



CHEMICAL PRODUCT SAFETY DATA SHEET

Prepared in accordance with GB/T 16483 and GB/T 17519.

MATERION

Product name: Titanium Product

Issue date: 05-14-2019

Version #: 01

SDS No: 013

SECTION 1 Chemical product and company identification

Chinese name of chemical	钛产品	
English name of chemical	Titanium Product	
Manufacturer/Supplier	Materion Advanced Materials Group	
Address	42 Mt. Ebo Road South Brewster, NY 10509 United States	
Contact person	Not available.	
Telephone	1+845.279.0900	
e-mail	Not available.	
Emergency telephone number	Chemtrec	1+703.527.3887
Issue date	05-14-2019	
SDS No	013	

SECTION 2 Hazards identification

Emergency overview	Not available.	
Hazard categories		
Physical hazards	Flammable solids	Category 1
	Pyrophoric solids	Category 1
Health hazards	Not classified.	
Environmental hazards	Not classified.	
Label elements		
Pictograms	None.	
Signal word	None.	
Hazard statement	None.	
Precautionary statement		
Prevention	None.	
Response	None.	
Storage	None.	
Disposal	None.	
Physical and chemical hazards	Not available.	
Health hazards	Not available.	
Environmental hazards	Not available.	
Supplemental information	None.	

SECTION 3 Composition/information on ingredients

Substance/mixture	Substance		
Chemical name	Concentration (%)	CAS Number	
Titanium	99.9 - 100	7440-32-6	

SECTION 4 First aid measures

Inhalation	Not available.
Skin contact	Not available.
Eye contact	Not available.
Ingestion	Not available.
Most important symptoms and health effects	Not available.
Personal protection for first-aid responders	Not available.

SECTION 5 Fire-fighting measures

Extinguishing media	DRY sand, sodium chloride powder, graphite powder or Met-L-X powder.
Extinguishing media to avoid	None.
Specific hazards	None.
Special fire fighting procedures	Use water spray to cool unopened containers.
Protection of fire-fighters	None.

SECTION 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	Keep unnecessary personnel away.
For emergency responders	Not available.
Environmental precautions	Not available.
Clean-up methods and materials and containment measures	Dike far ahead of spill for later disposal. Following product recovery, flush area with water.
Prevention of secondary hazards	Not available.

SECTION 7 Handling and storage

Handling	Not available.
Storage	Store in original tightly closed container.

SECTION 8 Exposure controls/personal protection

Exposure limits

No exposure limits noted for ingredient(s).

Biological limit values	No biological exposure limits noted for the ingredient(s).
Monitoring methods	Follow standard monitoring procedures.
Engineering measures	Not available.
Personal protective equipment	
Respiratory protection	Not available.
Hand protection	Not available.
Eye protection	Not available.
Skin and body protection	Not available.

SECTION 9 Physical and chemical properties

Appearance

Physical state	Solid.
Form	Solid.
Color	Not available.
Odor	Not available.
pH	Not available.
Melting point/freezing point	3034.4 °F (1668 °C)

Boiling point, initial boiling point, and boiling range	5948.6 °F (3287 °C)
Flash point	Not available.
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	< 0.0000001 kPa (77 °F (25 °C))
Vapor density	Not available.
Relative density	Not available.
Density	4.51 g/cm ³ estimated at 20 °C
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	482 °F (250 °C) 2192 °F (1200 °C)
Decomposition temperature	Not available.
Other data	
Molecular formula	Ti
Molecular weight	47.9 g/mol
Specific gravity	4.51 at 20 °C

SECTION 10 Stability and reactivity

Stability	Not available.
Possibility of hazardous reactions	Not available.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	None.
Hazardous decomposition products	None.

SECTION 11 Toxicological information

Acute toxicity	Not available.
Routes of exposure	Not available.
Skin corrosion/irritation	Not available.
Serious eye damage/eye irritation	Not available.
Respiratory or skin sensitization	
Respiratory sensitization	Not available.
Skin sensitizer	Not available.
Germ cell mutagenicity	Not available.
Carcinogenicity	Not available.
Toxic to reproduction	Not available.
Specific target organ toxicity following single exposure	Not available.
Specific target organ toxicity following repeated exposure	Not available.
Aspiration hazard	Not available.
Chronic effects	Not available.

SECTION 12 Ecological information

Ecotoxicity	Not available.
Persistence and degradability	Not available.
Bioaccumulation	Not available.
Mobility in soil	Not available.
Other hazardous effects	Not available.

SECTION 13 Disposal considerations

Residual waste	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.
Local disposal regulations	Collect and reclaim or dispose in sealed containers at licensed waste disposal site.

SECTION 14 Transport information**CNDG**

UN number	UN1352
UN proper shipping name	TITANIUM POWDER, WETTED with not less than 25% water (a visible excess of water must be present) (a) mechanically produced, particle size less than 53 microns; (b) chemically produced particle size less than 840 microns
Transport hazard class(es)	
Class	4.1
Subsidiary risk	-
Packing group	II
Special precautions for user	Not available.

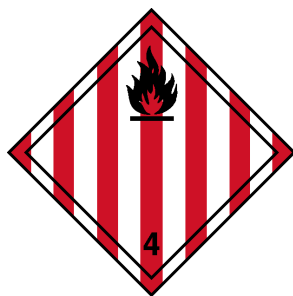
IATA

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 available.

CNDG**SECTION 15 Regulatory information****Law of the People's Republic of China on Prevention and Control of Occupational Diseases**

Not regulated.

Regulations on the Control over Safety of Dangerous Chemicals**Catalog of Hazardous Chemicals**

TITANIUM METAL POWDER [CONTAINING WATER NOT LESS THAN 25%, PARTICLE SIZE IS LESS THAN 53 MICRONS IF PRODUCED BY MECHANICALLY; PARTICLE SIZE IS LESS THAN 840 MICRONS IF PRODUCED BY CHEMICAL METHODS] (CAS 7440-32-6)

Provision on the Environmental Administration of New Chemical Substances**China Inventory of Existing Chemical Substances**

Country(s) or region	Inventory name	On inventory (yes/no)*
China	Inventory of Existing Chemical Substances in China (IECSC)	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).

International regulations**Stockholm Convention**

Not applicable.

Rotterdam Convention

Not applicable.

Montreal Protocol

Not applicable.

Kyoto protocol

Not applicable.

Basel Convention

Not applicable.

SECTION 16 Other information**References**

Not available.

Disclaimer

Materion Advanced Materials Group cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

Revision information

Product and Company Identification: Product Review
 Hazards Identification: Shared US and Canadian Categories
 Composition / Information on Ingredients: Ingredients
 Transport Information: Material Transportation Information