



MATERIAL SAFETY DATA SHEET

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name: Friction Material, Drum Brake Lining

MSDS Number: No. 0237

ABEX (6020, 6035, 6037, 6047, 6048, 6068, 6079, 6080, 6082, 6097, 6103, 6110, 6125, 6126, 6127, 6135, 6150, 6206, 6224, 685, 697)

FA (903, 904, 906, 908, 910, 912, 916, NB-1, PM23-1)

FERODO (3038, 3057, 3074, 3075, 3076, 3102, 3135, 3137, 3165, 3169, 3172, 3177, 3184, 3185, 3187, 3190, 3198, 372, 373, 374, 3219)

FM (2031, 2041, 2058, 2059, 2088, 2089, 2090, 2100, 2116, 2151, 2153, 2181, 2185, 2188, 2189, 2200, 2202, 2203, 2204, 2206, 2216, 2237, 282)

GNBX (3)

TQ (201, 202, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214)

WE (103,105, 106,130, 133, 134,147,153, 155, 156,157, 158, 159,160,161, 162, 163, 164, 167, 168, 169, 170, 171, 172, 173, 174, 175)

Manufacturer:

Federal Mogul Corporation
26555 Northwestern Highway
Southfield, MI 48034

Phone: (248) 354-7700/(248) 354-8950

Emergency Phone: 1-800-567-7455 (PSC)

SECTION 2: COMPOSITION/INFORMATION ON HAZARDOUS 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.

Ingredient*	CAS No.:	% Weight	OSHA PEL	ACGIH TLV (2004)
Alumina-fused	1344-28-1	>1	15 mg/m ³ ^a	10 mg/m ³
Aluminum	7429-90-5	>1	15 mg/m ³ ^{a, b}	10 mg/m ³
Amorphous Silica	7631-86-9	>1	80 mg/m ³	
			% SiO ₂ + 2	3 mg/m ³ (respirable fraction)
Aluminum salt	1335-30-4	>1	None Established	None Established
Antimony trioxide	1309-64-4	>1	0.5 mg/m ³	0.5 mg/m ³
Barytes	7727-43-7	>1	15 mg/m ³ ^b	10 mg/m ³
Bituminous coal	NONE	>1	None Established	None Established
Brass	NONE	>1	1 mg/m ³	1 mg/m ³
Calcium carbonate (limestone)	1317-65-3	>1	15 mg/m ³	None Established
Calcium carbonate	471-34-1	>1	None Established	10 mg/m ³
CALGON	68915-31-1	>1	None Established	None Established
Carbon Black	1333-86-4	>1	3.5 mg/m ³	3.5 mg/m ³
Cashew Particle	68333-96-0	>1	None Established	None Established
Cashew Particle	68333-94-8	>1	None Established	None Established

Cashew Resin	69012-00-6	>1	None Established	None Established
Cashew Resin	8007-24-7	>1	None Established	None Established
Cashew Resin	NONE	>1	None Established	None Established
Cellulose	9004-34-6	>1	15 mg/m ³ ^b	10 mg/m ³
Ceramic Fibers	142844-00-6	>1	1 fiber/cc ^c	0.2 fiber/cc (refractory) (A2)
Ferrophosphorus	8049-19-2	>1	None Established	None Established
Glass Fiber	65997-17-3	>1	None Established	1 fiber/cc ^c (A3)
Graphite	7782-42-5	>1	15 mppcf ^d	2 mg/m ³ (respirable fraction)
Nitrile polymer	9003-18-3	>1	None Established	None Established
Hydrated lime	1305-62-0	>1	15 mg/m ³ ^a	2 mg/m ³
Iron Powder (as Iron)	7439-89-6	>1	None Established	None Established
Para-aramid polymer	26125-61-1	>1	None Established	None Established
Kyanite	1302-76-7	>1	None Established	None Established
Linseed	67746-08-1	>1	None Established	None Established
Mica	12001-26-2	>1	20 mppcf, <1% silica	3 mg/m ³ (respirable fraction)
Mineral fiber – biosoluble	194718-72-4	>1	None Established	None Established
Mineral Fibers	65997-17-3	>1	1 fiber/cc ^c	1 fiber/cc ^c
Petroleum Coke	64743-05-1	>1	None Established	None Established
Polyacrylonitrile	24980-62-9	>1	None Established	None Established
Phenolic Resin-Cured	9003-35-4	>1	None Established	None Established
Rubber (Powdered)	9006-04-6	>1	None Established	None Established
Rubber (Natural with talc)	139497-04-4	>1	None Established	None Established
Sea Coal	68409-95-0	>1	None Established	None Established
Silica (Tripoli)	1317-95-9	>1	10 mg/m ³ (respirable % SiO ₂ + 2 fraction)	0.1 mg/m ³ (respirable fraction)
Steel Fiber	65997-19-5	>1	None Established	None Established
Sulfur	7704-34-9	>1	None Established	None Established
Synthetic Vitreous Fibers (ceramic)	8031-18-3	>1	1 fiber/cc ^c	0.2 fiber/cc (refractory) (A2)
Talc	14807-96-6	>1	20 mppcf, <1% silica	2.0 mg/m ³
Wollastonite	13983-17-0	>1	None Established	None Established
Zinc oxide	1314-13-2	>1	15 mg/m ³	2.0 mg/m ³

