

65843

MATERIAL SAFETY DATA SHEET

The issuance of this document complies with the U. S. Department of Labor, Occupational Safety and Health Administration's (OSHA) Hazard Communication Standard 29 CFR 1910.1200. Standard must be consulted for specific requirements.

Definitions: **ACGIH** American Conference of Governmental Industrial Hygienists
NIOSH National Institute for Occupational Safety and Health
NE Not Established **NISS** Not In Sources Searched
NA Not Applicable **TLV** Threshold Limit Value
TWA Time Weighted Average **PEL** Permissible Exposure Limit

IDENTITY (As used on label and list): Chromium (-50, -52, -53, -54) Metal

SECTION I. Manufacturer's Identification

Manufacturer's Name: **UT-Battelle**
c/o Oak Ridge National Laboratory
Isotope Business Office
P. O. Box 2008
Oak Ridge, Tennessee 37831

Emergency Telephone Number:
Lab Shift Superintendent (865) 574-6606
Telephone Number for Assistance:
Isotope Business Office (865) 574-6984

Date Prepared: 19-March-1987
Date Reviewed: 25-June-2003

SECTION II. Hazardous Ingredients/Identity Information

Exposure Limits:
OSHA: TWA 1 mg/m³
ACGIH TLV: TWA 0.5 mg/m³ (1989-90)
NIOSH: NE
Immediately Dangerous to Life and Health: NE

Chemical Formula: Cr
Primary Rating: CAS Registry Number: 007440-47-3
Health Hazard Rating: 3, high health hazard
Fire Hazard Rating: 1, slightly flammable
Reactivity Rating: 0, nonreactive
Secondary Rating* DOT Number: UN 3179
Health Hazard Rating: 3, high health hazard
Fire Hazard Rating: 4, extremely flammable
Reactivity Rating: 0, nonreactive

DOT Class: 4.1, Flammable solid
(Sub) 6.1 Poison
DOT Label: Flammable Solid, Poison

*Powder will explode spontaneously in air, ignites and is potentially explosive in atmospheres of carbon dioxide.

SECTION III. Physical/Chemical Characteristics

Physical Description: Steel-gray lustrous metal, cubic structure.
Molecular Weight (naturally occurring): 51.996
Melting Point: 1900°C
Boiling Point: 2642°C
Specific Gravity: 7.14 (water=1)
Evaporation Rate: NISS

Vapor Pressure: 1 mm Hg @ 1616°C
Vapor Density: NISS
Percent Volatiles: NA
Solubility: Insoluble in water.

SECTION IV. Fire and Explosion Hazard Data

Flash Point (method): NISS
Autoignition Temperature: NISS
Extinguishing Media: Use dry sand, carbon microspheres, dolomite, met, or extinguishing media suitable for surrounding materials.
Firefighting Procedures: Firefighting techniques should concentrate on controlling the spread of the fire to other combustible materials. Wear pressure-demand, self-contained breathing apparatus and full firefighting protective clothing.
Fire and Explosion Hazards: When finely divided, burns rapidly if heated in flame. Powder will explode spontaneously in air. Ignites and is potentially explosive in atmospheres of carbon dioxide.

SECTION V. Reactivity Data

Stability: Unstable: _____ Stable: X
Conditions to Avoid: NISS
Incompatibility (materials to avoid): Powder, amine nitrates, amine perchlorates, ammonium nitrate, hydrogen peroxide, lithium, nitric oxide, potassium, chlorate, sulfur dioxide, oxidants.
Hazardous Decomposition or Byproducts: NISS
Hazardous Polymerization: May Occur: _____ Will Not Occur: X

SECTION VI. Health Hazard Data

Routes of Entry: Inhalation: X Skin: Ingestion: X

Signs and Symptoms of Exposure:

Acute Inhalation: Chromium dust causes respiratory irritation.
Acute Swallowing: NISS
Acute Skin Contact: Irritant.
Acute Eye Contact: Irritant.
Chronic: Chronic inhalation will cause irritation of respiratory system.

Health Hazards (Target organs/systems):

Acute: Blood, central nervous system, digestive system, eyes, kidneys (nephrotoxin), liver (hepatotoxin), lungs, mucous membrane, peripheral nervous system, reproductive system, respiratory system, skin (cutaneous hazard).
Chronic: NISS

Emergency and First Aid Procedures:

Inhalation: Remove to fresh air and give artificial respiration if not breathing. Get medical aid.
Swallowing: Induce vomiting only after massive ingestion.
Skin contact: Remove contaminated clothing and wash skin with plenty of water.
Eye contact: Flush eyes at once with water for at least 15 minutes. Get medical aid.
Physicians' notes: NISS

Carcinogenicity: NTP Yes IARC Monographs Yes OSHA Regulated No

Medical Conditions Generally Aggravated by Exposure: NISS

SECTION VII. Precautions for Safe Handling and Use

Steps to be Taken in Case Material is Released or Spilled: Notify safety personnel of leaks or spills. Remove spills by vacuuming or wet sweeping in order to keep airborne dust at a minimum.

Waste Disposal Method: Collect in an appropriate container for salvage or disposal. Treat unsalvageable waste as a toxic solid in accordance with federal, state, and local regulations.

Precautions to be Taken in Handling and Storing: Store in closed container in a cool, dry, well-ventilated, low fire-risk area. Protect container from physical damage.

Other Precautions: Avoid breathing dust. Avoid skin and eye contact. Eyewash stations and washing facilities should be accessible to areas of use.

SECTION VIII. Control Measures

Respiratory Protection (specify type): Use a NIOSH-approved inorganic dust respirator when dust levels exceed the PEL.

Ventilation:

Local Exhaust: Employ to keep dust below TLV levels.

Mechanical (general): Employ to keep dust below TLV levels.

Special: NISS

Other: NISS

Protective Gloves: Compatible chemical resistant gloves.

Eye Protection: Wear approved chemical safety goggles/glasses.

Other Protective Clothing or Equipment: Wear protective clothing.

Work/Hygienic Practices: Wash thoroughly after handling.

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