

Material Safety Data Sheet

Date of Preparation: July 21, 2001

Revision: B

Section 1 - Chemical Product and Company Identification

Product Name: Varistor Powder and Blocks
Manufacturer: Hubbell Power Systems/ Ohio Brass, 1850 Richland Ave Aiken S.C. 29801
Phone: 803-648-8386 ext 175, Nights/ Weekends 573-682-8727



Emergency Overview

Section 2 - Composition / Information on Ingredients

Ingredient Name	CAS Number	% wt or % vol
Nickel	7440020	1-5%
Antimony	7440360	<0.5%
Bismuth Oxide	NA	1-5%
Zinc Oxide	1314132	85-95%

Trace Impurities:

Ingredient	OSHA PEL		ACGIH TLV		NIOSH REL		NIOSH IDLH
	TWA	STEL	TWA	STEL	TWA	STEL	
Nickel	1mg/m3	NA	NA	NA	NA	NA	NA
Antimony	0.5mg/m3	NA	NA	NA	NA	NA	NA
Bismuth Oxide	NA	NA	NA	NA	NA	NA	NA
Zinc Oxide	5.0 mg/m3	NA	NA	NA	NA	NA	NA

Toxicity Data:

Section 3 - Physical and Chemical Properties

Physical State: Solid	Water Solubility: Negligible
Appearance and Odor: Light Grey no Odor	Other Solubilities: NA
Odor Threshold: NA	Boiling Point: NA
Vapor Pressure: NA	Freezing/Melting Point: 1400 C
Vapor Density (Air=1): NA	Viscosity: NA
Formula Weight: 85.4	Refractive Index: NA
Density: 5.7	Surface Tension: NA
Specific Gravity (H₂O=1, at 4 °C): 5.7	% Volatile: 0
pH: NA	Evaporation Rate: NA

Section 4 - Fire-Fighting Measures

Flash Point: NA
Flash Point Method: NA
Burning Rate: Moderate
Autoignition Temperature: NA
LEL: NA
UEL: NA
Flammability Classification: 0
Extinguishing Media: Water, Foam, Dry Powder
Unusual Fire or Explosion Hazards: If product is in service it may be near High Voltage Electricity use caution.
Hazardous Combustion Products: Carbon Monoxide

Fire-Fighting Equipment: This product is normally stable. However dust from this product can react with acids, oxidizers, nickel nitrate, and when hot Zinc Oxide and can react with magnesium and chlorinated rubber violently. .

Section 5 - Stability and Reactivity

Stability See section 4. .

Polymerization: Hazardous polymerization cannot occur.

Chemical Incompatibilities: See section 4

Section 6 - Health Hazard Information

Potential Health Effects

Primary Entry Routes:

Target Organs: Eyes and Respiratory System

Acute Effects Irritation of eyes, Coughing, Fatigue, Rash on skin.

Inhalation: Yes

Eye: Yes

Skin: Yes

Ingestion: Yes

Carcinogenicity: IARC, NTP, and OSHA do list this product as a carcinogen.

Medical Conditions Aggravated by Long-Term Exposure: Dust from this product can aggravate respiratory conditions.

Chronic Effects: None Known

Emergency and First Aid Procedures

Inhalation: Take to fresh air consult Doctor

Eye Contact: Flush Eyes for 15 Minutes consult Doctor

Skin Contact: Flush skin with water. If rash appears consult Doctor

Ingestion: Give milk and induce to vomit. Consult Doctor

After first aid, get appropriate in-plant, paramedic, or community medical support.

Note to Physicians:

Special Precautions/Procedures: This product contains Zinc Oxide and Antimony

Section 7 - Spill, Leak, and Disposal Procedures

Spill /Leak Procedures: NA

Small Spills: NA

Large Spills: NA

Disposal: This product is not regulated under RCRA. Consult with local and State regulators.. Nickel Antimony, and Zinc Oxide are listed under SARA 313

Section 8 - Exposure Controls / Personal Protection

Engineering Controls:

Ventilation: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs

(Sec. 2). Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.

Administrative Controls:

Respiratory Protection: Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a MSHA/NIOSH-approved respirator. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. For emergency or nonroutine operations (cleaning spills, reactor vessels, or storage tanks), wear an SCBA.

Warning! Air-purifying respirators do not protect workers in oxygen-deficient atmospheres. If respirators are used, OSHA requires a written respiratory protection program that includes at least: medical certification, training, fit-testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.

Protective Clothing/Equipment: Wear chemically protective gloves, boots, aprons, and gauntlets to prevent prolonged or repeated skin contact. Wear protective eyeglasses or chemical safety goggles, per OSHA eye- and face-protection regulations (29 CFR 1910.133). Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with contact lenses.

Safety Stations: Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

Comments: Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

Section 9 - Special Precautions and Comments

Prepared By: Bill Emery

Disclaimer: The information contained in this MSDS was compiled in good faith. It is the user responsibility to determine the suitability of this information for health and safety applications. We reserve the right to amend this MSDS at any time.