



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

DATE OF LAST REVISION: 08-28-95

CHEMICAL IDENTITY

| | |
|------------------------|-------------------------------------------------|
| LABEL IDENTITY | Titanium Silicide |
| CHEMICAL NAME/SYNONYMS | Titanium Disilicide |
| FORMULA | TiSi₂ |
| CHEMICAL FAMILY | Metal Silicide |
| CAS REGISTRY NUMBER | 12039-83-7, LISTED IN THE TSCA INVENTORY |
| HAZARDOUS INGREDIENTS | Titanium Silicide |
| %: 100 | TLV: not set OSHA/PEL: not set |

PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---------------------------------------|------------------------------|
| COLOR, FORM AND ODOR | Gray powder, no odor. |
| BOILING POINT | ND |
| DENSITY (gm/cc) | 4.12 |
| VAPOR PRESSURE @ 20° | NA |
| % VOLATILE BY VOLUME (%) | NA |
| EVAPORATION RATE (H ₂ O=1) | NA |
| SOLUBILITY IN WATER | Insoluble |
| MELTING POINT | 1540 C |

FIRE AND EXPLOSION HAZARD DATA

| | |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| FLASH POINT | NA |
| AUTOIGNITION TEMPERATURE | NA |
| FLAMMABILITY | Non-flammable |
| EXTINGUISHING MEDIA | Use suitable extinguishing agent for surrounding material and type of fire. |
| SPECIAL FIRE FIGHTING PROCEDURES | Wear self-contained breathing apparatus and full protective clothing. |
| UNUSUAL FIRE & EXPLOSION HAZARDS | When heated to decomposition, it may emit toxic fumes. Contact with acids can generate toxic and flammable gases. |



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HEALTH HAZARD INFORMATION

TOXICITY DATA

No specific data for this compound

HMIS RATING:

HEALTH: **2*** FLAMMABILITY: **0** REACTIVITY: **0** PERSONAL PROTECTION: **E**

ROUTES OF ENTRY

INHALATION: **Yes**
SKIN: **Yes**
INGESTION: **Yes**
EYES: **Yes**

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: **None Known**

EFFECTS OF OVEREXPOSURE (acute and chronic):

INHALATION: **A nuisance dust, may irritate nose and throat**

DERMAL: **May cause mild irritation due to the abrasive action of the dust.**

EYE: **May cause mild irritation due to the abrasive action of the dust.**

OTHER: **Titanium compounds are, for the most part, virtually inert and non-toxic.**

CARCINOGENICITY: **None**

NTP: **No**

IARC MONOGRAPHS: **No**

OSHA REGULATE: **No**

EMERGENCY FIRST AID PROCEDURES:

INGESTION: **1-2 glasses milk/water to induce vomiting, seek medical attention immediately.**

INHALATION: **remove to fresh air, give oxygen if breathing is difficult, seek medical attention.**

SKIN: **brush material off skin, wash affected area with soap & water, seek medical attention.**

EYE CONTACT: **flush eyes with lukewarm water for 15 minutes, seek medical attention.**

REACTIVITY DATA

STABILITY

Stable

CONDITIONS CONTRIBUTING TO UNSTABILITY

Powder with fine grain sized, below one micron, may ignite during intensive mechanical treatment.

INCOMPATIBILITY (MATERIALS TO AVOID)

Strong acids & oxidizers

HAZARDOUS DECOMPOSITION PRODUCTS

None Known

HAZARDOUS POLYMERIZATION

Will Not Occur

CONDITIONS TO AVOID

Heat, flame and incompatible materials



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SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: **Wear a self-contained breathing apparatus and full protective clothing. Isolate the area where the spill occurred and insure that proper ventilation is available. Vacuum up spill using a high efficiency unit and place in a container for proper disposal. Take care not to raise dust.**

WASTE DISPOSAL METHOD: **In accordance with local, state & federal regulations.**

SPECIAL PROTECTIVE INFORMATION

| | |
|----------------------------|------------------------------------------------------------------------------------------------------------------------|
| RESPIRATORY PROTECTION | Wear NIOSH/MSHA approved |
| LOCAL EXHAUST | Recommended |
| MECHANICAL (general) | N/A |
| SPECIAL | N/A |
| PROTECTIVE GLOVES | Recommended |
| EYE PROTECTION | Safety glasses with side shields |
| OTHER PROTECTIVE EQUIPMENT | Maintain wink, safety shower and eyewash fountain in the work area. Wear full protective clothing at all times. |

SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING/STORAGE:

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

| | | |
|-----------------------------|-------------|-----------------------|
| TRANSPORTATION REQUIREMENTS | DOT CLASS: | Not Classified |
| | UN NUMBER: | NC |
| | IMCO CLASS: | NC |
| | OTHER: | |

PRECAUTIONARY LABELING

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

WORK/HYGENIC/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 and smoking. Do not blow dust off clothing or skin with compressed air.



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NA= NOT APPLICABLE
NE= NOT ESTABLISHED

ND= NO DATA FOUND

NR=NOT RECORDED