Material Safety Data Sheet

PRODUCT IDENTITY (As used on the label or friction material)  
No. 0213
FA-004, FA-005, FA-006, FA-007, FA-008, FER4101F, FER4102F, FM4110, FM2111, FM2136, FM2154, FM2155, FM4108F, NF86, FM2136A

1. PRODUCT AND COMPANY INFORMATION

Manufacturer: Federal-Mogul Friction Products
1 Grizzly Lane  or  2084 Rowesville Road  or  2410 Papermill Road
Smithville  
Tennessee 37166  
USA  or  Orangeburg  
South Carolina 29116  or  Winchester  
Virginia 22604

U.S.A. Contact: Dr. Mark Phipps  
Contact Number: 615-597-3673

Product Code: As Listed Above  
Common Name: Friction material  
Synonyms: Friction lining, Brake Lining  
CAS Number: Not applicable to mixtures  
Chemical Formula: Not applicable to mixtures

2. COMPOSITION/INFORMATION ON INGREDIENTS

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

The products listed above do not contain all of the ingredients listed below (*).

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS Number</th>
<th>Component</th>
<th>CAS Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum Oxide*</td>
<td>1344-28-1</td>
<td>Nitrile Rubber*</td>
<td>9003-18-3</td>
</tr>
<tr>
<td>Antimony Oxide*</td>
<td>1309-64-4</td>
<td>Petroleum Coke*</td>
<td>64743-05-1</td>
</tr>
<tr>
<td>Antimony Sulfide*</td>
<td>1345-04-6</td>
<td>Phenolic Resin-Cured</td>
<td>9003-35-4</td>
</tr>
<tr>
<td>Aramid Fiber</td>
<td>26125-61-1</td>
<td>Potassium Titanate</td>
<td>12056-51-8</td>
</tr>
<tr>
<td>Barium Sulfate</td>
<td>7727-43-7</td>
<td>Rubber (Powdered)*</td>
<td>9006-04-6</td>
</tr>
<tr>
<td>Brass*</td>
<td>NONE</td>
<td>Silica (Tripoli)*</td>
<td>1317-95-9</td>
</tr>
<tr>
<td>Calcium Oxide*</td>
<td>1305-78-8</td>
<td>Tin*</td>
<td>7440-31-5</td>
</tr>
<tr>
<td>Ceramic fibers*</td>
<td>142844-00-6</td>
<td>Vermiculite*</td>
<td>1318-00-9</td>
</tr>
<tr>
<td>Copper</td>
<td>7440-50-8</td>
<td>Tin Sulfide*</td>
<td>1314-95-0 &amp;</td>
</tr>
<tr>
<td>Fibrous Glass*</td>
<td>65997-17-3</td>
<td>Wollastonite*</td>
<td>13983-17-0</td>
</tr>
<tr>
<td>Graphite</td>
<td>7782-42-5</td>
<td>Zirconium Hydroxide*</td>
<td>14475-63-9</td>
</tr>
<tr>
<td>Hydrated Lime*</td>
<td>1305-62-0</td>
<td>Zirconium Oxide*</td>
<td>1314-23-4</td>
</tr>
<tr>
<td>Iron Pyrite*</td>
<td>1317-37-9</td>
<td>Zirconium Silicate*</td>
<td>14940-68-2</td>
</tr>
<tr>
<td>Mica*</td>
<td>12001-26-2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Federal-Mogul Friction Products  
MSDS - OE NAO Materials  
Page 1 of 8
Warning: Some of the products listed above contains chemicals known to the state of California to cause cancer or reproductive toxicity. However, significant exposure is not anticipated under normal conditions of usage.

### 3. HAZARDS IDENTIFICATION

Ingredients that are found on any of the OSHA designated carcinogen lists are as follows:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>NTP</th>
<th>IARC</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crystalline Silica</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

### Symptoms and Effects of Exposure to the Individual Components:

**ALUMINUM OXIDE**

**Inhalation hazards** – Exposure to alumina may cause coughing, shortness of breath. Chronic: Prolonged exposure may affect breathing capacity. **Other hazards** – Ingestion is not recommended but no adverse effects have been reported. Alumina is not absorbed through the skin, but contact may cause abrasion. Dust may irritate eyes.

