

Material Safety Data Sheet

(Complies with 29 CFR 1910.1200)

Section I			
Manufacturer	Carlisle Brake and Friction 920 Lake Road Medina, Ohio 44256		
Emergency Phone.	330-725-4941	Effective Date	April 1, 2005
Chemical Name	Friction Material	Revision Date	10-25-12
Trade name	Sintered Friction Material		
Category	Inorganic—7342-49		

Section II - Hazardous Ingredients / Identity				
Component	OSHA-PEL (mg/m ³)	ACGIH-TLV (mg/m ³)	%	CAS No.
Fused Silica	80 mg/m ³ / %SiO ₂ (amorphous SiO ₂) 0.1 mg/m ³ (resp.)	0.1 mg/m ³	Proprietary	60676-86-0
Iron	Total=15.0 Resp.= 5.0	10.0	Proprietary	7439-89-6
Tungsten Disulphide	5 mg/m ³	5 mg/m ³	Proprietary	7440-33-7
Zircon Granular	5 mg/m ³	5 mg/m ³	Proprietary	14940-68-2
Carbon	Total=15.0 Resp.= 5.0	10.0	Proprietary	7782-42-5
Nickel Alloy	Total= 1.0	1.0	Proprietary	7440-02-0
Copper	1.0	1.0	Proprietary	7440-50-8
Tin	2.0	2.0	Proprietary	7440-31-5
Boron nitride	N / A	5.0	Proprietary	10043-11-5
Calcium Fluoride		2.5	Proprietary	7789-75-5
Zirconium Oxide	5.0	5.0	Proprietary	14940-68-2

Section III - Physical Characteristics			
Boiling Point	N/A	Sp.Gr. (H ₂ O=1)	
Vapor Press (mm Hg)	N/A	Solubility in Water	Insoluble
Reactivity in Water	N/A	Vapor Density (Air=1)	N/A
Melting Point	925° C	Color	Grey/Black
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	None
Unusual Fire and Explosion Hazards	None Know		

Section V - Reactivity Data	
Stability	Stable
Incompatibility (Materials to Avoid)	May react with strong oxidizers.
Hazardous Decomposition Products	
Hazardous Polymerization	Will Not Occur
Conditions to Avoid	None

Section VI - Health Hazards
<p>Effects of Overexposure:</p> <p>Inhalation: a) Iron inhalation can cause slight upper respiratory irritation, coughing and a metal taste in mouth. b) Chronic exposure to carbon as graphite dust can cause fibrosis, emphysema and corpulmonale. c) Inhalation of high conc. of copper dust may cause intense sneezing, nausea, weakness and fever, hemolysis of red blood cells, deposition of hemofuscin in the liver and possible injury to lung cells. d) Nickel is a suspected carcinogen in animals. Inhalation may cause bronchitis. e) Tin can cause neuralgic disturbances including tremors and flaccid paralysis. Exposure to dust and fumes of tin oxide causes a mild pneumoconiosis. f) Zircon sands contain trace quantities (106- 20 pCi/g) of natural occurring radioactive Uranium & Thorium. Overexposure to respirable dust may cause lung cancer. g) exposure to respirable Boron Nitride dust may produce pneumoconiosis.</p> <p>Emergency Procedures</p> <p>Eye Contact: Flush with clean water for 15 minutes. If irritation persists, contact a physician. 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: If conscious, give large quantities of water to induce vomiting. Get medical attention.</p>

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

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	Wear gloves to avoid skin contact.
Eye Protection	Wear safety glasses or goggles.

Other Protective Equipment	N/A
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Section IX - Special Precautions

No special precautions necessary

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