

Material Safety Data Sheet

Section I

Product Name

RIGID BRAKE LINING MATERIALS (ZAF-20-EE/BPS-520-EE/ZAF-21-FF/BPS-521-FF/MORSE-R9-FF)

Manufacturer

**Morse Automotive
M.A. EAST, INC.
101 Friction Drive
Cartersville, Georgia 30120**

Emergency Telephone Number
770-607-2222

Telephone Number for Information
770-607-2222

Date of preparation:
January 27, 1992

Section II - Hazardous Ingredients/Identity Information

Hazardous Components

(Specific Chemical Identity: Common Names(s))

%

OSHA PEL

ACGIH TLV

Notes

Binder System Component (cured) may contain traces of:

Cashew Plant Derivatives	*	none	none	skin irritant
Hexamethylenetetramine (or other hardner)	*	none	none	--
Phenolic resin system				
- Phenol	*	5 ppm	5 ppm	skin notation
- Formaldehyde	*	0.75 ppm	0.3 ppm(A)	primary irritant

Reinforcement and Filler Component

Amorphous silicates	*	(80 mg/m3)/%SiO ₂	10mg/m3	
Acrylic and aramid fibers and fibrous pulp	*	15 mg/m3(B)	10 mg/m3(B)	total dust(C)
Carbon black	*	3.5 mg/m3	3.5 mg/m3	total dust
Coal (less than 5% SiO ₂)	*	2.4 mg/m3/(%SiO ₂ +2)	2 mg/m3	total dust
Coke	*	15 mg/m3(B)	10 mg/m3(B)	total dust(C)
Graphite	*	15 mg/m3	2 mg/m3	respirable dust
Metals, metallic alloys, and their oxides (Iron, Zinc, Aluminum, Magnesium, Calcium, Copper)	*	5 - 15 mg/m3	5 - 10 mg/m3	total dust
Nonasbestiform Talc	*	2 mg/m3	2 mg/m3	respirable dust

* The exact percentage of ingredients in this product is proprietary information. Only components which may be health hazards as defined in 29 CFR 1910.1200 are listed above. Information necessary for emergency health or health hazard investigations will be released to medical or health and safety personnel under signed confidentiality agreements.

(A) The ACGIH lists formaldehyde as a suspect human carcinogen

(B) As particulates not otherwise regulated

(C) Respirable dust exposure limits for these components are 5 mg/m3

Section III - Physical/Chemical Characteristics

Boiling Point/Melting Point

N/A

Specific Gravity (Water=1)

1.5 to 2.5

Vapor Pressure (mmHg)

Very low (slight resin odor)

Vapor Density (Air=1)

N/A

Solubility in Water

Insoluble

Evaporation Rate (Butyl Acetate=1)

N/A

NFPA Chemical Hazard Rating

Health=1 (slight) Fire=1 (slight) Reactivity=1 (slight)

Appearance and Odor

Dark gray solid. Slight resin odor.

Section IV - Fire and Explosion Hazard Data

Flash Point (Method Used)	N/A	Flammability N/A	LEL N/A	UEL N/A
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Extinguishing Media

Water or ABC Dry Chemical as appropriate for surrounding fire.

Unusual Fire & Explosion Hazards

This material may produce irritating smoke in smoldering fire.

Special Fire Fighting Procedures

Suggested respiratory protection: positive pressure, self-contained breathing apparatus approved by NIOSH/MSHA.

Section V - Reactivity Data

Stability	Unstable N/A	Conditions to Avoid No known hazard during normal industrial use. Avoid temperatures greater than 800 °F.
	Stable YES	

Incompatibility (Materials to Avoid)

Strong acids and other oxidizing agents.

Hazardous Decomposition or Byproducts

Normal combustion products: carbon monoxide, carbon dioxide, and soot.

Product specific combustion products: ammonia, oxides of nitrogen, phenols, and aldehydes.