**ANTIMONY COMPOUNDS**

**Inhalation hazards** – No serious health risks reported from exposure other than a possible change in blood pressure. Prolonged exposure may cause irritation of the nose, throat, and mouth. **Other hazards** – Skin or eye contact may result in coughing, dizziness, headache, nausea, vomiting, diarrhea, stomach cramps, and insomnia.

**ARAMID FIBERS**

**Inhalation hazards** – Overexposure to respirable fibers by inhalation may cause mild and temporary upper respiratory irritation, with discomfort or cough. Based on animal testing, prolonged and repeated exposure to excessive concentrations of respirable fibers may cause permanent lung injury. **Other hazards** – Skin sensitization has not been observed in human tests. The mechanical action of fibers may cause slight skin irritation at clothing binding points and mild irritation of the eyes and nasal passages.

**BARIUM SULFATE**

**Inhalation hazards** – Should be treated as a nuisance dust. Exposure to Barium Sulfate may cause paroxysmal coughing, wheezing, difficult breathing and upper respiratory tract irritation. **Other hazards** – No adverse effects have been reported from ingestion. Eye contact may cause temporary discomfort and irritation.

**BRASS and COPPER**

**Inhalation hazards** – Acute: may produce irritation of the nose and/or trachea. May produce acute gastroenteric symptoms resulting in vomiting or inflammation and may cause metal fume fever. Chronic: prolonged exposure may cause injury to liver, kidneys or spleen; anemia may develop. Chronic toxicity is reportedly confined to those persons suffering from pre-existing Wilson’s disease. **Other hazards** – Copper dusts and mists are eye and mucous membrane irritants and skin sensitizers. Acute exposure may cause metallic taste and nasal ulceration and perforation. Prolonged skin contact may produce sensitization dermatitis. Exposure may result in discoloration of the skin and hair. Ingestion of copper compounds may cause vomiting and collapse. Acute poisoning is characterized by hemolysis, jaundice, anuria, hypertension and convulsions.

**CALCIUM OXIDE**

**Inhalation hazards** – Exposure to dust may cause upper respiratory irritation, with discomfort or cough. Pure material is caustic to living tissue. **Other hazards** – Contact can cause skin irritation and severe irritation of the eyes and nasal passages. Ingestion may cause gastrointestinal ulcers and perforation.
CERAMIC FIBERS
Inhalation hazards – Overexposure to respirable fibers by inhalation may cause mild and temporary upper respiratory irritation, with discomfort or cough. ACGIH classifies refractory ceramic fibers as “suspected human carcinogen.” (TLV-A2) Other hazards - The mechanical action of fibers may cause slight skin irritation and mild irritation of the eyes and nasal passages. Ingestion may cause gastrointestinal irritation, vomiting, and diarrhea.

FIBROUS GLASS
Inhalation hazard – Acute: mechanical irritation of mouth, nose, throat. Itching and irritation of upper respiratory tract. Other hazards – transient mechanical irritation to skin. Direct contact with eyes will cause mechanical irritation. May cause unpleasant deposits in eyes, ears and nasal passages. IARC categorizes “continuous filament glass dust” as not classifiable relative to human carcinogenicity (Group 3). However, if the end product is finely ground, a fibrous glass dust may result, which IARC classifies as “possibly carcinogenic to humans” (Group 2B).

GRAPHITE
Inhalation hazards – Acute: exposure may result in cough, dyspnea, black sputum, and fibrosis. Chronic: Prolonged exposure may cause pneumoconiosis. It is reported that diseases of the respiratory and cardiovascular system may be aggravated by exposure.

HYDRATED LIME
Inhalation hazards – Dust may cause irritation of nasal and respiratory passages. Other hazards – Lime is a strong eye irritant, and may cause corrosive damage and blindness. Exposure to dust may cause severe skin irritation, drying and burning, particularly with damaged skin. Swallowing of excessive amounts may damage mucous membranes of digestive system. There are no known chronic hazards.

