



MATERIAL SAFETY DATA SHEET

SECTION 1 - PRODUCT INFORMATION

Product Name: Chromium Metal - Aluminothermic
Cas No. 7440-47-3
Formula: Cr
Products Covering: Chromium
Chemical Family: Metals
Manufacturer's Name: Miller and Company LLC
Address: 9700 W. Higgins Road
Suite 1000
Rosemont, IL 60018
Phone: 874-696-2400
Emergency Phone: Chemtrec 800-262-8200
Prepared by: H. F. Linebarger
Date: May 28, 2013

SECTION 2 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor: Metallic silver briquette. No Odor
Melting Point: 1830°C
Specific Gravity: 7.18 gm/cc
Solubility: Insoluble

SECTION 3 - COMPOSITION / INGREDIENTS

Significant Ingredients:	wt. %	CAS Registry #
Chromium	>99	7440-47-3
Iron	<0.2	7439-89-6

OSHA Hazardous Components (29 CFR1910, 1200):

	Exposure Limits 8 hours TWA (mg/m3)
	<u>ACGIH TLV</u> <u>OSHA-PEL</u>
Chromium	0.5 1

SECTION 4 - FIRE AND EXPLOSION DATA

Combustibility:

Dry Aluminothermic Chromium Metal as packaged is not combustible. When suspended in air, dusts or chromium metal can be ignited, propagate flame readily, and generate some pressure or explode. The degree of combustibility in air is dependent upon particle size, oxide coating, and quality of dispersion. The hazard increases with particle fineness. Thoroughly clean areas or equipment to be maintained prior to dust disturbing or ignition source generation activities.

Auto Ignition Temperature (dust layer): Chromium - 698°F (370°C)
Lower Explosive Level: Chromium - 230 g/m³
Combustion Products: Oxides or constituent elements
Minimum Ignition Energy: Chromium - 400 milljoules

Extinguishing Media: Class D fire: Use dry powder, dry sand, or CO₂ to smother fire. Fire may also be isolated and allowed to burn itself out. Do not disturb metal while extinguishing the fire.

SECTION 5 - HEALTH - HAZARD DATA

Inhalation: High concentrations of dust or fume may be harmful if inhaled.
Skin Contact: Frequent or prolonged contact may irritate the skin and cause a skin rash (dermatitis).
Eye Contact: Irritating, but will not permanently injure eye tissue.

SECTION 5 - HEALTH - HAZARD DATA - CONTINUED

Effects of Overexposure

Chronic Effects: This product contains in the metallic state. The International Agency for Research on Cancer has determined that chromium and certain chromium compounds are "casually associated with cancer in humans" but "the compounds responsible for the carcinogenic effect in humans cannot be specified". This requires that chromium in all forms be Identified as carcinogenic under OSHA. The American Conference of Governmental Industrial Hygienists has reviewed the available data and conducted that only specific water insoluble hexavalent chromium compounds are carcinogenic to humans.

SECTION 6 - REACTIVITY DATA

Stability: Stable and hazardous polymerization will not occur.
Conditions to Avoid: Avoid contact with water and acids such as Hydrochloric (HCL) and Nitric (HN03).
Hazardous Reaction/Decomposition Products: Small amounts of hydrogen may evolve if moisture is present. Wet material may react with water to liberate heat and generate steam.

SECTION 7 - SPILL, LEAK, OR DISPOSAL INFORMATION

Land Spill

Dry Aluminothermic Chromium Metal represents minimal hazard. Cleanup personnel should wear appropriate respiratory protective equipment when addressing fine material. Avoid the use of compressed air to maneuver spills or leaks of fine material. Fine material should be swept up or vacuumed using explosion-proof equipment. Keep dry material and wet material separated. Place cleaned up material in disposal container. Avoid repacking wet materials in sealed containers.

Water Spill

Remove from water body by dipping or other appropriate means. Avoid repacking wet materials in sealed containers.

SECTION 8 - EMPLOYEE PROTECTION DATA

Respiratory Protection: Industry areas, use NIOSH-approved Schedule 21C respirator. Compliance is required with OSHA respirator regulations, 29 CFR 1910.134 (USA) and CSA Standard Z94.4-M1982 (Canada).
Eye Protection: Standard Safety Glasses are recommended.
Other Clothing & Equipments: Protective gloves are recommended during handling. Lump material may have sharp edges. As with other metal dusts, avoid contamination of work clothing.
Ventilation: Local exhaust when necessary to achieve dust control and general ventilation to achieve air change in enclosed spaces.

SECTION 9 - ADDITIONAL INFORMATION

Handling/Storage: Store in ambient temperature, atmospheric pressure.
 Avoid generation of airborne dusts. Keep fines/powders in closed containers away from sparks, heat, and open flames. Keep material dry when storing for long periods of time. To reduce the potential for explosion, avoid adding wet product to molten metal.