

1 Identification**Product identifier****Product name:** Tantalum Thinfoil**Stock number:** 40717**CAS Number:**

7440-25-7

EC number:

231-135-5

Relevant identified uses of the substance or mixture and uses advised against.**Identified use:** SU24 Scientific research and development**Details of the supplier of the safety data sheet****Manufacturer/Supplier:**Alfa Aesar
Thermo Fisher Scientific Chemicals, Inc.
30 Bond Street
Ward Hill, MA 01835-8099
Tel: 800-343-0660
Fax: 800-322-4757
Email: tech@alfa.com
www.alfa.com**Information Department:** Health, Safety and Environmental Department**Emergency telephone number:**

During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660. After normal business hours, call Carechem 24 at (866) 928-0789.

2 Hazard(s) identification**Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)**

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

Hazards not otherwise classified No information known.**Label elements****GHS label elements** Not applicable**Hazard pictograms** Not applicable**Signal word** Not applicable**Hazard statements** Not applicable**WHMIS classification** Not controlled**Classification system****HMIS ratings (scale 0-4)****(Hazardous Materials Identification System)****HEALTH** 0 Health (acute effects) = 0**FIRE** 0 Flammability = 0**REACTIVITY** 0 Physical Hazard = 0**Other hazards****Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.**3 Composition/information on ingredients****Chemical characterization: Substances****CAS# Description:**

7440-25-7 Tantalum

Identification number(s):**EC number:** 231-135-5**4 First-aid measures****Description of first aid measures****General information** No special measures required.**After inhalation** Seek medical treatment in case of complaints.**After skin contact** Generally the product does not irritate the skin.**After eye contact** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.**After swallowing** If symptoms persist consult doctor.**Information for doctor****Most important symptoms and effects, both acute and delayed** No further relevant information available.**Indication of any immediate medical attention and special treatment needed** No further relevant information available.**5 Fire-fighting measures****Extinguishing media****Suitable extinguishing agents** Special powder for metal fires. Do not use water.**For safety reasons unsuitable extinguishing agents** Water**Special hazards arising from the substance or mixture**

If this product is involved in a fire, the following can be released:

Tantalum oxide

Advice for firefighters**Protective equipment:** No special measures required.**6 Accidental release measures****Personal precautions, protective equipment and emergency procedures** Not required.**Environmental precautions:** Do not allow material to be released to the environment without proper governmental permits.**Methods and material for containment and cleaning up:** Pick up mechanically.**Prevention of secondary hazards:** No special measures required.**Reference to other sections**

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

Product name: **Tantalum Thinfoil**

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7 Handling and storage

Handling

Precautions for safe handling

Keep container tightly sealed.
Store in cool, dry place in tightly closed containers.

Information about protection against explosions and fires: No special measures required.

Conditions for safe storage, including any incompatibilities

Storage

Requirements to be met by storerooms and receptacles: No special requirements.

Information about storage in one common storage facility: Not required.

Further information about storage conditions:

Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.
Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

Additional information about design of technical systems: No further data; see section 7.

Control parameters

Components with limit values that require monitoring at the workplace:

7440-25-7 Tantalum (100.0%)

PEL (USA)	Long-term value: 5 mg/m ³ metal
REL (USA)	Short-term value: 10 mg/m ³ Long-term value: 5 mg/m ³ Metal
TLV (USA)	metal; TLV withdrawn due to insufficient data
EL (Canada)	Long-term value: 5 mg/m ³ metal
EV (Canada)	Long-term value: 10 mg/m ³ metal and oxide (total dust)

Additional information: No data

Exposure controls

Personal protective equipment

General protective and hygienic measures

The usual precautionary measures for handling chemicals should be followed.

Maintain an ergonomically appropriate working environment.

Breathing equipment: Not required.

Protection of hands: Not required.

Penetration time of glove material (in minutes) Not determined

Eye protection: Safety glasses

Body protection: Protective work clothing.

9 Physical and chemical properties

Information on basic physical and chemical properties

General Information

Appearance:

Form:	Solid in various forms
Color:	Grey to silver
Odor:	Odorless
Odor threshold:	Not determined.

pH-value: Not applicable.

Change in condition

Melting point/Melting range:	2996 °C (5425 °F)
Boiling point/Boiling range:	5429 °C (9804 °F)
Sublimation temperature / start:	Not determined
Flammability (solid, gaseous)	Not determined.
Ignition temperature:	Not determined
Decomposition temperature:	Not determined
Auto igniting:	Not determined.