IRON PYRITE (IRON DISULFIDE)
Iron pyrite dust is classified as a nuisance particulate. Inhalation hazards – Excessive inhalation of respirable dust may produce pleuritis, and/or fatal pneumonia. Acute – Irritation of the eyes, skin, nose, throat and respiratory system. Chronic – Long term exposure to high concentrations of dust and fume containing iron compounds (6-10 years) may produce siderosis with changes visible on chest x-rays.

MICA POWDER (containing less than 1% Quartz)
Amber thin flakes that are odorless. Long-term exposure to respirable airborne concentrations above the TLV may lead to pneumoconiosis in which usually no functional lung impairment occurs. The symptoms most frequently reported were chronic cough and dyspnea. Any of several silicates of varying chemical composition but with similar physical properties and crystalline structure. May contain small amounts of crystalline silica.

MAN-MADE MINERAL FIBERS – (MMMF – GLASSWOOL, SLAGWOOL, LOOSE WOOL, AND ROCKWOOL)
Inhalation hazards – Exposure to respirable fibers by inhalation may cause temporary upper respiratory irritation, with discomfort and cough. Prolonged exposure may cause chronic lung disease. IARC has recently change the classification of man-made mineral fibers (diameter <1 µm) to “unclassifiable with respect to carcinogenicity to humans.” (Group 3). ACGIH classifies synthetic vitreous fibers (rock wool fibers) as “animal carcinogen” (TLV-A3).

The mineral fibers used in formulations: FM2136, FM2154, FM2155 are considered mineral wool using the EC Commission directive 97/69/EC based on the chemistry of the manufactured product. These same fibers are exonerated from classification as a carcinogen based on independent medical studies that support that the particular chemistry of these fibers is bio-soluble. This conclusion is based on bio-persistence testing (Ref. E.E. McConnel 1994 report on Chronic Inhalation Study of Size Separated Rock Wool and Slag Wool Insulation in Fischer 344/N Rats). The precautions outlined in section 8, concerning inhalation and protective clothing should be exercised. Other hazards – The mechanical action of fibers may cause skin irritation and irritation of the eyes and nasal passages. Ingestion may cause gastrointestinal irritation, vomiting, and diarrhea.

NITRILE RUBBER
Inhalation hazards – Gases and fumes from thermal processing or decomposition of this product may cause irritation of respiratory tract, skin and eyes. Other hazards – Eyes – may cause eye irritation if material introduced into the eye. Eyes may feel scratchy, become red, and tear.

PETROLEUM COKE
Inhalation hazards – May irritate mucous membranes by mechanical or chemical means. May cause lung inflammation. Other hazards – eyes: may cause slight to moderate irritation. Skin: may cause irritation

PHENOLIC RESIN – CURED
Inhalation hazards – Dust may cause irritation of nasal and respiratory tracts. If formaldehyde vapors are present, inhalation may cause a form of nasal cancer. Other hazards – Prolonged exposure can cause irritation, redness, and tearing of the eyes and may lead to sensitization of the skin and dermatitis.

POTASSIUM TITANATE
May cause irritation of respiratory system. Contains 7% or less of crystalline silica, small amounts which may be in respirable form and may cause silicosis or lung cancer.

RUBBER (POWDERED)
Inhalation hazards – May cause mild irritation of respiratory tract. Repeated and prolonged inhalation of dust may lead to a benign pneumoconiosis. This condition may cause some lung function impairment but is reversible with reduced exposure. Other hazards – Eyes – may cause mild transient eye irritation. Contains carbon black.

SILICA DUST
Inhalation hazards – Acute: Exposure to silica dust may cause paroxysmal coughing, wheezing, dyspnea and upper respiratory tract irritation. Chronic: Prolonged exposure to silica dust may cause silicosis. Crystalline silica has been classified by IARC as “carcinogenic to humans.” (Group 1). ACGIH classifies Crystalline silica as “suspected human carcinogen.” (TLV-A2). Other hazards - Eye or skin contact can cause temporary discomfort and irritation.

TIN
Inhalation hazards – Acute: Exposure to dust may cause coughing and respiratory tract irritation. Other hazards – Contact may cause skin and eye irritation.

