MATERIAL SAFETY DATA SHEET

SECTION 1 – PRODUCT

Product Name:	Chromium Metal and Alloys
Cas No.	7440-47-3
Formula:	Cr, FeCr
Products Covering:	Low Carbon Ferrochrome, High Carbon Ferrochrome
Chemical Family:	Ferroalloys
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:	January 13, 2009

SECTION 2 – PHYSICAL DATA

Appearance and Odor:	Metallic grey color, no odor
Solubility:	Product is insoluble in water.
Reactivity in Water:	None
Specific Gravity:	3.8 to 7.2
Melting Point-Range:	1200°C to 1800°C.

SECTION 3 – COMPOSITION

Typical Analysis (Wt % Range)	
Chromium	50 – 100%
Iron	0 – 50%

TLV (mg/m^3): No TLV's exist for ferrochromium alloys; TLV's may be applicable to constituent elements.
1 mg/m^3 as Chrome (OSHA)
10 mg/m^3 as Fe_2O_2 (OSHA)

SECTION 4 – HAZARDS

Combustibility: Fine-sized chromium metal when suspended in air can be ignited, will propagate flame readily, and will generate some pressure or a mild explosion. Fine sized ferrochromium alloys when suspended in air could be ignited, would weakly propagate flame but could not be exploded. Lump chromium metal and ferrochromium alloys are not combustible.

Extinguishing Media: Class D fire: Use dry chemicals, dry sand, or CO_2 to smother fire. Fire may also be isolated and allowed to burn itself out. Do not disturb burning metal while extinguishing the fire.

SECTION 5 – HEALTH – HAZARD DATA

First Aid Procedures:

Inhalation:	Remove from dusty area to fresh air.
Skin Contact:	No hazard associated with skin contact.
Eye Contact:	Flush with water to be sure that no particles remain in the eye.

Effects of Overexposure:

Acute: Cr metal and alloys are of low toxicity in lump form. Overexposure to dusts may irritate eye, nose or throat.

Chronic: Prolonged overexposure to dusts of chromium metal and alloys may cause irritation and/or pulmonary disease.

SECTION 6 – REACTIVITY DATA

Stability: Stable in all sizes.
Material to Avoid: Acids such as HCI and HNO_2
Conditions to Avoid: Avoid generation of airborne dusts
Hazardous Reaction/Decomposition Products: None.

SECTION 7 – SPILL, LEAK OR DISPOSAL INFORMATION

Steps to be Taken in Case of Spills: Fine material should be swept up or vacuumed. Avoid using compressed air to maneuver spills or leaks of fine material. No problems are associated with spills or leakage of lump material.

Waste Disposal or Repack Information: No special precautions are required. Dispose of in accordance with applicable federal, state, and local regulations.

SECTION 8 – EMPLOYEE PROTECTION INFORMATION

Respiratory Protection:
In dusty areas, use NIOSH-approved Schedule 21C respirator.

Eye Protection:
Subject to safety rules. Recommended the use of safety goggles.

Ventilation:
Local for dusty operations

Other Clothing and Equipments:
Protective gloves are recommended during handling. Lump material may have sharp edges. As with other metal dusts, avoid contamination of work clothing.

SECTION 9 – ADDITIONAL INFORMATION

Handling/Storage: Minimize and control operations producing dust.

Milling: Use of special precautions, such as inert atmosphere, is recommended when sizing to minus 100 mesh with more than 50% minus 200 mesh.

Labeling: No special labels are required.