

Super Conductor Materials, Inc.

391 Spook Rock Industrial Park, Suffern, NY 10901 · 845.368.0240 · Fax 845.368.0250 · www.scm-inc.com

Chemtrec: (800) 424-9300
Poison Center: (800) 562-8236
Revision Date: January 8th, 2019

SAFETY DATA SHEET

Identity: Zirconium carbide

Formula: ZrC

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: 103.23

CAS #	OSHA PEL	ACGIH TLV	%
12070-14-3	5mg/m ³ Zr	5mg/m ³ Zr	0.0-100.0%

SECTION III – PHYSICAL/CHEMICAL CHARACTERISTICS

Physical States:

Boiling Point: 5100°C	Vapor Pressure: N/A
Melting Point: 3540°C	Specific Gravity (water = 1): 6.73 g/cm ³
Evaporation Rate (Butyl Acetate=1): 0	Flash Point: N/A
Solubility in water: Insoluble	

Appearance and odor: Hard gray, metallic powder, odorless

SECTION IV - FIRE AND EXPLOSION HAZARD DATA:

Method Used: unknown *Explosive Limits:* LEL: NE UEL: NE

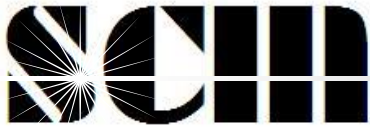
Extinguishing Media:

Flammable solid. Zirconium carbide in the form of a fine powder is highly flammable and may be easily ignited. Use suitable dry powder extinguishing agents.

Special Fire Fighting Procedures:

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

Unusual Fire and Explosion Hazards: Flammable in the form of duct or powder.



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SECTION V - REACTIVITY DATA

Stability: Stable

Conditions to Avoid: Excessive heating, sparks, and sources of ignition.

Incompatibility – (Materials to avoid): Strong oxidizers, evolves flammable hydrogen gas on contact with acids and bases.

Hazardous Decomposition or Byproducts: Thermal decomposition may produce toxic oxides on contact with acids and bases.

Conditions to Avoid- Hazardous Polymerization: Will not occur.

Hazardous Polymerization: None

SECTION VI - HEALTH HAZARD DATA

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

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

Zirconium compounds are not an important industrial poison. Most zirconium compounds in common use are insoluble and considered inert. Pulmonary granuloma in zirconium workers has been reported.

Sign and Symptoms of Overexposure:

Inhalation: May cause red, dry throat, coughing, sneezing and difficulty breathing.

Ingestion: May cause burning sensation.

Skin: May cause redness and itching.

Eye: May cause redness, itching and watering.

Health Hazards (Acute and Chronic):

Inhalation:

Acute: May cause irritation to the respiratory tract, mucous membranes or the nose and throat.

Chronic: No chronic health effects recorded.

Ingestion:

Acute: May cause irritation to the gastrointestinal tract.

Chronic: No chronic health effects recorded.

Skin:

Acute: May cause irritation.

Chronic: May cause skin granulomas.

Eye:

Acute: May cause irritation.

Chronic: No chronic health effects recorded.

Target Organ: May affect the respiratory system and skin.

Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

Medical Conditions generally aggravated by this material: Pre-existing respiratory disorder

Emergency and First Aid Procedures:



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Inhalation: Remove victim to fresh air, keep warm and quiet, and give oxygen if breathing is difficult; seek medical attention

Ingestion:

Skin: Remove contaminated clothing, brush material off skin, wash affected area with mild soap and water, and seek medical attention immediately.

Eye: Flush eyes with lukewarm water, lifting upper and lower eyelids for at least 15 minutes and seek medical attention immediately.

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-Control Measures. Isolate spill area, provide ventilation. 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. Use with adequate ventilation.

SECTION VIII - CONTROL MEASURES

Protective Equipment Summary (Hazard Label Information):

NIOSH/MSHA approved respirator, impervious gloves, safety glasses, clothes to prevent contact, goggles or face shield.

Ventilation:

Local Exhaust: To maintain concentration at or below TLV, PEL

Special: Handle in an enclosed, controlled environment.

Mechanical (General): Not recommended

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