Material Safety Data Sheet

(Complies with 29 CFR 1910.1200)

Section I			
Manufacturer	Carlisle Brake and Friction 920 Lake Rd. Medina, Ohio 44256		
Emergency Phone .	330-725-4941	Effective Date	March 18, 2016
Chemical Name	Friction Material	Revision Date	March 18, 2016
Tradename	Sintered Friction Material		
Category	Inorganic—8032A		

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
Tin	2.0	2.0	Proprietary	7440-31-5
Iron	Total=15.0 Resp.= 5.0	10.0	Proprietary	7439-89-6
Silicon Carbide	Total=15.0 Resp.= 5.0	10.0	Proprietary	409-21-2
Carbon	Total = 15.0 Resp.= 5.0	10.0	Proprietary	7782-42-5
Molybdenum disulfide	15.0	10.0	Proprietary	1317-33-5
Boron nitride	N /A	5.0	Proprietary	

Section III - Physical Characteristics			
Boiling Point	N/A	Sp.Gr. (H_2O=1)	N/A
Vapor Press (mm Hg)	N/A	Solubility in Water	N/A
Reactivity in Water	N/A	Vapor Density (Air=1)	N/A
Melting Point	N/A	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	Dry chemical, graphite, dolomite, NaCl
Unusual Fire and Explosion Hazards	N/A		

Section V - Reactivity Data	
Stability	Stable
Incompatibility (Materials to Avoid)	Strong oxidizing agents
Hazardous Decomposition Products	Nitrogen oxide if reacted with nitric acid.
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, nausia, weakness and fever. Can cause hemolysis of red blood cells, deposition of hemofuscin in the liver and possible injury to lung cells.
b) Tin can cause neurologic disturbances including tremors and flaccid paralysis. Exposure to dust and fumes of tin oxide causes a mild pneumoconiosis.
c) Iron can cause coughing, slight upper respiratory irritation, and a metallic taste in the mouth.
d) Chronic exposure to carbon as graphite dust can cause fibrosis, emphysema and corpulmonale.

Skin: Repeated exposure to copper (as salts) may cause dermatitis.

Eye: Copper may cause conjunctivitis or ulceration and turbidity of the cornea.

Emergency Procedures

Eye Contact: 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: Under normal conditions of industrial use, ingestion is not expected to occur. Should ingestion occur, substantial lead exposure could result. (see inhalation). Get medical attention.

.Section VII - Spill/Leak Procedures

Handling, Storage	None applicable
DOT Shipping Rules	Non-hazardous as "article", no special precautions
Spill/Leak	Broom, Scoop, Vacuum. Avoid dusting. Wear respirator.
Waste Disposal Methods	Check with local counsel for applicable laws/regulations.

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	Long sleeve shirts

Section IX - Special Precautions

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