VERMICULITE
Inhalation hazard – Related to small concentration of silica in compound. See information on Silica Dust.

WOLLASTONITE
A non-metallic mineral powder, white in color with a faint odor. Inhalation hazard – long term cumulative inhalation of heavy concentrations may cause restriction of the large airways. Other hazards – May cause minor skin irritation.

ZIRCONIUM COMPOUNDS
Inhalation hazards – Avoid inhalation of zirconium containing aerosols, which can cause lung granulomas. Other hazards – Most zirconium compounds in common use are insoluble and are considered inert.

4. FIRST AID MEASURES

Inhalation: Move to fresh air. Obtain medical attention.
Eyes: Flush with water to remove particulate. Obtain medical attention.
Skin: Wash thoroughly with soap and water. If persistent irritation develops, obtain medical attention.
Ingestion: Obtain medical attention.
5. FIRE FIGHTING MEASURES

Flash Point: None.
Auto-ignition Temperature: This product is inherently flame resistant but may ignite at temperatures exceeding 1112°F (600°C) in an oxygen enriched atmosphere.
Flammable Limits in Air: % in Air by Volume: LEL: N/A UEL: N/A
Flame Propagation Rate: Not Established.
Extinguishing Media: Use media suitable for surrounding fire.
Special Fire Fighting Procedure: When heated to very high temperatures, may give off smoke and decomposition products which may contain toxic compounds.
Protective Equipment: Fire fighters and others exposed should wear self-contained breathing apparatus.
Unusual Fire and Explosion Hazards: None

6. ACCIDENTAL RELEASE MEASURES

If a release of dust occurs during machining, abrading, or riveting, remove 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 the workplace.

7. HANDLING AND STORAGE

Store in a dry place. Shipping and storage may result in accumulation of dust in shipping containers. If this occurs, dispose of the container in an airtight polyethylene bag (see disposal instructions below) or remove 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 storage containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

As shipped, friction materials are not considered hazardous but operations (overheating, burning, machining, abrading, or riveting) that can create airborne dust should be avoided. Such operations could cause concentrations in excess of permissible exposure limits for the respective ingredient and therefore should be considered hazardous. Exposure limits are shown below.

<table>
<thead>
<tr>
<th>Component</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
<th>NIOSH REL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antimony Compounds</td>
<td>0.5 mg/m³</td>
<td>0.5 mg/m³</td>
<td>0.5 mg/m³ TWA</td>
</tr>
<tr>
<td>Aramid Fiber</td>
<td>2 fibers/cc (respirable)*</td>
<td>None Established</td>
<td>None Established</td>
</tr>
<tr>
<td>Brass and Copper</td>
<td>1 mg/m³ TWA</td>
<td>1 mg/m³ ***</td>
<td>1 mg/m³ TWA IDLH : 100 mg/m³</td>
</tr>
<tr>
<td>Calcium Oxide</td>
<td>5 mg/m³</td>
<td>2 mg/m³</td>
<td>2 mg/m³ TWA IDLH : 25 mg/m³</td>
</tr>
<tr>
<td>Ceramic Fibers</td>
<td>1 fiber/cc (SOHIO)**</td>
<td>None Established</td>
<td>None Established</td>
</tr>
<tr>
<td>Graphite</td>
<td>15 mppcf</td>
<td>2.0 mg/m³ (respirable)</td>
<td>2.5 mg/m³ TWA (resp.) IDLH : 1250 mg/m³</td>
</tr>
<tr>
<td>Hydrated Lime</td>
<td>15 mg/m³ (t. dust) TWA</td>
<td>2 ppm</td>
<td>5 mg/m³ TWA</td>
</tr>
<tr>
<td>Component</td>
<td>OSHA PEL</td>
<td>ACGIH TLV</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td>-----------</td>
<td>----------</td>
<td>-----------</td>
<td>-----------</td>
</tr>
<tr>
<td>Mica</td>
<td>20 mppcf TWA</td>
<td>3 mg/m³ TWA</td>
<td>3 mg/m³ (resp.) IDLH : 25 mg/m³</td>
</tr>
<tr>
<td>Mineral Fibers</td>
<td>1 fiber/cc (proposed)****</td>
<td>None Established</td>
<td>1 fiber/cc 5 mg/m³ TWA</td>
</tr>
<tr>
<td>Silica (Crystalline, Tripoli)</td>
<td>0.1 mg/m³ (respirable)</td>
<td>0.1 mg/m³ (respirable)</td>
<td>0.05 mg/m³ (resp.) IDLH : 50 mg/m³</td>
</tr>
<tr>
<td>Tin Compounds</td>
<td>2 mg/m³</td>
<td>2 mg/m³</td>
<td>2.5 mg/m³ TWA IDLH : 100 mg Sn /m³</td>
</tr>
<tr>
<td>Zirconium Compounds</td>
<td>5 mg/m³ TWA</td>
<td>5 mg/m³ TWA</td>
<td>5 mg/m³ TWA</td>
</tr>
<tr>
<td>Aluminum Oxide, Barium Sulfate, Fibrous Glass, Iron Pyrite, Nitrile Rubber, Petroleum Coke, Phenolic Resin-Cured, Potassium Titanate***** Rubber (Powdered), Vermiculite, Wollastonite</td>
<td>10 mg/m³ total dust TWA 5 mg/m³ (respirable)</td>
<td>10 mg/m³ total dust TWA 5 mg/m³ (respirable)</td>
<td>10 mg/m³ total dust TWA 5 mg/m³ (respirable)</td>
</tr>
</tbody>
</table>

