# Chemical Safety Data Sheet MSDS / SDS

# **Tantalum**

Revision Date:2025-09-27 Revision Number:1

# SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### **Product identifier**

Product name : Tantalum

CBnumber : CB3367656

CAS : 7440-25-7

EINECS Number : 231-135-5

Synonyms : Tantalum, Tantalum Powder

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

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.

Uses advised against : none

#### **Company Identification**

Company : Chemicalbook

Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing

Telephone : 010-86108875

## SECTION 2: Hazards identification

# GHS Label elements, including precautionary statements

Symbol(GHS)			
Signal word	Warning		

#### Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continuerinsing.

P405 Store locked up.

#### Hazard statements

H228 Flammable solid

H315 Causes skin irritation

H319 Causes serious eye irritation

# SECTION 3: Composition/information on ingredients

#### **Substance**

Product name : Tantalum

Synonyms : Tantalum, Tantalum Powder

CAS : 7440-25-7 EC number : 231-135-5

MF : Ta
MW : 180.95

## SECTION 4: First aid measures

#### **Description of first aid measures**

#### If inhaled

After inhalation: fresh air.

#### In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

#### In case of eye contact

After eye contact: rinse out with plenty of water. Remove contact lenses.

#### If swallowed

After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

#### Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

## Indication of any immediate medical attention and special treatment needed

No data available

# SECTION 5: Firefighting measures

#### **Extinguishing media**

#### Suitable extinguishing media

Special powder against metal fire Cover with dry sand or cement.

#### Special hazards arising from the substance or mixture

Tantalum Oxides Not combustible.

#### Advice for firefighters

In the event of fire, wear self-contained breathing apparatus.

#### **Further information**

none

#### **NFPA 704**

0 4 0

HEALTH 4 Very short exposure could cause death or major residual injury (e.g. hydrogen cyanide, phosgene, methyl isocyanate, hydrofluoric acid)

Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete,

FIRE 0 stone, and sand. Materials that will not burn in air when exposed to a temperature of 820 °C (1,500 °F) for a period of 5 minutes.(e.g. Carbon tetrachloride)

REACT 0 Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium, N2)

SPEC.
HAZ.

## SECTION 6: Accidental release measures

#### Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

#### **Environmental precautions**

No special precautionary measures necessary.

#### Methods and materials for containment and cleaning up

Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

#### Reference to other sections

For disposal see section 13.

# SECTION 7: Handling and storage

#### Precautions for safe handling

For precautions see section 2.2.

#### Conditions for safe storage, including any incompatibilities

#### Storage conditions

Tightly closed. Dry.

#### Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

# SECTION 8: Exposure controls/personal protection

#### control parameter

#### Hazard composition and occupational exposure limits

Does not contain substances with occupational exposure limits.

#### **Exposure controls**

#### Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

Skin protection

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm Break through time: 480 min

Material tested: KCL 741 Dermatril? L

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Splash contact Material: Nitrile rubber

Minimum layer thickness: 0,11 mm Break through time: 480 min

Material tested: KCL 741 Dermatril? L

Respiratory protection

required when dusts are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type: Filter type P1

The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.

These measures have to be properly documented.

Control of environmental exposure

No special precautionary measures necessary.

# SECTION 9: Physical and chemical properties

#### Information on basic physicochemical properties

light gray solid
No data available
No data available
No data available
Melting point: 2.996 °C
5.325 °C
Not applicable
No data available
The product is not flammable.
No data available
<0.01 mm Hg ( 537.2 °C)
No data available
16.6
0,01 g/l at 20 °C - insoluble
No data available
300 °C
No data available
Viscosity, kinematic: No data available Viscosity, dynamic: No data available
No data available
No data available
13.5 μΩ-cm, 20°C

# Other safety information

No data available

# SECTION 10: Stability and reactivity

#### Reactivity

No data available

#### **Chemical stability**

The product is chemically stable under standard ambient conditions (room temperature) .

