

Page 1/8
Revision Date 24-Mar-2025
Version 3

Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THECOMPANY/UNDERTAKING

Product Identifier

Perihalan Produk: <u>Titanium target</u>
Product Description: <u>Titanium target</u>

Cat No.: 97637 **CAS No** 7440-32-6

Molecular Formula Ti

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

Recommended Use Laboratory chemicals. Uses advised against No Information available

Company Thermo Fisher Scientific Fisher Scientific (M) Sdn Bhd

Hap Seng Business Park, Lot 01-03, 01-04 Aras 1 Unity Square, No 12, Persiaran Perusahaan, Seksyen 23, 40300 Shah Alam,

Selangor Darul Ehsan, Malaysia. Main line: +60 3-5525 7888

Supplier

E-mail address Enquiry.my@thermofisher.com

Emergency Telephone Number Tel: +03-5525 7888

CHEMTREC Malaysia 1-800-815-308 (Malay)

CHEMTREC Malaysia (Kuala Lumpur) +(60)-327884561 (Malay)

SECTION 2: HAZARDS IDENTIFICATION

Label Elements

Hazard Statements

Precautionary Statements

Storage

P403 - Store in a well-ventilated place

Classification of the substance or mixture

Disposal

P501 - Dispose of contents/ container to an approved waste disposal plant

Other Hazards

Titanium target Revision Date 24-Mar-2025

This product does not contain any known or suspected endocrine disruptors

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No	Weight %		
Titanium	7440-32-6	99.97		

SECTION 4: FIRST AID MEASURES

Description of first aid measures

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get

medical attention.

Skin Contact Wash off immediately with soap and plenty of water while removing all contaminated

clothes and shoes. Get medical attention.

Ingestion Clean mouth with water. Get medical attention.

Inhalation Remove from exposure, lie down. Remove to fresh air. If not breathing, give artificial

respiration. Get medical attention.

Self-Protection of the First Aider No special precautions required.

Most important symptoms and effects, both acute and delayed

No information available.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable Extinguishing Media

Dry chemical. approved class D extinguishers. clay. sodium carbonate.

Extinguishing media which must not be used for safety reasons

No information available.

Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous Combustion Products

None under normal use conditions.

Advice for fire-fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Titanium target Revision Date 24-Mar-2025

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Ensure adequate ventilation.

Environmental precautions

See Section 12 for additional Ecological Information.

Methods and Material for Containment and Cleaning Up

Sweep up and shovel into suitable containers for disposal.

Reference to Other Sections

Refer to protective measures listed in Sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Avoid contact with skin and eyes. Do not breathe dust. Handle under argon.

Conditions for Safe Storage, Including any Incompatibilities

Keep in a dry, cool and well-ventilated place. Keep container tightly closed.

Specific End Uses

Use in laboratories.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Exposure Controls Engineering Measures

None under normal use conditions.

Personal protective equipment

Eye Protection Wear safety glasses with side shields (or goggles)

Hand Protection Protective gloves

Skin and body protection Wear appropriate protective gloves and clothing to prevent skin exposure

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

Respiratory Protection No protective equipment is needed under normal use conditions

Titanium target Revision Date 24-Mar-2025

Recommended Filter type: Particle filter

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice

Environmental exposure controls No information available

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Solid

Solid

Information on basic physical and chemical properties

Appearance Grey
Physical State Solid
Odor Odorless

Odor Threshold No data available PH No information available

Melting Point/Range1677 °C / 3050.6 °FSoftening PointNo data availableBoiling Point/Range3277 °C / 5930.6 °F

Boiling Point/Range 3277 °C / 5930.6 °F @ 760 mmHg

Flash Point No information available Method - No information available

Evaporation Rate Not applicable

Flammability (solid,gas)

Explosion Limits

No information available

No data available

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Vapor PressureNo data availableVapor DensityNot applicable

Specific Gravity / Density 4.5100

Bulk Density No data available

Water Solubility Insoluble

water Solubility Insoluble

Solubility in other solvents No information available

Partition Coefficient (n-octanol/water)

Autoignition Temperature1200 °C / 2192 °FDecomposition TemperatureNo data available

Viscosity Not applicable Solid

Explosive Properties No information available Oxidizing Properties No information available

Molecular Formula Ti Molecular Weight 47.88

SECTION 10: STABILITY AND REACTIVITY

Reactivity

None known, based on information available.

