

# Material Safety Data Sheet

## Section I

Product Name

**SEMI-METALLIC DISC BRAKE MATERIALS (MORSE MA503 FF)**

Manufacturer

**Morse Automotive, Inc.  
4130 S. Morgan St.  
Chicago, IL 60609**

Emergency Telephone Number  
773-843-9000

Telephone Number for Information  
773-843-9000

Date of Preparation: March 9, 1992  
Date of Issue: July 29, 1999

## 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:

Cashew Plant Derivatives	*	none	none	skin irritant
Isopropanol	*	400 ppm	400 ppm	--
Phenolic resin system				
- Phenol	*	5 ppm	5 ppm	skin notation
- Formaldehyde	*	0.75 ppm	0.3 ppm(A)	primary irritant
- Ammonia	*	50 ppm	25 ppm	primary irritant

### Reinforcement and Filler Component

Nitrile Rubber	*	none	none	--
Carbon black	*	3.5 mg/m3	3.5 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
Cellulose Fibers	*	none	none	--
Titanates and silicates in stabilized particulate form	*	10 mg/m3	0.1 mg/m3	irritant dust
(Iron, Zinc, Copper, Aluminum, Barium, Magnesium, Calcium)	*	5 - 15 mg/m3	5 - 10 mg/m3	total 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

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**Section III - Physical/Chemical Characteristics**

Boiling Point/Melting Point	N/A	Specific Gravity (Water=1)	2.6 to 3.0
Vapor Pressure (mmHg)	Very low	Vapor Density (Air=1)	N/A
Solubility in Water	Insoluble	Evaporation Rate (Butyl Acetate=1)	N/A

NFP Chemical Hazard Rating      Health=1 (slight)    Fire=1 (slight)    Reactivity=1 (slight)

Appearance and Odor  
Dark gray solid. No 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  
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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Health Hazards (Acute & Chronic)  
Skin contact with product may cause an allergic skin reaction similar to poison ivy in 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. If dust is ingested, drink fluids to remove.

**Section VII - Precautions for Safe Handling and Use**

Steps to be Taken in Case Material is Released or Spilled  
Material is a solid. Sweep (scoop) up and remove to a chemical disposal area.

Waste Disposal Method  
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.

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 during dry grinding.

Other Protective Clothing or Equipment  
As necessary to prevent prolonged skin contact.

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Work/Hygienic Practices

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

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### **Section IX - SARA Title III Information**

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This product may contain phenol, formaldehyde, and ammonia, 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.

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### **Section X - California (Proposition 65) Information**

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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".

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

**For: Tenneco Automotive Brake**

**Date: March 9, 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: Brian Kirts, Morse Automotive, Inc. (Update ingredients)**

**For: Morse Automotive, Inc.**

**Date: March 1, 2001**

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