N/A = Not Applicable or Available

* No OSHA limit has been established for this substance. The limit shown is a recommended limit established by DuPont, a manufacturer of aramid fibers (Kevlar®).

** No OSHA limit has been established for this substance. The limit shown is a recommended limit established by the manufacturer. The TLV-TWA is under further review. A value no greater than 0.5 f/cc, or less than 0.1 f/cc will be considered, based upon data currently available.

*** ACGIH lists a TLV Notice of Intended Changes to .05 mg/m³ for fume and respirable particulate.

**** No OSHA limit has been established for this substance. The value shown is a proposed limit recommended by the manufacturers trade association (TIMA). ACGIH lists a TLV Notice of Intended Changes to 1 f/cc.

***** This chemical is currently under study by the EPA. No limits have been established.

Respiratory Protection: Use NIOSH-approved respirator if exposure to dust, vapors, or fumes in concentrations exceeding PEL’s or TLV’s is possible. (See 29 CFR 1910.134 for respiratory protection standards)

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

Personal Protective Equipment: Suitable respiratory protection should be worn if dust exposure is possible. All regulations and safe practices related to the use of respiratory protection must be observed. Refer to OSHA standards and NIOSH guidelines. If skin irritation occurs, gloves and other protective garments may be worn.

9. PHYSICAL AND CHEMICAL CHARACTERISTICS

Boiling Point: N/A
Melting Point: None
Color: Gray/Black
pH: 8 – 12
Vapor Density: N/A
Solubility in water: Insoluble
Specific Gravity: 1.80 – 3.00 g/cc
Vapor Pressure: N/A
Odor: Phenolic
Form: Solid

10. STABILITY AND REACTIVITY

Stability: Stable at normal temperatures and storage conditions.
Incompatibility: None.
Hazardous Decomposition Products: Oxides of carbon, nitrogen and sulfur. Hydrocarbons, ammonia and other trace organic compounds.
Hazardous Polymerization: Will not polymerize. This product is fully cured in the manufacturing process.
11. TOXICOLOGICAL INFORMATION

**Acute:** Skin and eye irritation may occur with repeated contact to dusts.

**Chronic:** This product is a mixture of chemicals physically bonded together, therefore, in the as supplied state this product is considered non-hazardous. If in the event that dust is generated, some of the ingredients can have long-term effects. These are detailed in section 3.

12. ECOLOGICAL INFORMATION

Soluble copper is known to be an ecotoxin. A study conducted, by the Santa Clara Valley Authority, identified copper from disc brake pad wear debris as a major contributor to the high level of copper in San Francisco Bay. These findings have been disputed and are currently under review by the Brake Manufacturers Council, Santa Clara Valley Authority and the International Copper Association.

