



SAFETY DATA SHEET

ProChemOnline.com



SECTION 1 PRODUCT AND COMPANY INFORMATION

PRODUCT NAME: **Zirconium (IV) Carbide**

PRODUCT NUMBER: 3906-1

CAS NUMBER: 12070-14-3

MANUFACTURER:

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SECTION 2 HAZARDS IDENTIFICATION

CLASSIFICATION OF SUBSTANCE OR MIXTURE

Pictogram



Signal Word

Danger

Hazard Statements

H228	Flammable solid.
H302+H312+H332	Harmful if swallowed, in contact with skin, or if inhaled.

Precautionary Phrases

P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P261	Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P264	Wash skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301+P312	IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Dispose of contents/ container to an approved waste disposal plant.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P363	Wash contaminated clothing before reuse.
P370+P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
P501	Dispose of contents/ container to an approved waste disposal plant.

SECTION 2 HAZARDS IDENTIFICATION (Cont.)

HMIS CLASSIFICATION:

Health: 1 Fire: 2 Reactivity Hazard: 1

NFPA RATING:

Health: 1 Flammability: 2 Reactivity Hazard: 1

EYE CONTACT: May cause mild to moderate irritation of the eyes.

SKIN CONTACT: May cause slight to mild irritation of the skin.

INHALATION: Dust may be irritating to the nose, mucous membranes, and respiratory tract.

INGESTION: No information is available

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Formula: ZrC

Molecular Weight: 103.23

CHEMICAL NAME	CAS#	%
Zirconium (IV) Carbide	12070-14-3	100

SECTION 4 FIRST AID MEASURES

EYE EXPOSURE: Immediately flush the eyes with copious amounts of water for at least 15 minutes. Assure flushing under eyelids. A victim may need assistance in keeping their eyelids open. Get immediate competent medical attention.

SKIN EXPOSURE: Wash affected area with water. Remove contaminated clothes if necessary. Seek medical assistance if irritation persists.

INHALATION: Remove to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention if necessary.

INGESTION: Seek medical attention immediately. Keep the victim calm. Induce vomiting only if directed by medical personnel.

SECTION 5 FIREFIGHTING MEASURES

FLASH POINT: Not available

AUTO IGNITION TEMPERATURE: Not available

EXPLOSION LIMITS: Not available

EXTINGUISHING MEDIUM: Carbon dioxide, extinguishing powder, or water spray. Fight large fires with water spray or alcohol resistant foam.

SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.

HAZARDOUS COMBUSTION AND DECOMPOSITION PRODUCTS: Carbon oxides and zirconium oxides.

SECTION 6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Wear all appropriate equipment when using this material. Ensure adequate ventilation. Evacuate personnel to safe areas.

ENVIRONMENTAL PRECAUTIONS: Prevent spillage from entering drains or allowing to be released into the environment.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP: Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations. Keep in suitable, closed containers for disposal. Contain spillage, pick up with an electrically protected vacuum cleaner or by wet-brushing and transfer to a container for disposal according to local regulations

SECTION 7 HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING: Wear appropriate personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use. Avoid formation of dusts and aerosols. Keep away from sources of ignition. Take measures to prevent the build up of electrostatic charge.

CONDITIONS FOR SAFE STORAGE: Store in cool, dry, and well-ventilated area. Protect against electrostatic charges. Keep in a tightly sealed container.

SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

EXPOSURE CONTROLS

Component	Exposure Limits	Basis	Entity
Zirconium (IV) Carbide	5 mg/m ³	TWA	ACGIH
	10 mg/m ³	STEL	ACGIH
	5 mg/m ³	PEL	OSHA
	5 mg/m ³	REL	NIOSH
	10 mg/m ³	STEL	NIOSH

TWA: Time Weighted Average over 8 hours of work.

REL: Recommended Exposure Limit

STEL: Short Term Exposure Limit during x minutes.

PEL: Permissible Exposure Limit

EYE PROTECTION: Wear chemical safety glasses or goggles.

SKIN PROTECTION: Wear nitrile or rubber gloves, and a complete flame-retardant antistatic suit. This protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

VENTILATION: Provide local exhaust, preferably mechanical.

RESPIRATOR: Use an approved respirator.

ADDITIONAL PROTECTION: Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

COLOR AND FORM: Grey powder

ODOR: None

MOLECULAR WEIGHT: 103.23

BOILING POINT: 5100°C

MELTING POINT: 3540°C

SPECIFIC GRAVITY: 6.73 gm/ml

VAPOR DENSITY: No data available

SOLUBILITY: Insoluble

SECTION 10 STABILITY AND REACTIVITY

STABILITY: Stable

HAZARDOUS POLYMERIZATION: Will not occur

CONDITIONS TO AVOID: Heat, flames, and sparks. Extremes of temperature and direct sunlight.

INCOMPATIBILITY: Strong oxidizing agents and halogens.

DECOMPOSITION PRODUCTS: Carbon oxides and zirconium oxides

SECTION 11 TOXICOLOGICAL DATA

ACUTE TOXICITY: No data available

CARCINOGENIC EFFECTS: No components of this product present at levels greater than or equal to 0.1% is identified a carcinogen.

MUTAGENIC EFFECTS: Not available

TETRATOGENIC EFFECTS: Not available

RTECS: No data

To the best of our knowledge the toxicological effects of this compound have not been fully investigated.

SECTION 12 ECOLOGICAL DATA

No data available.

SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of in according to local, state, and federal regulations.

SECTION 14 TRANSPORTATION DATA

UN3178

Flammable solid, inorganic, n.o.s.

(Zirconium carbide)

CLASS 4.1

PG III

Marine Pollutant: No

SECTION 15 REGULATORY INFORMATION

TSCA: Listed in the TSCA inventory

SARA 302/304: Not Listed

SARA 311/312: Not Listed

SARA (TITLE 313): Not Listed

CALIFORNIA PROP. 65: Not Listed

PENNSYLVANIA RIGHT TO KNOW: Zirconium (IV) Carbide

NEW JERSEY RIGHT TO KNOW: Zirconium (IV) Carbide

SECTION 16 OTHER INFORMATION

DISCLAIMER: The information herein is believed to be accurate and reliable as of the date compiled. However, Prochem, Inc. makes no representation, warranty, or guarantee of any kind with respect to the information in this document or any use of the product based on the information.

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