

Material Safety Data Sheet

(Complies with 29 CFR 1910.1200)

Section I			
Manufacturer	Carlisle Brake & Friction 920 Lake Road Medina, Ohio 44256		
Emergency Phone .	330-725-4941	Effective Date	February 12, 1997
Chemical Name	Friction Material	Revision Date	March 17, 2003
Tradename	Sintered Friction Material		
Category	Inorganic--829D		

Section II - Hazardous Ingredients / Identity				
Component	OSHA-PEL (mg/m ³)	ACGIH-TLV (mg/m ³)	%	CAS No.
Copper	1.0	1.0	Proprietary	7440-50-8
Iron	Total=15.0 Resp.= 5.0	10.0	Proprietary	
Carbon	Total=15.0 Resp.= 5.0	10.0	Proprietary	7782-42-5
Mullite/ Glass	Resp.= 5.0	10.0		1302-93-8 60676-86-0

Section III - Physical Characteristics			
Boiling Point	N/A	Sp.Gr. (H ₂ O=1)	5.1
Vapor Press (mm Hg)	N/A	Solubility in Water	Insoluble
Reactivity in Water	N/A	Vapor Density (Air=1)	N/A
Melting Point	> 1550° F	Color	Copper color
Appearance/Odor	No Odor		

Section IV - Fire and Explosion Data			
Flashpoint	N/A	Method used	N/A
Flammable Limits (LEL/UEL)	N/A	Special Fire Fighting Procedure	None
Auto Ignition Temperature	N/A	Extinguishing Media	CO ₂ , foam, dry chemical, water
Unusual Fire and Explosion Hazards	None		

Section V - Reactivity Data	
Stability	Stable
Incompatibility (Materials to Avoid)	None
Hazardous Decomposition Products	None
Hazardous Polymerization	Will Not Occur
Conditions to Avoid	None

Section VI - Health Hazards

Effects of Overexposure:

Inhalation: a) Inhalation of high concentrations of copper dust may cause intense sneezing, nausea, weakness and fever. Can cause hemolysis of red blood cells, deposition of hemofuscin in the liver and possible injury to lung cells.
b) Chronic exposure to carbon as graphite dust can cause fibrosis, emphysema and corpulmonale.
c) Iron can cause coughing, slight upper respiratory irritation, and a metallic taste in the mouth. Repeated exposure to copper (as salts) may cause dermatitis. If abrasions are present, lead exposure could be significant.

Skin:

Emergency Procedures

Eye Contact: Copper may cause conjunctivitis or ulceration and turbidity of the cornea. In case of contact, immediately flush with water for 15 minutes, including under the eyelids. Seek medical help immediately if material cannot be adequately removed from the eye.

Skin Contact: Wash thoroughly with soap and water.

Inhalation: Following exposure to a large amount of dust, remove from exposure. If breathing has stopped, perform artificial respiration. Contact a physician.

Ingestion: Unlikely. If ingestion occurs, contact a physician.

Section VII - Spill/Leak Procedures

Handling, Storage	None applicable
DOT Shipping Rules	Non-hazardous as "article", no special precautions
Spill/Leak	N/A
Waste Disposal Methods	Check with local counsel for applicable laws/regulations. Lead is subject to SARA 313R reporting

Section VIII - Special Protection /Control Measures

Respiratory Protection/Ventilation	Use a NIOSH approved respirator with appropriate filters when exposed to brake wear products. Use exhaust ventilation to keep exposure below exposure limits.
Protective Gloves	Recommended, particularly if sensitive skin.
Eye Protection	Recommended
Other Protective Equipment	N/A

Section IX - Special Precautions

No special precautions necessary

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