13. DISPOSAL CONSIDERATIONS

Federal and state law regulates disposal of solid waste. Waste should be placed in airtight containers, and disposed of in accordance with 40CFR261, 40CFR262 and applicable state and local regulations.

14. TRANSPORT INFORMATION

D.O.T. / IMO / IATA / AFI
Proper Shipping Name: Not regulated by these modes of transportation
D.O.T. Hazard Code: N/A

15. REGULATORY INFORMATION

All chemicals used in the manufacture of this product are listed on the TSCA Inventory.

<table>
<thead>
<tr>
<th>Carcinogen List:</th>
<th>NTP</th>
<th>IARC</th>
<th>NIOSH</th>
<th>“Prop65”</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aramid Fiber</td>
<td>No</td>
<td>3</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Antimony Sulfide</td>
<td>No</td>
<td>3</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Antimony Oxide</td>
<td>No</td>
<td>2B</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Ceramic Fibers</td>
<td>Yes</td>
<td>2B</td>
<td>No</td>
<td>Yes*</td>
<td>No</td>
</tr>
<tr>
<td>Mineral Fibers</td>
<td>No</td>
<td>3</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Fibrous Glass**</td>
<td>No</td>
<td>3</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Aluminum Oxide, Barium Sulfate, Brass, Calcium Oxide, Copper, Graphite, Hydrated Lime, Iron Pyrite, Mica, Nitrile Rubber, Petroleum Coke, Phenolic Resin-Cured, Potassium Titanate, Rubber (Powdered),</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>
### Carcinogen List:

<table>
<thead>
<tr>
<th>Name</th>
<th>NTP</th>
<th>IARC</th>
<th>NIOSH</th>
<th>&quot;Prop65&quot;</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tin, Tin Sulfide, Vermiculite, Wollastonite, Zirconium Oxide, Zirconium Hydroxide, Zirconium Silicate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Proposition 65 lists ceramic fibers of respirable size
** This has recently changed from 2B to 3.
*** IARC classifies “continuous filament glass dust” as “not classifiable with respect to human carcinogenicity.” (Group 3) IARC and NTP classify “fibrous glass dust” as “possibly carcinogenic to humans” (Group 2B)

The following chemicals are subject to SARA Title III/CERCLA “reportable quantities” (RQs) and / or “threshold planning quantities” (TPQs) and / or are classified as “Toxic Chemicals” under the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372:

<table>
<thead>
<tr>
<th>INGREDIENT NAME</th>
<th>SARA 313 (toxic chemical)</th>
<th>SARA/CERCLA RQ (LB)</th>
<th>SARA EHS TPQ (LB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum Oxide (Fibrous)</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony Compounds</td>
<td>Yes</td>
<td>1,000</td>
<td></td>
</tr>
<tr>
<td>Copper</td>
<td>Yes</td>
<td>5,000</td>
<td></td>
</tr>
<tr>
<td>Brass (as zinc compound)</td>
<td>Yes</td>
<td>1,000</td>
<td></td>
</tr>
</tbody>
</table>

CAS numbers are found in section 2. The chemicals listed above are not used in all the formulae listed. The aluminum oxide used is not the fibrous form and hence is not covered by SARA 313 legislation. The maximum % will be confirmed (if found in a particular compound) to the appropriate health officials on a need to know basis, by calling 1-615-597-3673.

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.

### 16. OTHER INFORMATION

**Issue Date:** 1st September 1999  
**MSDS Number:** 0213  
**Revision Date:** 16th January 2003  
**Issue:** 8  
**Prepared by:** Dr. Mark Phipps

This product does not contain any deliberate addition of asbestos.

**Disclaimer:**

The information and recommendations set forth herein are taken from sources believed to be accurate as of the date of revision. Federal-Mogul makes no warranty with respect to the accuracy of the information or the suitability of the recommendations, and assumes no liability, including direct, incidental or consequential damages for any reliance thereon.

This MSDS should not be used as a complete or accurate summary of the content of the product. For specific information on brand names, manufacturers, or quantities, please refer to specific product specification documents where available.