



MATERIAL SAFETY DATA SHEET
COMPLIES WITH 29 CFR 1910.1200.
OSHA HAZARD COMMUNICATION RULE

DATE OF LAST REVISION: 12/07/05

CHEMICAL IDENTITY

LABEL IDENTITY	ZIRCONIUM CARBIDE
CHEMICAL NAME/SYNONYMS	ZIRCONIUM CARBIDE
FORMULA	ZrC
CHEMICAL FAMILY	METAL CARBIDE
CAS REGISTRY NUMBER	12070-14-3, LISTED IN THE TSCA INVENTORY
HAZARDOUS INGREDIENTS	ZIRCONIUM CARBIDE
%: 100	TLV: 5mg/m3 OSHA/PEL: 5mg/m3
	(for Zr compounds as Zr)

PHYSICAL AND CHEMICAL PROPERTIES

COLOR, FORM AND ODOR	Grey to dark grey powder, target pieces and granules, no odor
BOILING POINT	5100 C
DENSITY (gm/cc)	NA
VAPOR PRESSURE @ 20°	NA
% VOLATILE BY VOLUME (%)	NA
REACTION WITH WATER	None
EVAPORATION RATE (H2O=1)	NA
SOLUBILITY IN WATER	Insoluble
MELTING POINT	3540 C

FIRE AND EXPLOSION HAZARD DATA

FLASH POINT	NA
AUTOIGNITION TEMPERATURE (° C)	NA
FLAMMABILITY	Flammable as solid
EXTINGUISHING MEDIA	Do not use water. Use extinguishing agent for metal fires.
SPECIAL FIRE FIGHTING PROCEDURES	Wear full face, and self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes.
UNUSUAL FIRE & EXPLOSION HAZARDS	Dust explosion hazard. Heated powder can ignite in air. A flammable solid in dust form.



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HEALTH HAZARD INFORMATION

TOXICITY DATA **No data**

HMIS RATING:

HEALTH: **1** FLAMMABILITY: **1** REACTIVITY: **1** PERSONAL PROTECTION: **X**

ROUTES OF ENTRY

INHALATION: **Yes**
SKIN: **No**
INGESTION: **Yes**

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: **NA**

EFFECTS OF EXPOSURE (acute and chronic):

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 works has been reported.

CARCINOGENICITY: **None** NTP: **no** IARC MONOGRAPHS: **no** OSHA REGULATE: **no**

EMERGENCY FIRST AID PROCEDURES:

INGESTION: **Give 1-2 glasses of milk or water and induce vomiting. Seek medical attention if symptoms persist. Never induce vomiting or give anything by mouth to an unconscious person.**

INHALATION: **Remove victim to fresh air, keep warm and quiet.**

SKIN CONTACT: **Brush material off skin, wash affected area with mild soap and water.**

EYE CONTACT: **Flush eyes with lukewarm water, lifting upper and lower eyelids, for at least 15 minutes. Seek medical help.**

REACTIVITY DATA

STABILITY

Stable under normal condition.

CONDITIONS TO AVOID

Heat, Open flame.

INCOMPATIBILITY (MATERIALS TO AVOID)

Strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS

None

HAZARDOUS POLYMERIZATION

Will Not Occur



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SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Wearing full protective clothing, isolate spill area and 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 all state, federal and local regulations.

SPECIAL PROTECTIVE INFORMATION

RESPIRATORY PROTECTION
VENTILATION
PROTECTIVE GLOVES
EYE PROTECTION
PROTECTIVE CLOTHING

**Use NIOSH-approved respirator if processing
General exhaust is recommended.**

Use of gloves advisable to avoid cuts.

Safety glasses

Evaluate each situation for possibility of flash burns. Work areas must be periodically cleaned to avoid accumulation of flammable dust. If dust has accumulated, wear reflective heat-resistant suit while cleaning.

OTHER PROTECTIVE EQUIPMENT

Evaluate each situation for possibility of flash burns. Work areas must be periodically cleaned to avoid accumulation of flammable dust. If dust has accumulated, wear reflective heat-resistant suit while cleaning.

SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING/STORAGE:

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

TRANSPORTATION REQUIREMENTS

DOT CLASS: 4.1
UN NUMBER: 3178
PG: III
ADR/RID: 4.1
IMDG: 4.1
IATA: 4.1



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NA= NOT APPLICABLE

ND= NO DATA FOUND

NR=NOT RECORDED