*: Each product listed in Section 1 does not contain all of the ingredients listed above

a. As total particulate (not otherwise regulated)

b. Milligrams of constituent per cubic meter of sampled air, on a weight-to-volume basis

c. As synthetic vitreous fibers per cubic centimeter of sampled air

A2: ACGIH has classified the compound as a suspected human carcinogen.

A3: ACGIH has classified the compound as a confirmed animal carcinogen with unknown relevance to humans.

d. Millions of particles per cubic foot of sampled air

OSHA Regulatory Status: This product is classified as hazardous.

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

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 exposures in excess of permissible exposure limits for the respective ingredients and should be considered hazardous.

Prolonged or repeated exposure may cause lung injury, including silicosis. This product may contain crystalline silica. Crystalline silica has been classified by IARC as a known human carcinogen. Some human studies indicate potential for lung cancer from crystalline silica exposure. Risk of injury depends on duration and level of exposure. Long-term exposures that result in silicosis may result in additional health effects.

SECTION 3: HAZARDS IDENTIFICATION (continued)

POTENTIAL HEALTH EFFECTS

Inhalation: Dust may cause irritation. Fume produced at high temperatures may cause metal fume fever, a 24-to 48-hour "flu-like" illness. Repeated inhalation of dust may affect a variety of organs (See Chronic Section below).

Skin: May cause irritation. Prolonged skin contact may cause skin sensitization and/or dermatitis.

Eye: Dust may cause irritation and redness. Particles may scratch the eye.

Ingestion: Ingestion may cause irritation, nausea, vomiting, and diarrhea.

Chronic: Repeated inhalation of dust may cause fibrotic lung disease and increased risk of sinus and respiratory cancer. Long-term dust inhalation may also harm the nervous, gastrointestinal, renal (kidneys), and hematological (blood) systems.

Carcinogenicity:

	COMPONENT
	NTP
	IARC
	OSHA
Silica (Crystalline)	Yes
	1
	Yes
Carbon black	No
	2B
	No

Ceramic Fibers, Glass fibers

Yes
2B
No

Mineral Fiber*

Yes
3
No

Mineral Fibers (respirable) Synthetic vitreous fiber

No
3
No

Aluminum, Aluminum salt, Barytes, Bituminous coal, Brass, Calcium carbonate, CALGON, Cashew particle, Cashew Resin-Cured, Cellulose, Ferrophosphorus, Graphite, Nitrile polymer, Hydrated lime, Iron powder, Para-aramid polymer, Kyanite, Linseed, Mica, Polyacrylonitrile, Petroleum coke, Phenolic Resin-cured, Rubber (Powdered), Sea coal, Steel fiber, Sulfur, Talc, Wollasonite, Zinc oxide

No

No

No

* The mineral fiber used has been classified as biosoluble and exonerated under ECC directive 97/69/EC, Note Q. The IARC has recently changed the classification of Mineral Fibers to Group 3 "unclassifiable" from Group 2 "possible carcinogen."

Signs and Symptoms: Skin may become red and itchy with repeated contact. Anemia may cause dizziness and fatigue. Muscle weakness, fatigue, irritability, poor memory, and headache may indicate neurological effects. Gastrointestinal effects may result in nausea, abdominal pain, diarrhea, constipation, nausea and vomiting.