Titanium target Revision Date 24-Mar-2025

Chemical Stability

Moisture sensitive. Air sensitive.

Possibility of Hazardous Reactions

Hazardous Polymerization Hazardous polymerization does not occur.

Hazardous Reactions No information available.

Conditions to Avoid

Incompatible products.

Incompatible Materials

Acids. Strong acids. Halogens. oxygen. Metals. Carbon dioxide (CO2). halocarbons.

<u>Hazardous Decomposition Products</u>

None under normal use conditions.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects

Product Information No acute toxicity information is available for this product

(a) acute toxicity;

OralNo data availableDermalNo data availableInhalationNo data available

(b) skin corrosion/irritation; No data available

(c) serious eye damage/irritation; No data available

(d) respiratory or skin sensitization;

Respiratory No data available Skin No data available

(e) germ cell mutagenicity; No data available

(f) carcinogenicity; No data available

There are no known carcinogenic chemicals in this product

(g) reproductive toxicity; No data available

(h) STOT-single exposure; No data available

Revision Date 24-Mar-2025 **Titanium target**

No data available (i) STOT-repeated exposure;

No information available. **Target Organs**

Not applicable (j) aspiration hazard;

Solid

Symptoms / effects,both acute and No information available.

delayed

Endocrine Disrupting Properties Assess endocrine disrupting properties for human health. This product does not contain any

known or suspected endocrine disruptors.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity effects

Persistence and degradability

Persistence

Insoluble in water.

Degradability Not relevant for inorganic substances.

May have some potential to bioaccumulate Bioaccumulative potential

Spillage unlikely to penetrate soil. Is not likely mobile in the environment due its low water Mobility in soil

solubility.

Endocrine Disruptor Information This product does not contain any known or suspected endocrine disruptors

Other adverse effects No information available

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from Residues/Unused

Products

Dispose of in accordance with local regulations

Contaminated Packaging Empty containers should be taken to an approved waste handling site for recycling or

disposal

SECTION 14: TRANSPORT INFORMATION

IMDG/IMO Not regulated

Road and Rail Transport Not regulated

Revision Date 24-Mar-2025 Titanium target

Not regulated IATA

Special Precautions for User No special precautions required

SECTION 15: REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

International Inventories X = listed

Component	EINECS	TSCA	DSL	PICCS	ENCS	ISHL	IECSC	AICS	KECL
Titanium	231-142-3	Χ	Х	Х	Χ		Χ	Χ	KE-33881

National Regulations

Persistent Organic Pollutant Ozone Depletion Potential

This product does not contain any known or suspected substance This product does not contain any known or suspected substance

SECTION 16: OTHER INFORMATION

Legend

CAS - Chemical Abstracts Service

TSCA - United States Toxic Substances Control Act Section 8(b)

EINECS/ELINCS - European Inventory of Existing Commercial Chemical DSL/NDSL - Canadian Domestic Substances List/Non-Domestic

Substances/EU List of Notified Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

IECSC - Chinese Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

Inventory

Substances List

ENCS - Japanese Existing and New Chemical Substances

AICS - Australian Inventory of Chemical Substances

NZIoC - New Zealand Inventory of Chemicals

WEL - Workplace Exposure Limit

ACGIH - American Conference of Governmental Industrial Hygienists

RPE - Respiratory Protective Equipment

LC50 - Lethal Concentration 50%

POW - Partition coefficient Octanol:Water

TWA - Time Weighted Average

IARC - International Agency for Research on Cancer

LD50 - Lethal Dose 50%

EC50 - Effective Concentration 50%

ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road

IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code

OECD - Organisation for Economic Co-operation and Development

BCF - Bioconcentration factor

ICAO/IATA - International Civil Aviation Organization/International Air

Transport Association

MARPOL - International Convention for the Prevention of Pollution from

Shins

ATE - Acute Toxicity Estimate VOC - (Volatile Organic Compound)

Key literature references and sources for data

https://echa.europa.eu/information-on-chemicals

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

Prepared By Health, Safety and Environmental Department

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Titanium target Revision Date 24-Mar-2025

In accordance with local and national regulations: Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013

Disclaimer

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End of Safety Data Sheet