



SAFETY DATA SHEET

Revision date 16-July-2020

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product Identifier

CAS No. 12039-83-7
Product Name TiSi₂-Titanium disilicide
Molecular Formula Si₂Ti

Relevant identified uses of the substance or mixture and uses advised against

Recommended use Chemical intermediate
For research and industrial use only

Details of the supplier

Company name Hunan Huawei Jingcheng Material Technology Co., Ltd.
Address Room 516, Hunan International Business Center, Jintai Plaza,
East Second Ring, Furong District, Changsha City, Hunan
Province, China.
Website www.hnjc-metal.com
Telephone 0086-731-85124338
Fax

Emergency telephone number

0086-731-85124338

Section 2: HAZARDS IDENTIFICATION

The substance is not classified according to the Globally Harmonized System (GHS).

Hazard statement(s)

HMIS III Rating

Health

2 Moderate Hazard - Temporary or minor injury may occur
Flammability

1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)

Physical

0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

GHS label elements not applicable

Hazard pictograms not applicable

Signal word Warning

Hazard statements H335 - May cause respiratory irritation

Precautionary statements

P261 - Avoid breathing dust

P271 - Use only outdoors or in a well-ventilated area

P304 + P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing

P312 - Call a doctor if you feel unwell

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

P405 - Store locked up

P501 - Dispose of contents/container to licensed waste disposal facility

Hazards not otherwise classified (HNOC) or not covered by GHS

None

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substance type : Mono-constituent
Name : TITANIUM SILICIDE, 95%, powder
CAS No : 12039-83-7

Section 4: FIRST AID MEASURES

Description of first aid measures

If inhaled

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, seek medical advice.

In case of skin contact

Wash off with soap and plenty of water.

In case of eye contact

Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.

If swallowed

Never give anything by mouth to an unconscious person. Get medical advice/attention.

Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation : May cause respiratory irritation. Inhalation of large amounts is expected to cause necrosis of tracheal epithelium, bronchitis and interstitial pneumonia.

Symptoms/injuries after skin contact : May cause skin irritation.

Symptoms/injuries after eye contact : May cause eye irritation.

Symptoms/injuries after ingestion : No information available.

Indication of any immediate medical attention and special treatment needed

No data available

Section 5: FIRE FIGHTING MEASURES

Extinguishing media Suitable

Suitable extinguishing media : Use Met-L-X or other appropriate metal-extinguishing powder.

Unsuitable extinguishing media : Do not apply water to burning material.

Special hazards arising from the substance or mixture

Fire hazard : Irritating fumes vapors may develop when material is mixed with other materials and exposed to elevated temperatures or open flame.

Explosion hazard : May form flammable or explosive dust-air mixtures.

Advice for firefighters

Firefighting instructions : Exercise caution when fighting any chemical fire.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

Avoid contact with skin and eyes. Do not breathe dust.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Protective equipment : Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Emergency procedures : Evacuate unnecessary personnel.

For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".

Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

Methods and materials for containment and cleaning up

For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for cleaning up : Sweep or shovel spills into appropriate container for disposal.

Reference to other sections

See section 8

Section 7: HANDLING AND STORAGE

Precautions for safe handling

Precautions for safe handling : Avoid contact with skin and eyes. Avoid dust formation. Do not breathe dust. Use only outdoors or in a well-ventilated area.

Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container tightly closed. Store locked up.

Incompatible materials : Oxidizing agent.

Storage area : Store in a well-ventilated place. Store away from heat.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

ACGIH-ACGIH TWA (mg/m³) -10 mg/m³

OSHA-OSHA PEL (TWA) (mg/m³) -15 mg/m³ nuisance dust

Exposure controls

Appropriate engineering controls

Provide local exhaust or general room ventilation.

Personal protective equipment

Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Eye/face protection

Safety glasses. Contact lenses should not be worn.

Skin and body protection

Wear suitable protective clothing.

Respiratory protection

Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. NIOSH-certified dust and mist (orange cartridge) respirator.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical state : Solid

Appearance : Powder.

Molecular mass : 112.03 g/mol

Color : Gray.

Odor : No data available

Odor threshold : No data available

Refractive index : No data available

pH : No data available

Relative evaporation rate (butyl acetate=1) : No data available

Melting point : 1540 °C

Freezing point : No data available

Boiling point : No data available

Flash point : > 110 °C

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Flammability (solid, gas) : No data available

Vapor pressure : < 0.001 mm Hg @ 20°C

Relative vapor density at 20 °C : No data available

Relative density : 4.1 - 4.4

VOC content : 0 %

Solubility : Insoluble in water.

Log Pow : No data available

Log Kow : No data available

Viscosity, kinematic : No data available

Viscosity, dynamic : No data available

Explosive properties : No data available

Oxidizing properties : No data available

Explosion limits : No data available Other safety information

No data available

Section 10: STABILITY AND REACTIVITY

Reactivity : No data available

Chemical stability	Stable
Possibility of hazardous reactions	Violent reaction when heated with oxidizers such as potassium nitrate or potassium chlorate. When heated to elevated temperature, reacts steam to form hydrogen.
Conditions to avoid	heat
Incompatible Conditions	oxidizing agents
Hazardous Decomposition Products	Silicon oxides. Titanium oxides.

Section 11: TOXICOLOGICAL INFORMATION

Acute toxicity : Not classified

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

None of the components in this product at concentrations >0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : May cause respiratory irritation.

Specific target organ toxicity (repeated

exposure)

: Not classified

Aspiration hazard : Not classified

Symptoms/injuries after inhalation : May cause respiratory irritation. Inhalation of large amounts is expected to cause necrosis of tracheal epithelium, bronchitis and interstitial pneumonia.

Symptoms/injuries after skin contact : May cause skin irritation.

Symptoms/injuries after eye contact : May cause eye irritation.

Symptoms/injuries after ingestion : No information available

SECTION 12: Ecological information

Ecotoxicity	No further relevant information available.
Persistence and degradability	No information available.
Bioaccumulation	No information available.
Mobility	No information available.
Results of PBT and vPvB assessment	No information available.

Other adverse effects

Effect on ozone layer : No additional information available

Effect on the global warming : No known effects from this product.

GWPmix comment : No known effects from this product.

Section 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Sewage disposal recommendations : Do not dispose of waste into sewer

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility.

Ecology - waste materials : Avoid release to the environment.

Section 14: TRANSPORT INFORMATION

DOT (US)

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

Section 15: REGULATORY INFORMATION

Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on the Canadian NDSL (Non-Domestic Substances List)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on the Korean ECL (Existing Chemicals List)

Section 16: OTHER INFORMATION

Abbreviations and acronyms : Abbreviations: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal

Concentration; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: millimeters Hg, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: threshold limit value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety and Health; IARC: International Agency for Research on Cancer; NTP: National Toxicology Program; HMIS: Hazardous Material Information System; CAS No.: Chemical Abstract Service Registration Number; EC No.: European Commission Registration Number; EC Index No.: European Commission Index Number; OECD: The Organisation for Economic Co-operation and Development; GHS: The Globally Harmonized System of Classification and Labelling.

HMIS III Rating

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End of Safety Data Sheet

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