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MATERIAL SAFETY DATA SHEET

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Effective Date: March 9, 1992

Code: Semi-Metallic Disc Brake Material

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Section 1 - PRODUCT AND COMPANY IDENTIFICATION

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PRODUCT NAME: Semi-Metallic Brake Materials

Identity Friction Material: ZAF-43-FF,ZAF-91-FF,SS3108FF,SS3100FF,
TS3190FF, TS3115FF

MANUFACTURER'S NAME:
BrakePro, Inc.
101 Friction Drive
Cartersville, Georgia 30120

EMERGENCY TELEPHONE NO.
(770)387-0100

MISCELLANEOUS INFORMATION:
(770)387-0100

SUPPLIER'S NAME:
Rayloc
Division of Genuine Parts Company
3100 Windy Hill Road
Atlanta, Georgia 30339

REVISION DATE:
Nov. 1, 2012

Section 2 - HAZARDOUS INGREDIENTS

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CAS NO.	INGREDIENT	-----EXPOSURE LIMITS-----					
		% BY WT.	ACGIH TLV	OSHA PEL	UNITS	VP MM	HG
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Binder System Component (cured) may contain:							
	Cashew Plant Derivatives	*	None	None	(skin irritant)		
	Hexamethylenetetramine (or other hardener)	*	None	None			
	Isopropanol	*	400 ppm	400 ppm			
	Phenolic Resin System						
	-Phenol		5 ppm	5 ppm	(skin notation)		
	-Formaldehyde	*	0.3 ppm (A)	0.75 ppm	(primary irritant)		
	-Ammonia	*	25 ppm	50 ppm			
	-Calcium Hydroxide	*	5mg/m3	15mg/m3			
Reinforcement and Filler Component							
	Acrylic & Aramid Fibers & Fibrous Pulp	*	10mq/m3 (B)	15mq/me (B)	(total		

			dust) (C)
Carbon Black	*	3.5mg/m3	3.5mg/m3 (total dust)
Coal (less than 5% SiO2)	*	2mg/m3	2.4mg/m3(%SiO2 plus 2) (total dust)
Coke	*	10mg/m3(B)	15mg/m3(B) (total dust)(C)
Graphite	*	2mg/m3	15mg/m3 (resp. dust)

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Section 2 - HAZARDOUS INGREDIENTS (cont.)

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CAS NO.	INGREDIENT	-----EXPOSURE LIMITS-----				
		% BY WT.	ACGIH TLV	OSHA PEL	UNITS	VP MM HG
	Metals & their Oxides and/or sulfides	*	5-10mg/m3	5-15mg/m3	(total dust)	
	(Iron, Zinc, Aluminum, Magnesium, Calcium, Manganese)					
	Fibrous Glass	*	10mg/m3	15mg/m3	(total dust)(C)	

* 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 5mg/m3.

Section 3 - HAZARDS IDENTIFICATION

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-Signs and Symptoms of Exposure
None during normal industrial use.

-Routes of Entry

Inhalation: Yes

Skin: No

Ingestion: Unlikely

-Health Hazards (Acute and 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

-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.

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Section 4 - FIRST AID MEASURES

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-Emergency and 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.

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Section 5 - FIREFIGHTING MEASURES

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Flash Point: N/A

LEL: N/A

UEL: N/A

Flammability: N/A

Extinguishing Media: ABC Dry Chemical as appropriate for surrounding fire.

Special Firefighting Precautions: Suggested respiratory protection:
Positive pressure, self-contained

breathing apparatus approved by
NIOSH/MSHA

Unusual Fire & Explosion Hazards: This material may produce irritating
smoke in smoldering fire

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Section 6 - ENVIRONMENTAL RELEASE MEASURES
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-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.

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Section 7 - HANDLING AND STORAGE
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-Precautions to be Taken in Handling and Storage

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

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Section 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION
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Respiratory Protection: 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.

Mechanical (general) - None during normal industrial use.

May be required during dry grinding.

Special - None during normal industrial use.

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.

Work/Hygienic Practices: Standard hygienic practices during normal industrial use. Wash skin with soap and water.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point/Melting Point: N/A

Specific Gravity (H₂O=1): 2.5-3.5

Vapor Pressure (mmHg): Very low

Vapor Density (air=1): N/A

Evaporation Rate: N/A
(butyl acetate=1)

Solubility in Water: Insoluble

Appearance and Odor: Dark gray solid. No odor.

Section 10 - STABILITY AND REACTIVITY

Stability: Stable

Conditions to Avoid: No known hazard during normal industrial use.
Avoid temperatures greater than 800 degrees F.

Incompatibility (materials to avoid): Strong acids and other oxidizing agents

-Hazardous Decomposition or By Products

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 11 - TOXICOLOGICAL INFORMATION

Information Not Available

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Section 12 - ECOLOGICAL INFORMATION
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Information Not Available

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Section 13 - DISPOSAL CONSIDERATIONS
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-Waste Disposal Method

Dispose according to applicable federal, state and local regulations.

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Section 14 - TRANSPORT INFORMATION
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Information Not Available

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Section 15 - REGULATORY INFORMATION
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-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".

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Section 16 - OTHER INFORMATION
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-SARA Title III Information

This product may contain phenol, formaldehyde, ammonia, and aluminum oxide (fibrous forms) and, therefore, may 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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