



32919-XXXX  
 32920-XXXX  
 32921-XXXX

**Material Safety Data Sheet**  
 May be used to comply with  
 OSHA's Hazard Communication Standard,  
 29 CFR 1910.1200. Standard must be  
 consulted for specific requirements.

**U.S. Department of Labor**  
 Occupational Safety and Health Administration  
 (Non-Mandatory Form)  
 Form Approved  
 OMB No. 1218-0072



IDENTITY (As Used on Label and List)  
Orton Pyrometric Cones/Bars

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

**Section I**

Manufacturer's Name <u>The Edward Orton Jr. Ceramic Foundation</u> Address (Number, Street, City, State, and ZIP Code) <u>6991 Old JC Highway, P.O. Box 460</u> <u>Westerville OH 43081-0460</u>	Emergency Telephone Number (614) 895-2663 Telephone Number for Information (614) 895-2663 Date Prepared 6-27-89 Signature of Preparer (optional) <u>Dale A. Fronk</u> Dale A. Fronk
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**Section II — Hazardous Ingredients/Identity Information**

Hazardous Components (Specific Chemical Identity; Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
<u>Numbers 022, 021, 020 contain a low soluble lead frit and titanium dioxide</u>				
<u>lead as a dust</u>		<u>.05mg/m<sup>3</sup></u>		<u>50% as P</u>
<u>titanium dioxide</u>		<u>10mg/m<sup>3</sup></u>		
<u>Numbers 017, 016, 015, 014, 013, 012, 011, 010, 09, 08</u>				
<u>07, 06, 05½, 05, 04, 03, 02, 01, 1, 2, 3, 4, 5, 6, 7</u>				
<u>8, 9, 10, 11, 12, 12½, 13, 13½, 14, 14½, 15, 15½</u>				
<u>16, 17, 18, 19, 20, 21, 23, 26, 27, 28, 29, 30, 31</u>				
<u>31½, 32, 32½, 33, 34 contain silica</u>				
<u>silica as dust</u>		<u>10.0mg/m<sup>3</sup></u>		<u>10-65%</u>
<u>(Time weighted)</u>				

**Section III — Physical/Chemical Characteristics**

Boiling Point	N/A	Specific Gravity (H <sub>2</sub> O = 1)	1.8 to
Vapor Pressure (mm Hg.)	N/A	Melting Point	N/A
Vapor Density (AIR = 1)	N/A	Evaporation Rate (Butyl Acetate = 1)	N/A
Solubility in Water NIL			
Appearance and Odor Solid - Shape of pyramid or rectangular bar - No. odor.			

**Section IV — Fire and Explosion Hazard Data**

Flash Point (Method Used)	N/A	Flammable Limits	LEL N/A	UEL N/A
Extinguishing Media N/A				
Special Fire Fighting Procedures All numbers except those labeled PCE contain 4-6% organic material that will burn above 300°F.				

**Unusual Fire and Explosion Hazards**  
 Item Numbers: 32919-1050, 32919-1150

N/A

V.3280

**Section V — Reactivity Data**

Stability	Unstable		Conditions to Avoid
	Stable	X	
Incompatibility (Materials to Avoid) N/A			
Hazardous Decomposition or Byproducts N/A			
Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	

**Section VI — Health Hazard Data**

Route(s) of Entry:	Inhalation?	Skin?	Ingestion?
	N/A	None anticipated	None anticipated
Health Hazards (Acute and Chronic) Product is non-hazardous when used as intended. Product should not be ground into dust or ingested. Product may contain crystalline silica which may cause cancer based on animal data.			
Carcinogenicity:	NTP?	IARC Monographs?	OSHA Regulated?
Signs and Symptoms of Exposure N/A			
Medical Conditions Generally Aggravated by Exposure N/A			
Emergency and First Aid Procedures If swallowed, get professional medical help.			

**Section VII — Precautions for Safe Handling and Use**

Steps to Be Taken in Case Material is Released or Spilled	No specific precautions
Waste Disposal Method	Disposal must meet existing federal, state and local environmental control regulations for low soluble lead frit - titanium dioxide - silica
Precautions to Be Taken in Handling and Storing	Keep out of reach of children. Wash hands after handling.
Other Precautions	Organic components may produce harmful gases during firing, if not fully oxidized. Also, other gases may be produced during firing, therefore, provide adequate ventilation to kiln or kiln area.

**Section VIII — Control Measures**

Respiratory Protection (Specify Type) N/A			
Ventilation	Local Exhaust	N/A	Special N/A
	Mechanical (General)	N/A	Other N/A
Protective Gloves	N/A	Eye Protection	N/A
Other Protective Clothing or Equipment No special requirements			

Work Hygiene Practices  
Item Numbers: 32919, 32920, 32921, 32922

Wash hands after handling