Medical Conditions Aggravated by Exposure: Overexposure may aggravate pre-existing skin, respiratory, kidney, blood, gastrointestinal and nervous system disorders.

Target Organs: Skin, eyes, lungs, gastrointestinal system.

POTENTIAL HEALTH EFFECTS (continued)
Symptoms and Effects of Exposure to Selected Individual Components

ALUMINUM OXIDE

Inhalation hazards – Exposure to alumina may cause coughing and shortness of breath.

Chronic: Prolonged exposure may affect breathing capacity.

Other hazards – Ingestion is not recommended, but adverse effects have not been reported. Alumina is not absorbed through the skin, but contact may cause abrasion. Dust may irritate eyes.

ANTIMONY COMPOUNDS

Inhalation hazards – There are no reported serious health risks 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. IARC classifies antimony trioxide as Group 2, possibly carcinogenic to humans. Proposition 65 lists antimony trioxide as a cancer-causing chemical.

BARYTES

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 – Adverse effects have not been reported from ingestion. Eye contact may cause temporary discomfort and irritation.

BITUMINOUS COAL

Inhalation hazards – May irritate mucous membranes by mechanical or chemical means. May cause lung inflammation.

Other hazards – May cause slight to moderate eye irritation. May cause skin irritation.

BRASS

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 may be 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. Hemolysis, jaundice, anuria, hypertension and convulsions characterize acute poisoning.

CALCIUM CARBONATE

A white, finely pulverized powder with no odor.

Inhalation hazards – Limestone dust is considered a nuisance dust. Prolonged exposure may cause irritation to throat and lungs. Silica content is not considered high enough to cause silicosis unless exposures are extremely high and prolonged.

Other hazards – May cause mild transient eye irritation.

CALGON

Other hazards – Chronic exposure to can cause adverse effects on the gastrointestinal tract, liver, or gall bladder.

CARBON BLACK

Inhalation hazards – Exposure may cause temporary upper respiratory tract discomfort. IARC classifies carbon black as Group 2B, possibly carcinogenic to humans. Proposition 65 lists carbon black as a cancer-causing chemical.

Symptoms and Effects of Exposure to Selected Individual Components (continued)

CASHEW RESIN – CURED

Inhalation hazards – Cured cashew particles are generally considered to be a nuisance dust, but prolonged exposure may cause irritation of nasal and respiratory tracts leading to sensitization. In the unlikely event of formalin vapors and/or uncured cashew liquid being present, this may cause dermatitis and could lead to a form of nasal cancer.

CELLULOSE

Inhalation hazards – Overexposure to respirable fibers by inhalation may cause mild and temporary upper respiratory irritation, with discomfort or cough. **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.

CERAMIC FIBERS

Inhalation hazards – Overexposure to respirable fibers by inhalation may cause mild and temporary upper respiratory irritation, with discomfort or cough. NTP has listed respirable ceramic fibers as Group B, reasonably anticipated to cause cancer in humans. IARC has listed ceramic fibers as Group 2B, possibly carcinogenic to humans. ACGIH classifies refractory ceramic fibers as A2, a suspected human carcinogen. **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.

FERROPHOSPHORUS

Inhalation hazards – May cause respiratory tract irritation.

Other hazards – Chronic exposure to can cause adverse effects on the gastrointestinal tract, liver, or gall bladder.

GLASS FIBER

Inhalation hazards – Overexposure to respirable fibers by inhalation may cause mild and temporary upper respiratory irritation, with discomfort or cough. **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.

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.

NITRILE POLYMER

Inhalation hazards – May cause respiratory tract irritation.

Other hazards – May cause skin or eye irritation.

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 to damaged skin. Swallowing excessive amounts may damage mucous membranes and the digestive system. There are no known chronic hazards.

IRON DUST (IRON OXIDE)

Inhalation hazards – Repeated or prolonged exposures to iron dust may cause a form of benign pneumoconiosis called siderosis. Exposure is generally not associated with pulmonary fibrosis or disability unless there is concurrent exposure to other fibrosis-producing materials such as silica.

Other hazards – Contact may cause skin and eye irritation.

