



SAFETY DATA SHEET

MATERION

1. Identification

Product identifier Titanium Product

Other means of identification

SDS number 013

CAS number 7440-32-6

Recommended use of the chemical and restrictions on use

Recommended use Manufacture of computer, electronic and optical products, electrical equipment
Scientific research and development
Other: Manufacture of medical and defense equipment

Recommended restrictions Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Consumer uses: Private households (= general public = consumers)

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name Materion Electronic Materials
Address 6070 Parkland Boulevard
Mayfield Heights
OH
44124
United States
Telephone EH&S 1.216.383.4019
Website www.materion.com
E-mail ehs@materion.com
Contact person Theodore Knudson
Emergency phone number See Section 16.

2. Hazards identification

GHS classification

Physical hazards Flammable solids Category 1
Pyrophoric solids Category 1
Self-heating substances and mixtures Category 1
Health hazards Not classified.
Environmental hazards Not classified.

GHS label elements, including precautionary statements

Pictograms None.

Signal word None.

Hazard statements The material as sold in solid form is generally not considered hazardous. However, if the process involves grinding, melting, cutting or any other process that causes a release of dust or fumes, hazardous levels of airborne particulate could be generated.

Precautionary statement

Prevention Not available.

Response Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages. In case of fire: Use appropriate media to extinguish.

Storage Store away from incompatible materials.

Disposal Dispose of waste and residues in accordance with local authority requirements.

Other hazards which do not result in classification None known.

Supplemental information For further information, please contact the Product Stewardship Department at +1.216.383.4019.

3. Composition/information on ingredients

Substance or mixture Substance

Chemical name	Common name and synonyms	CAS Number	Concentration (%)
Titanium Product		7440-32-6	100

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages. Rinse with water.
Eye contact	Do not rub eyes.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Direct contact with eyes may cause temporary irritation.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Dry chemical, soda ash, lime or DRY sand.
Unsuitable extinguishing media	Water Spray or Fog
Specific hazards arising from the chemical	None known.
Fire fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
Special protective equipment and precautions for firefighters	Wear suitable protective equipment.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. For personal protection, see section 8 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.
Methods and materials for containment and cleaning up	Large Spills: Wet down with water and dike for later disposal. Shovel the material into waste container. Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

7. Handling and storage

Precautions for safe handling	Wear appropriate personal protective equipment. Wash thoroughly after handling. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Control parameters/Occupational exposure limits	No exposure limits noted for ingredient(s).
Appropriate engineering control measures	Explosion-proof general and local exhaust ventilation.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Wear safety glasses with side shields (or goggles).
Skin protection	
Hand protection	Wear gloves to prevent metal cuts and skin abrasions during handling.
Other	Wear suitable protective clothing.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties**Appearance**

Physical state Solid.

Form Solid.

Colour Silver

Odour None.

Odour threshold Not applicable.

pH Not applicable.

Melting point/freezing point 1668 °C (3034.4 °F) / Not applicable.

Initial boiling point and boiling range Not applicable.

Flash point Not applicable.

Evaporation rate Not applicable.

Flammability (solid, gas) None known. Flammable solid.

Flammability limit - lower (%) Not available.

Flammability limit - lower (%) temperature Not applicable.

Flammability limit - upper (%) Not available.

Flammability limit - upper (%) temperature Not applicable.

Explosive limit - lower (%) Not applicable.

Explosive limit - lower (%) temperature Not applicable.

Explosive limit – upper (%) Not applicable.

Explosive limit - upper (%) temperature Not applicable.

Vapour pressure < 0.0000001 kPa (25 °C (77 °F))

Vapour density Not applicable.

Relative density Not applicable.

Solubility(ies)

Solubility (water) Insoluble.

Partition coefficient (n-octanol/water) Not applicable.

Auto-ignition temperature Not applicable.

Decomposition temperature Not applicable.

Viscosity Not applicable.

Other data

Density 4.51 g/cm³ estimated at 20 °C

Explosive properties Not explosive.

Flammability Not applicable.

Molecular formula Ti

Molecular weight 47.9 g/mol

Oxidising properties Not oxidising.

10. Stability and reactivity

Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability Material is stable under normal conditions.

Possibility of hazardous reactions No dangerous reaction known under conditions of normal use.

Conditions to avoid Contact with incompatible materials.

Incompatible materials	Strong oxidising agents. Ammonia. Chlorine.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Not likely, due to the form of the product.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Not relevant, due to the form of the product.
Ingestion	Expected to be a low ingestion hazard.

Acute toxicity Not known.

Symptoms None known.

Skin corrosion/irritation Not classified.

Serious eye damage/eye irritation None known.

Respiratory or skin sensitisation

Respiratory sensitisation Not a respiratory sensitizer.

Skin sensitisation Not a skin sensitiser.

Germ cell mutagenicity Not classified.

Carcinogenicity Not classified.

Reproductive toxicity Not classified.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not an aspiration hazard.

Chronic effects None known.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Persistence and degradability No data is available on the degradability of this substance.

Bioaccumulative potential No data available.

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal methods/information Consult authorities before disposal. Dispose of contents/container in accordance with local/regional/national/international regulations.

Special precautions Dispose in accordance with all applicable regulations.

14. Transport information

ADR

Not regulated as dangerous goods.

RID

Not regulated as dangerous goods.

ADN

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

15. Regulatory information

Safety, health and environmental regulations specific for the product in question

Prior Informed Consent (PIC) Substances (Environment Protection and Management Act, 2nd Schedule, Part 1, Jul. 1, 2013)

Not regulated.

Chemical Weapons Prohibition (Act)

Not applicable.

Environmental Protection and Management (Hazardous Substances) Regulations

Not applicable.

Environmental Public Health Act

Not applicable.

Misuse of Drugs Act

Controlled Narcotic Drugs (Misuse of Drugs Act, First Schedule, Part I, II & III, as amended)

Not regulated.

Drug Precursors (Misuse of Drugs Act, Third Schedule, Parts I & II, as amended)

Not regulated.

Controlled Specified Drugs (Misuse of Drugs Act, Fourth Schedule, as amended)

Not regulated.

Temporarily Listed Drugs (Misuse of Drugs Act, Fifth Schedule, as amended)

Not regulated.

International regulations

Montreal Protocol

Not applicable.

Stockholm Convention

Not applicable.

Rotterdam Convention

Not applicable.

Kyoto Protocol

Not applicable.

Basel Convention

Not applicable.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information

References Not available.

Issued by Not available.

Prepared by Not available.

Further information

Transportation Emergency
Call Chemtrec at:
US: 800.424.9300
International: 703.741.5970
Spain: 900.868.538
Switzerland: 0800.564.402
Chemtrec's toll free, mobile-enabled number in Germany – 0800 1817059
South Korea Toll-free Number – 080-880-0468

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Issue date

23-May-2022

Key/legend

Not applicable.