Danger of explosion: Not determined.

Explosion limits:

Lower:	Not determined
Upper:	Not determined
Vapor pressure:	Not applicable.
Density at 20 °C (68 °F):	16.69 g/cm ³ (139.278 lbs/gal)
Relative density	Not determined.
Vapor density	Not applicable.
Evaporation rate	Not applicable.
Solubility in / Miscibility with	
Water:	Insoluble
Partition coefficient (n-octanol/water):	Not determined.
Viscosity:	
dynamic:	Not applicable.
kinematic:	Not applicable.
Other information	No further relevant information available.

10 Stability and reactivity

Reactivity No information known.

Chemical stability Stable under recommended storage conditions.

Thermal decomposition / conditions to be avoided: Decomposition will not occur if used and stored according to specifications.

Possibility of hazardous reactions No dangerous reactions known

Conditions to avoid No further relevant information available.

Incompatible materials: No information known.

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USA

Product name: Tantalum Thinfoil

Hazardous decomposition products: Tantalum oxide

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11 Toxicological information

Information on toxicological effects

Acute toxicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for this substance.

LD/LC50 values that are relevant for classification: No data

Skin irritation or corrosion: No irritant effect.

Eye irritation or corrosion: No irritant effect.

Sensitization: No sensitizing effects known.

Germ cell mutagenicity: No effects known.

Carcinogenicity:

The Registry of Toxic Effects of Chemical Substances (RTECS) contains tumorigenic and/or carcinogenic and/or neoplastic data for this substance.

No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

Reproductive toxicity: No effects known.

Specific target organ system toxicity - repeated exposure: No effects known.

Specific target organ system toxicity - single exposure: No effects known.

Aspiration hazard: No effects known.

Subacute to chronic toxicity: No effects known.

Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

12 Ecological information

Toxicity

Aquatic toxicity: No further relevant information available.

Persistence and degradability No further relevant information available.

Bioaccumulative potential No further relevant information available.

Mobility in soil No further relevant information available.

Additional ecological information:

General notes:

Do not allow material to be released to the environment without proper governmental permits.

Do not allow undiluted product or large quantities to reach ground water, water course or sewage system.

Avoid transfer into the environment.

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

Other adverse effects No further relevant information available.

13 Disposal considerations

Waste treatment methods

Recommendation Consult state, local or national regulations to ensure proper disposal.

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

14 Transport information

UN-Number

DOT, ADN, IMDG, IATA

Not applicable

UN proper shipping name

DOT, ADN, IMDG, IATA

Not applicable

Transport hazard class(es)

DOT, ADR, ADN, IMDG, IATA

Class

Not applicable

Packing group

DOT, IMDG, IATA

Not applicable

Environmental hazards:

Not applicable.

Special precautions for user

Not applicable.

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.

Transport/Additional information:

DOT

Marine Pollutant (DOT):

No

UN "Model Regulation":

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15 Regulatory information

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

GHS label elements Not applicable

Hazard pictograms Not applicable

Signal word Not applicable

Hazard statements Not applicable

National regulations

All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.

All components of this product are listed on the Canadian Domestic Substances List (DSL).

SARA Section 313 (specific toxic chemical listings) Substance is not listed.

California Proposition 65

Prop 65 - Chemicals known to cause cancer Substance is not listed.

Prop 65 - Developmental toxicity Substance is not listed.

Prop 65 - Developmental toxicity, female Substance is not listed.

Prop 65 - Developmental toxicity, male Substance is not listed.

Information about limitation of use: For use only by technically qualified individuals.

Other regulations, limitations and prohibitive regulations

Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006. Substance is not listed.

The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed.

Substance is not listed.

Annex XIV of the REACH Regulations (requiring Authorisation for use) Substance is not listed.

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Product name: Tantalum Thinfoil

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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16 Other information

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing SDS: Global Marketing Department

Date of preparation / last revision 11/24/2015 / -

Abbreviations and acronyms:

ICAO: International Civil Aviation Organization

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

DOT: US Department of Transportation

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

vPvB: very Persistent and very Bioaccumulative

ACGIH: American Conference of Governmental Industrial Hygienists (USA)

OSHA: Occupational Safety and Health Administration (USA)

NTP: National Toxicology Program (USA)

IARC: International Agency for Research on Cancer

EPA: Environmental Protection Agency (USA)