Symptoms and Effects of Exposure to Selected Individual Components (continued)

PARA- ARAMID POLYMER

Inhalation hazards – Overexposure to respirable fibers by inhalation may cause mild 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 points and mild irritation of the eyes and nasal passages.

KYANITE

Inhalation hazard – may cause coughing, and shortness of breath.

Other hazards – may irritate eyes and abrade the skin.

LINSEED OIL

Inhalation hazard – No known adverse health effects.

Other hazards – Eye contact may cause redness or irritation.

MAN-MADE MINERAL FIBERS – (SYNTHETIC VITREOUS FIBERS)

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 classifies man-made mineral fibers (diameter <1 µm) as Group 2B, possibly carcinogenic to humans. ACGIH classifies synthetic vitreous fibers as A3, an animal carcinogen with unknown relevance to humans.

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.

Note: The emergence of “biosoluble” forms of man-made fibers has allowed these fiber types to be omitted from classification as a carcinogen according to Note Q in EU Commission Directive 97/69/EC.

MICA

Thin amber flakes that are odorless. Long-term exposure to a respirable airborne concentration exceeding the TLV may lead to pneumoconiosis, but usually no functional lung impairment. The symptoms most frequently reported are chronic cough and dyspnea. May contain naturally occurring trace amounts of crystalline silica.

PAN – POLYACRYLONITRILE

Inhalation hazards – May cause respiratory tract irritation.

Other hazards – May cause skin or eye irritation.

PETROLEUM COKE

Inhalation hazards – Overexposure to dust may result in chronic bronchitis.

Other hazards – Dust may be abrasive and irritating to eyes.

PHENOLIC RESIN – CURED

Inhalation hazards – Dust may cause irritation of nasal and respiratory tracts. Product is fully cured, so formalin vapor should not be present. If formaldehyde is present, inhalation may cause a form of nasal cancer.

Other hazards – Prolonged exposure can cause irritation, redness, tearing of the eyes, and may lead to sensitization of the skin and dermatitis.

RUBBER (POWDERED)

Inhalation hazards – May cause mild irritation of the 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.

Symptoms and Effects of Exposure to Selected Individual Components (continued)

SEA COAL

Inhalation hazards – May irritate mucous membranes by mechanical or chemical means. May cause lung inflammation.

Other hazards – May cause slight to moderate eye irritation. May cause skin irritation.

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, Group 1, carcinogenic to humans. ACGIH classifies crystalline quartz as A2, suspected human carcinogen.

Other hazards – Eye or skin contact can cause temporary discomfort and irritation.

STEEL FIBER

Inhalation hazards – Acute: Metal fume fever with symptoms of chills, fever, cough, muscle aches, and difficulty in breathing from manganese; silicon can cause respiratory tract irritation; copper can cause irritation of eyes, nose, throat and lungs with a possibility of metal fume fever, chills, nausea, fever, dry throat, cough, and metallic taste. Chronic: Repeated exposure to iron over time may cause lung changes and benign pneumoconiosis; cumulative central nervous system and lung damage may occur with manganese as well as insomnia, and malaise; may cause irritation of the lungs and discoloration of the skin and hair.

Other hazards – May cause mechanical damage to skin and eyes.

SULFUR

Inhalation hazards – Exposure may cause irritation to mucous membranes and upper respiratory tract. Symptoms include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.

Other hazards – May also irritate by ingestion and skin absorption.

TALC

Inhalation hazards – Overexposure to respirable fibers by inhalation may cause mild and temporary upper respiratory irritation, with discomfort or cough. **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.

WOLLASTONITE

A non-metallic mineral powder, white in color with a faint odor.

Inhalation hazards – long-term cumulative inhalation of high concentrations may cause restriction of the large airways.

Other hazards – May cause minor skin irritation.

ZINC

Inhalation hazards – Exposure to zinc oxide can cause a flu-like illness called metal fume fever, with symptoms of metallic taste in the mouth, headaches, cough, shortness of breath, aches and chills, upset stomach and chest pain.

Other hazards – Zinc oxide may be absorbed through the skin to produce the above symptoms. Repeated high exposure may cause ulcer symptoms and affect liver function.

SECTION 4: FIRST AID MEASURES

Ingestion: Seek medical attention.

Inhalation: Move to fresh air. Seek medical attention.

Eye Contact: Flush with water to remove particulate. Seek medical attention.

