



**MD-BOTH INDUSTRIES**

40 Nickerson Road  
Ashland, MA 01721-1912  
Tel: (508) 881-4100  
Fax: (508) 881-1656

Hazard Ratings	
Minimal.....0	HEALTH 0
Slight.....1	FLAMMABILITY 1
Moderate.....2	REACTIVITY 3
Serious.....3	PERSONAL
Severe.....4	PROTECTION B

**MATERIAL SAFETY DATA SHEET**

Date of Preparation: April 22, 2002  
Prepared by: Max Hui

**SECTION 1**

Manufacturer's Name: MD-BOTH Industries  
Street Address: 40 Nickerson Road, Ashland, MA 01721  
Emergency Telephone #: CHEMTREC 800-424-9300 24HRS  
Chemical Name: Aluminum Flake Pelletized in 5% urea aldehyde resin  
Trade Name: Grandal 1500, Grandal 1700, Grandal 1880, Grandal 2150, Grandal 2480,  
Grandal 2600, Grandal 2900, Grandal 3200 VP 10471,  
Grandal VP 10663, Grandal VP 10609, Grandal Metagloss.

**SECTION 2 -- HAZARDOUS INGREDIENTS**

This product contains the following ingredients:

CAS#	Chemical Name	% by Weight	TLV 10 mg/m <sup>3</sup>	LEL 30 oz/1000 ft <sup>3</sup>	Vapor Pressure NA
7429-90-5	Aluminum Powder	92			
Proprietary	Urea aldehyde resin	5%	N/A	N/A	N/A

All component ingredients of these products are listed in the TSCA inventory and can be found on the Canadian DSL.

**SECTION 3 -- PHYSICAL DATA**

Boiling range (deg. C): 2467  
Melting Range (deg C) 660

Density @20 deg C 2.7 gm/cm<sup>3</sup>

Page 1 of 3

Grandal/5/7/02

Technical Support - Metallic Finished Inks & Black Dispersions: (888) 863-2684 (IL)  
Technical Support - Metallic Powders & Pastes: (800) 288-2684 (MA)  
Customer Service: (800) 288-2684 (MA)

MARKETED BY  
**HARWICK STANDARD**  
DISTRIBUTION CORPORATION  
60 S. Selberling Street • Akron, Ohio 44305

Type of odor: Characteristic  
Evaporation rate: N/A

Appearance: Silver colored Pellets  
% VOC: 0.0

#### SECTION 4 -- FIRE AND EXPLOSION DATA

Flammability Classification: OSHA: Not classified  
DOT: Not regulated

Flash Point Deg. F : N/A

Extinguishing media: Class D Dry chemical extinguishing agent or other suitable extinguishing material such as dry sand. Do not use Class A, B, or C extinguishers or halogenated agents. Do not use water.

Unusual fire and explosion hazards: Closed containers may explode when exposed to extreme heat. Water and finely divided aluminum react violently to form hydrogen gas. Aluminum burns at very high temperatures as a mass.

Special fire fighting procedures: If the aluminum has ignited, drum should be carefully isolated and fine dry sand placed around outside of container. Do not disturb the powder until it has cooled down to ambient temperature. Do not allow dust clouds to form.

#### SECTION 5 -- HEALTH HAZARD DATA

Effects of Overexposure:

Eye contact: may cause irritation.

Skin contact: prolonged exposure may cause irritation.

Inhalation: May cause irritation in respiratory tract

Primary Routes of Entry: Inhalation and skin contact.

Emergency and First Aid Procedures:

Eye contact: Flush with large amounts of water for 15 minutes or until irritation subsides. If irritation persists, call physician.

Skin contact: Wash with soap and water. Remove and wash contaminated clothing.

Inhalation: Remove affected person to fresh air. Restore normal breathing and administer oxygen if necessary. Call physician.

Ingestion: Drink 1 or 2 glasses of water to dilute. Do not induce vomiting. Consult physician or poison control center immediately. Treat symptomatically.

#### SECTION 6 -- REACTIVITY DATA

Product Stability: stable

Page 2 of 3

Grandal/5/7/02

Conditions to avoid: Heat, sparks, open flames, water, acids, alkalis, strong oxidizing agents  
Hazardous decomposition products: Aluminum reacts with water, acids, and alkalis to form hydrogen gas.

## SECTION 7 -- SPILL OR LEAK PROCEDURES

Procedure When Material Spilled or Released: Remove all sources of ignition. Keep people away. Using spark-proof tools remove material to leak-proof container for disposal.

Waste Disposal Method: Dispose of contaminated material in approved landfill or incinerator that can accept aluminum metal in accordance with local, state, and federal regulations.

## SECTION 8 -- SPECIAL PROTECTION INFORMATION

Ventilation: Use with ventilation sufficient to prevent buildup of dangerous concentrations of dust in air.

Use explosion-proof equipment. No smoking or open lights.

Protective Gloves: Use chemical resistant gloves to avoid prolonged skin contact.

Respiratory Protection: Dust mask may be used

Eyes: Do not wear contact lenses.

## SECTION 9 -- SPECIAL PRECAUTIONS

Handling and Storage: Do not store above 120 degrees F. Store in closed containers in a cool, well-ventilated area.

Other Precautions: Do not ingest. Avoid prolonged contact with skin and contact with eyes.

More detailed information on storage and handling of aluminum powders may be found in the Aluminum Association's brochure entitled "Recommendations for Storage and Handling of Aluminum Powders and Pastes".

The information contained in this data sheet was obtained from sources we believe are reliable but cannot guarantee. Your use of this information is beyond our control. Therefore, the information is provided without any representation or warranty.