

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

MATERIAL SAFETY DATA SHEET

Date of Preparation: September 29, 1997

Prepared by: Scott D. Fields

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 pasted in 35% Isopropanol

Trade Name: Aluminum Pasted in IPA

1880-04354, 1980-04354, 2080-0435, 2190-0435, 2390-0435 2480-0435, Metaface 2140-0435

SECTION 2 -- HAZARDOUS INGREDIENTS

This product contains no chemicals subject to the reporting requirements of section 313 of Title III and of 40 CFR 372. This product contains the following hazardous ingredients.

<u>CAS#</u>	<u>Chemical Name</u>	<u>% by Weight</u>	<u>TLV</u>	<u>LEL</u>	<u>Vapor Pressure</u>
7429-90-5	Aluminum	62.0	N/A	30 oz/1000 ft ³	N/A
67-63-0	Isopropyl alcohol	35.0	N/A	2 % by vol.	33mm Hg

All of the components of this product are listed in the TSCA inventory and the Canadian DSL.

SECTION 3 -- PHYSICAL DATA

Boiling point (deg. F): 180

Vapor density: Greater than air

Type of odor: Alcoholic

Evaporation rate: Slower than ether

Liquid density: Greater than water

Appearance: Silver colored paste

% VOC: 35

SECTION 4 -- FIRE AND EXPLOSION DATA

Flammability Classification: OSHA: Flammable Solid
DOT: Flammable Solid, Organic, NOS (Aluminum Paste), 4.1,
UN1325, II

Flash Point of solvent (deg. F): Minimum 53 Tag Closed Cup.

Extinguishing Media: Foam, carbon dioxide, dry chemical, 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: Estimated flammable limits for solvent(% by volume in air): Lower--2.0 % Vol. , Upper--12.0 % Vol. Closed containers may explode when exposed to extreme heat. Water and finely divided aluminum react to form hydrogen gas. Aluminum burns at very high temperatures as a mass. If solvent has completely burned out or evaporated, any disturbance that might create a dust cloud can result in explosion. LEL of dry aluminum flake is 30 ounces per 1000 cubic feet.

Special Fire fighting Procedures: Use supplied-air breathing equipment, if necessary, to avoid breathing solvent and decomposition products. If solvent has completely burned out and the aluminum has ignited, drum should be carefully isolated and fine dry sand placed around outside of container.

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, nausea, dizziness.

Primary Entry Routes: Inhalation of solvent vapors 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 immediately.

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

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. Incomplete combustion of solvent can form carbon monoxide.

Hazardous polymerization: Does not occur.

SECTION 7 -- SPILL OR LEAK PROCEDURES

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

Waste Disposal Method: Dispose of contaminated material in approved landfill or approved incinerator 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 solvent vapor in air. Use explosion-proof equipment. No smoking, or open lights.

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

Respiratory Protection: Use respiratory protection in confined or enclosed spaces, if needed.

Eye Protection: Use chemical goggles to reduce the chance of eye contact.

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 ALLOW MATERIAL TO EVAPORATE TO DRYNESS.** Do not ingest. Avoid prolonged contact with skin, contact with eyes, and breathing vapor.

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".

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