Skin Contact: Wash thoroughly with soap and water. If persistent irritation develops, seek medical attention.

SECTION 5: FIRE FIGHTING MEASURES

Flashpoint: N/A **LEL:** N/A **UEL:** N/A **Autoignition Temperature:** This product is inherently flame resistant, but may ignite at temperatures exceeding 1,112°F (600°C) in an oxygen-enriched atmosphere.

Extinguishing Media: Use media suitable for surrounding fire.

Unusual Fire and Explosion Hazards: None

Special Fire Fighting Procedures: Heating to very high temperatures may result in toxic decomposition products (See Section 10).

SECTION 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 in the workplace.

SECTION 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.

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 dust, vapor, or fume exceeding PELs or TLVs. (See 29 CFR 1910.134, respiratory protection standard).

Skin Protection: If skin irritation occurs, gloves and other protective garments may be worn.

Eyes: Wear safety glasses or goggles, as necessary, if dust exposure is possible.

Other: None known.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (as lead)

Boiling Point:	N/A	Vapor Pressure:	N/A
Melting Point:	N/A	Vapor Density (air = 1):	N/A
pH:	N/A	% Volatile:	N/A
Specific Gravity:	2.00 – 3.70 g/cc	Evaporation Rate:	N/A
Water Solubility:	Insoluble	Appearance and Odor:	Solid, phenolic

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable at normal temperatures and storage conditions.

Incompatibility (Materials/Conditions to Avoid): None.

Hazardous Polymerization: Will not polymerize. This product is fully cured in the manufacturing process.

Decomposition Products: Oxides of carbon, nitrogen and sulfur; hydrocarbons; ammonia; and other trace organic compounds.

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: Skin and eye irritation may occur with repeated contact to dust.

Chronic: This product is a mixture of chemicals physically bonded together. Therefore, in the "as supplied" state, this product is considered non-hazardous. If dust is generated, some of the ingredients can have acute and chronic effects (See Section 3 for details).

SECTION 12: ECOLOGICAL INFORMATION

None known

SECTION 13: DISPOSAL CONSIDERATIONS

Federal and state law regulates disposal of solid waste. Waste should be placed in airtight containers. Disposal must be in accordance with 49CFR261, 40CFR262, and applicable state and local regulations.

SECTION 14: TRANSPORTATION INFORMATION

Proper Shipping Name:	Not regulated
Hazard Class:	None
Identification Number:	None
Packing Group:	N/A
Shipping Label:	None
Additional Marking Requirement:	None

SECTION 15: REGULATORY INFORMATION

U.S. TSCA: All chemicals used in the manufacture of this product are listed on the U.S. Toxic Substances Control Act (TSCA) Inventory

California Proposition 65: This product contains antimony trioxide and carbon black, ingredients known to the State of California to cause cancer, birth defects or other reproductive effects.

SARA Title III – Section 313 Supplier Notification: This product contains the following chemicals 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 (EPCRA) of 1986 and 40 CFR 372:

Ingredient	CAS Number	% Weight
Aluminum (fume or dust)	7429-90-5	>1

SECTION 15: REGULATORY INFORMATION (continued)

RCRA Hazardous Waste Code: Not Available

CERCLA Hazardous Substances: Not Available

OSHA: Not Available

WHMIS Classification: Not Available

SECTION 16: OTHER INFORMATION

Abbreviations

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CAS #:	Chemical Abstract Service Number
OSHA PEL:	U.S. Occupational Safety and Health Administration Permissible Exposure Limit
ACGIH TLV:	American Conference of Governmental Industrial Hygienists Threshold Limit Value (2003)
fibers/cc:	Fibers per cubic centimeter of sampled air
mg/m ³ :	Milligrams of constituent per cubic meter of sampled air, on a weight-to-volume basis
N/A:	Not Applicable
NIOSH	National Institute for Occupational Safety and Health
IARC:	International Agency for Research on Cancer
NTP:	National Toxicology Program
HEPA:	High-efficiency particulate air

This product does not contain any deliberate addition of asbestos.

The information provided on this data sheet was abstracted from a supplier MSDS and standard references in occupational health and toxicology. Federal-Mogul makes no representation or warranty with respect to the information obtained from such references. The information provided is, however, as of the date below, true and accurate to the best of Federal-Mogul's knowledge.