 TLV-TWA (respirable dust) |
| Talc | 20 mppcf PEL-TWA 2 mg/m3 TLV-TWA (respirable dust) |
| Fibrous glass (continuous Filament) | 5 mg/m3 PEL-TWA (respirable dust) 1 fiber/cc or 5 mg/m3 (inhalable dust) TLV-TWA |
| Zirconium | 5 mg/m3 PEL/TLV-TWA 10 mg/m3 TLV-STEL |
| Steel Fiber | 5 mg/m3 PEL-TWA (respirable dust) 15 mg/m3 PEL-TWA (total dust) |
| Ferric Oxide | 10 mg/m3 PEL-TWA (fume) 5 mg/m3 TLV-TWA (respirable dust) |
| Magnesium Oxide | 15 mg/m3 PEL-TWA (fume, total particulate) 10 mg/m3 TLV-TWA (inhalable) |
| Feldspar | 5 mg/m3 PEL-TWA (respirable dust) 15 mg/m3 PEL-TWA (total dust) |
| Vermiculite | 5 mg/m3 PEL-TWA (respirable dust) 15 mg/m3 PEL-TWA (total dust) |

PEL - OSHA Permissible Exposure Limit; **TLV** - ACGIH Threshold Limit Value; **TWA** - Time Weighted Average

Engineering Controls: Use with adequate local exhaust ventilation and dust collection as necessary to maintain the concentration of airborne dust below the exposure limits.

Personal Protective Equipment (PPE)

Eye Protection: Safety glasses recommended.

Skin Protection: Gloves recommended for handling brake parts.

Respiratory Protection: If the concentrations exceed the Threshold Limit Values (TLV), a NIOSH approved particulate respirator appropriate for the exposure levels should be worn. Select based on consideration of the airborne workplace concentrations and duration of exposure. Select and use respirators in accordance with 29 CFR 1910.134, ANSI Z88.2, the NIOSH Respirator Decision Logic and good industrial hygiene practice. For firefighting, use self-contained breathing apparatus.

9. Physical and Chemical Properties

Odor/Appearance: Metallic parts with gray friction material.

Boiling Point: Not Applicable

Melting Point: Not Applicable

Vapor Pressure: Not Applicable

Vapor Density (Air=1): Not Applicable

% Solubility in Water: Insoluble

Flashpoint: Not Applicable

Autoignition Temperature: Not Applicable

Specific Gravity: 1.8 – 3.1 g/cc

% Volatile: Not Applicable

Evaporation Rate (Butyl Acetate=1): Not Applicable

pH: Not Applicable

Octanol/Water Partition Coefficient: Not Applicable

Lower Flammability Limit: Not Applicable

Upper Flammability Limit: Not Applicable

10. Stability and Reactivity

Stability: Material is stable.

Incompatibility: None determined.

Hazardous Decomposition Products: Combustion products from organic resins may include carbon monoxide, carbon dioxide, nitrogen oxides, sulfur dioxide, aldehydes, phenols, cyanide, ammonia and various hydrocarbons.

Hazardous Polymerization: Will not occur.

11. Toxicological Information

Acute Health Effects:

Eye Contact: Dust from product may cause abrasive irritation.

Skin Contact: Prolonged contact with dust from product may cause irritation.

Inhalation: Inhalation of excessive concentrations of dust may cause mucous membrane and respiratory irritation.

Ingestion: Not a potential route of exposure.

Chronic Health Effects: Inhalation of excessive concentrations of any dust, including dust from this material, may cause lung injury.

Carcinogenicity: IARC has classified carbon black as group 2B carcinogens (sufficient evidence in animals, inadequate evidence in humans). None of the other components of this product are listed as a carcinogen or suspected carcinogen by IARC, NTP, ACGIH or OSHA.

Medical Conditions Aggravated by Exposure: Persons with pre-existing skin and respiratory disorders may be at an increased risk from exposure.

No acute toxicity data is available for this product or its components.

12. Ecological Information

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

13. Disposal Considerations

Landfill in compliance with all applicable Federal, state and local regulations.

14. Transport Information

U.S. Department of Transportation (DOT): Not Regulated as a Hazardous Material

15. Regulatory Information

U.S. Regulations

Comprehensive Environmental Response and Liability Act of 1980 (CERCLA) Reportable Quantity:

This product is not subject to CERCLA reporting requirements, however, many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

Toxic Substances Control Act (TSCA): Manufactured articles are not subject to TSCA. These products are manufactured with chemicals listed on the TSCA inventory.

Superfund Amendments and Reauthorization Act (SARA) Title III Information:

SARA Section 311/312 Hazard Categories: Delayed Health

This product contains the following toxic chemical(s) subject to reporting requirements of SARA Section 313:

| | | |
|--------|-----------|-------|
| Copper | 7440-50-8 | 1-20% |
| Zinc | 7440-66-6 | 1-20% |

California Proposition 65:

This product contains the following chemicals known to the State of California to cause cancer or reproductive harm: None

International Regulations:

Canadian Environmental Protection Act: Manufactured articles are exempt from notification requirements under CEPA.

Canadian WHMIS Classification: Manufactured articles are not subject to WHMIS.

European Inventory of Commercial Chemical Substances: Manufactured articles are exempt from notification requirements.

European Community Labeling Classification: Not Applicable

European Community Risk and Safety Phrases: None

16. Other Information

NFPA Ratings:

Health: 1 Flammability: 0 Reactivity: 0

HMIS Ratings:

Health: 1* Flammability: 0 Reactivity: 0

Revision Indicator: Section 3: Hazardous Components; Section 8: Exposure Limits; Updated new components and formatting.

The information herein is believed to be accurate, however, Brake Parts, Inc. makes no representation or warranty as to its accuracy. The data is furnished gratuitously and independently of any sale of the product, and only for customer investigation and independent verification. Brake Parts, Inc. shall in no event be responsible for any damages of whatever nature directly or indirectly resulting from the publication or use of or reliance upon data contained herein. No express or implied warranty of any kind, including warranties of merchantability or fitness for use, with respect to the product or to the data herein is made hereunder.