



Super Conductor Materials, Inc.

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Poison Center: (800) 562-8236

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SAFETY DATA SHEET

Identity: Chromium carbide

Formula: Cr₃C₂

SECTION I - GENERAL INFORMATION

Manufacturer: Super Conductor Materials, Inc.

The information below is believed to be accurate and represents the best information available to Super Conductor Materials, Inc. However, SCM makes no warranty, expressed or implied with respect to such information and assumes no liability resulting from its use.

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Molecular weight: 180.02

CAS #	OSHA PEL	ACGIH TLV	%
12012-35-0	1 mg/m ³	0.5mg/m ³	0.0-100.0%

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

Physical States: Solid

Boiling Point: 3800.00°

Vapor Pressure (vs. air or mmHg): N/A

Melting Point: 1980.00°C

Specific Gravity (Water=1): 6.68 gm/cc

Evaporation Rate: N/A

Flash Point: N/A

Solubility in water: Insoluble

Appearance and odor: Gray powder, no odor

SECTION IV - FIRE AND EXPLOSION HAZARD DATA:

Method Used: Unknown

Explosive Limits: LEL: N/A

UEL: N/A

Extinguishing Media: USE: Class D or other suitable extinguishing agent for metal fires. DO NOT USE: Water

Special Fire Fighting Procedures:

Firefighters must wear full face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. Fumes from fire are hazardous. Isolate runoff to prevent environmental pollution.

Unusual Fire and Explosion Hazards:

Chromium carbide may emit toxic fumes if involved in a fire.

On contact with moisture, it may emit methane gas.



SECTION V - REACTIVITY DATA

Stability: Stable

Conditions to Avoid (instability): None

Incompatibility: Moisture, Strong oxidizing agents, acids and bases

Hazardous Decomposition or Byproducts: Methane gas

Hazardous Polymerization: will not occur

Conditions to avoid (hazardous polymerization): None

SECTION VI - HEALTH HAZARD DATA

Routes of entry: Inhalation? Yes Skin? Yes Eyes? Yes Ingestion? Yes Other? No

To the best of our knowledge the chemical, physical and toxicological properties of chromium carbide have not been thoroughly investigated and recorded.

Chromium: Confirmed human carcinogen with experimental tumorigenic data. Human poison by ingestion with gastrointestinal effects. (Sax, Dangerous Properties of Industrial Materials)

Signs and Symptoms of Overexposure:

Inhalation: May cause a dry throat, coughing and shortness of breath.

Ingestion: May cause gastritis, convulsions, asphyxia, giddiness, nausea, diarrhea and vomiting.

Skin: May cause redness and itching.

Eye: May cause redness, itching and watering.

Health Hazards (Acute and Chronic):

Inhalation:

Acute: May cause irritation.

Chronic: May cause pneumoconiosis, histologic fibrosis of lungs, nasal and/or lung cancer.

Ingestion:

Acute: May cause gastrointestinal disorders.

Chronic: No chronic health effects recorded.

Skin:

Acute: May cause irritation.

Chronic: No chronic health effects recorded.

Eye:

Acute: May cause irritation.

Chronic: May cause conjunctivitis.

Target Organs: May affect respiratory system.

Carcinogenicity: NTP? Yes IARC Monographs? Yes

OSHA Regulated? Yes

Medical Conditions Aggravated by Exposure: Pre-existing respiratory disorders, pulmonary functions and asthma.



Emergency and First Aid Procedures:

- Inhalation:* Remove victim to fresh air, keep warm and quiet, and give oxygen if breathing is difficult; seek medical attention
- Ingestion:* Give 1-2 glasses of milk or water and induce vomiting, seek medical attention. Never induce vomiting or give anything by mouth to an unconscious person
- Skin:* Remove contaminated clothing, brush material off skin, wash affected area with mild soap and water, and seek medical attention if symptoms persist
- Eye:* Flush eyes with lukewarm water, lifting upper and lower eyelids for at least 15 minutes and seek medical attention

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be taken in case material is released or spilled:

Wear appropriate respiratory and protective equipment specified in section VIII. Isolate spill area, provide ventilation and extinguish sources of ignition. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for proper disposal. Take care not to raise dust.

Waste disposal method:

Dispose of in accordance with state, local, and federal regulations.

Hazard Label Information:

Store in cool, dry area and in tightly sealed container. Wash thoroughly after handling.

Precautions to be taken in handling:

Chromium carbide reacts with moisture to form methane gas. Handle and store in a controlled environment and inert gas such as argon.

SECTION VIII - CONTROL MEASURES

Protective Equipment Summary (Hazard Label Information):

NIOSH approved respirator, impervious gloves, safety glasses, clothes to prevent contact.

Ventilation:

Local Exhaust: To maintain concentration at low exposure levels.

Special: Handle in an enclosed, controlled environment

Mechanical (General): Not recommended

Other: Handle in an inert gas such as argon

Work/Hygienic/Maintenance Practices:

Implement engineering and work practice controls to reduce and maintain concentration of exposure at low levels. Use good housekeeping and sanitation practices. Do not use tobacco or food in work area. Wash thoroughly before eating or smoking. Do not blow dust off clothing or skin with compressed air.

Please be advised that N/A can either mean Not Applicable or No Data Has Been Established