

## Material Safety Data Sheet

Identity: Titanium Carbide

Formula: TiC

### SECTION I - GENERAL INFORMATION

Manufacturer: [Stanford Advanced Materials](#) (SAM)

The information below is believed to be accurate and represents the best information available to SAM. However, SAM 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: 59.91

CAS #	OSHA PEL	ACGIH TLV	Other	%
12070-08-5	Not set (nuisance dust=10mg/m <sup>3</sup> )	Not set		100%

### SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

Physical States:

Boiling Point: 4820 °C	Vapor Pressure: NA
Melting Point (0 °C): 3140+-90	Density (gm/cc): 4.93
Evaporation Rate: NA	Percent Volatile: by Volume: NA
Solubility in water: Insoluble	Specific Gravity: (H <sub>2</sub> O=1): Reaction
in Water: Insoluble	

*Other Comments: soluble in nitric acid and aqua regia**Appearance and odor: Gray metallic powder, no odor*

### SECTION IV - FIRE AND EXPLOSION HAZARD DATA:

*Flash Point: N/A      Auto ignition Temp: N/A      Flammability: Non-Flammable**Extinguishing Media: Dry chemical, CO<sub>2</sub>, Graphite**Special Fire Fighting Procedures: Spontaneous dust explosion possibly due to static initiation if dust is very fine.**Unusual Fire and Explosion Hazards: Spontaneous dust explosion possibly due to static initiation if dust is very fine.*

SECTION V - REACTIVITY DATA

*Stability:* Yes

*Conditions to Avoid (stability):* None

*Incompatibility:* Contact with acids can generate flammable hydrogen gas.

*Hazardous Polymerization:* Will not occur

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SECTION VI - HEALTH HAZARD DATA

*Ti (dry powder) Date:*                      *Ims – rat TDLD:*                      *114mg/kg/77W-TFX:ETA*  
*Ims – rat TD:*                                      *360mg/kg/69W-I TFX-ETA*

*HMIS Hazard Rating:*

*Health*    *1*

*Flammability:*                                      *0*

*Reactivity:*    *0*

*Person Protection:*                                      *E*

*Effects of Overexposure:*

*Inhalation:*                      May cause mild irritation of the nose and throat. Exposure to TiC2 aerosol for five months caused lung changes in humans similar to silicosis.

*Other:*                      Insoluble titanium compounds are generally considered physiologically inert and non-toxic.

*Skin:*                      None

*Eye:*                      Mechanical irritation, watering of eyes, and inflammation of eyelids.

*Medical Conditions Aggravated by Exposure:*    Respiratory Disorders.

*Carcinogenicity:*    None                      *NTP:*    No                      *IARC Monographs:*    No                      *OSHA Regulated:*    No

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*Medical Conditions Aggravated by Exposure:*    Respiratory Disorders.

*Emergency and First Aid Procedures:*

*Inhalation:*                      If large quantities are consumed, induce vomiting and seek medical attention.

*Ingestion:*                      Remove victim to fresh air, seek medical attention.

*Skin:*                      Brush material off skin. Wash affected area with soap and water. Seek medical attention.

*Eye:*                      Flush eyes with lukewarm water for 15 minutes, seek medical attention.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

*Special Storage:*

Store in tightly closed containers in a cool dry place. Wash hands and face thoroughly after handling.

*In Case of spill or leakage:*

Wear self-contained breathing apparatus and full protective clothing. Isolate area. Ensure proper ventilation and water/moisture is kept away. Vacuum up spill using a high efficiency unit. Take care not to raise dust.

*Waste disposal method:*

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

SECTION VIII - CONTROL MEASURES

*Be sure to use:* NIOSH approved respirator, neoprene gloves, and safety glasses.

*Ventilation:* Maintain below TLV levels.

*Other:* Handle in a dry, inert controlled atmosphere.

*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