Hazardous Polymerization	Will Not Occur	Conditions to Avoid N/A
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Section VI - Health Hazard Data

Route(s) of Entry:	Inhalation? YES	Skin? YES	Ingestion? UNLIKELY
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Note: Dry grinding of the cured or partially cured material may produce an inhalation hazard as a nuisance dust.

Health Hazards (Acute & Chronic)

Skin contact with product may cause an allergic skin reaction similar to poison ivy in extremely sensitive individuals.

Prolonged or repeated skin contact may cause irritation.

Carcinogenicity	NTP? NO	IARC Monographs? NO	OSHA Regulated? NO
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Signs & Symptoms of Exposure

None during normal industrial use.

Medical Conditions Generally Aggravated by Exposure

None during normal industrial use. Persons with pre-existing skin disorders may be more susceptible to irritation from skin contact.

Emergency & First Aid Procedures

Eye Contact - Immediately flush eyes with water for 15 minutes. If irritation persists, consult a physician.

Skin Contact - In case of irritation, wash with soap and water. Treat as for poison ivy.

Inhalation - In case of irritation, remove to fresh air.

Ingestion - No known hazard during normal industrial use. First Aid not applicable.

Section VII - Precautions for Safe Handling and Use

Steps to be Taken in Case Material is Released or Spilled

Material is an inert solid. Sweep (scoop) up and remove to a chemical disposal area.

Waste Disposal Method

Material is an inert solid. Dispose according to applicable federal, state and local regulations.

Precautions to be Taken in Handling & Storing

Segregate stored material from oils and strong oxidizing agents. Keep away from electrical discharges, welding, open flames, extreme heat, and other sources of potential ignition. During transportation, do not expose to extremely hot temperatures.

Other Precautions

No special DOT classification.

Section VIII - Control Measures

Respiratory Protection (Specify Type)

None required during normal industrial use. Respiratory protection suitable for the measured nuisance dust level encountered is recommended during dry grinding. Minimally, a NIOSH approved dust mask should be worn during dry grinding of cured materials.

Ventilation	Local Exhaust None during normal industrial use. Recommended during dry grinding.	Special None during normal industrial use.
	Mechanical (General) None during normal industrial use. May be required during dry grinding.	Other None during normal industrial use.

Protective Gloves

Wear impervious gloves to prevent repeated or prolonged skin contact.

Eye Protection

None during normal industrial use. Goggles or safety glasses with side shields are recommended if dry grinding produces flying particles.

Other Protective Clothing or Equipment

As necessary to prevent prolonged skin contact.

Work/Hygienic Practices

Standard hygienic practices during normal industrial use. Wash skin with soap and water.

Section IX - SARA Title III Information

This product may contain trace amounts of phenol and formaldehyde, and may therefore be subject to the reporting requirements of Section 313, Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372 if present or used in sufficient quantities.

Section X - California (Proposition 65) Information

This product, as sold, is not believed to contain any chemical known to the state of California to cause cancer, birth defects, or other reproductive "harm".

Prepared by: Millard P. Griffin, Jr., CIH, Clayton Environmental Consultants, Inc.

For: Tenneco Automotive Brake

Date: January 27, 1992

Revised by: Millard P. Griffin, Jr., CIH, CSP, Clayton Environmental Consultants, Inc.

For: Tenneco Automotive Brake

Date: September 23, 1994

Revised by: D. R. Carter, BrakePro, Inc. (Changed names, area code, address, and material names only)

For: BrakePro, Inc.

Date: April 23, 1996

Revised by: Velvet J. Elrod, M.A. EAST, Inc. (Changed company name and telephone number only)

For: M.A. EAST, Inc.

Date: February 18, 1998

Revised by: Tim Henderson, M.A. EAST, Inc. (Deleted obsolete and added new Codes to Product Name Section only)

For: M.A. EAST, Inc.

Date: September 3, 1999

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