## Possibility of hazardous reactions

No data available

#### Conditions to avoid

no information available

#### Incompatible materials

Oxygen, Halogens, Strong bases, Hydrogen fluoride

#### Hazardous decomposition products

In the event of fire: see section 5

# **SECTION 11: Toxicological information**

#### Information on toxicological effects

#### **Acute toxicity**

LD50 Oral - Rat - > 2.000 mg/kg

Remarks: (External MSDS)

LC50 Inhalation - Rat - 4 h - > 5,18 mg/l (OECD Test Guideline 403)

Remarks: (External MSDS)

Symptoms: slight mucosal irritations, Possible damages:, Damage to:, Lungs Dermal

#### Skin corrosion/irritation

No data available

#### Serious eye damage/eye irritation

Eyes - Rabbit

Result: slight irritation Remarks: (External MSDS)

## Respiratory or skin sensitization

No data available

#### Germ cell mutagenicity

No data available

#### Carcinogenicity

No data available

#### Reproductive toxicity

No data available

## Specific target organ toxicity - single exposure

No data available

#### Specific target organ toxicity - repeated exposure

No data available

#### **Aspiration hazard**

No data available

# SECTION 12: Ecological information

#### **Toxicity**

No data available

#### Persistence and degradability

The methods for determining biodegradability are not applicable to inorganic substances.

#### Bioaccumulative potential

No data available

#### Mobility in soil

No data available

#### Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

#### Other adverse effects

No data available

# **SECTION 13: Disposal considerations**

#### Waste treatment methods

#### Incompatibilities

Incompatible with lead chromate. incompatible with oxidizers (chlorates, nitrates, peroxides, permanganates, perchlorates, chlorine, bromine, bromine trifluoride, fluorine, etc.); contact may cause fires or explosions. Keep away from alkaline materials, strong bases, strong acids, oxoacids, epoxides. Tantalum metal is attacked by hydrogen fluoride, fused alkalis, fuming sulfuric acid.

#### **Product**

See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

#### **Waste Disposal**

Sanitary landfill if necessary; recover if possible because of economic value. Technology exists for tantalum recovery from spent catalysts, for example.

# **SECTION 14: Transport information**

#### **UN** number

ADR/RID: IMDG: IATA:

#### **UN proper shipping name**

ADR/RID:

IMDG:

IATA:

#### Transport hazard class(es)

ADR/RID: IMDG: IATA:

#### **Packaging group**

ADR/RID: IMDG: IATA:

#### **Environmental hazards**

ADR/RID: IMDG Marine pollutant: IATA:

#### Special precautions for user

No data available

# **SECTION 15: Regulatory information**

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

#### Regulations on the Safety Management of Hazardous Chemicals

China Catalog of Hazardous chemicals 2015:Not Listed. website: https://www.mem.gov.cn/

#### Measures for Environmental Management of New Chemical Substances

Chinese Chemical Inventory of Existing Chemical Substances (China IECSC):Listed. website: https://www.mee.gov.cn/

EC Inventory:Listed.

European Inventory of Existing Commercial Chemical Substances (EINECS):Listed. website: https://echa.europa.eu/

Korea Existing Chemicals List (KECL):Listed. website: http://ncis.nier.go.kr

New Zealand Inventory of Chemicals (NZIoC):Listed. website: https://www.epa.govt.nz/

Philippines Inventory of Chemicals and Chemical Substances (PICCS):Listed. website: https://emb.gov.ph/

United States Toxic Substances Control Act (TSCA) Inventory:Listed. website: https://www.epa.gov/

Vietnam National Chemical Inventory:Listed. website: https://chemicaldata.gov.vn/

## SECTION 16: Other information

#### Abbreviations and acronyms

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

CAS: Chemical Abstracts Service

EC50: Effective Concentration 50%

IATA: International Air Transportation Association

IMDG: International Maritime Dangerous Goods

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

STEL: Short term exposure limit TWA: Time Weighted Average

#### References

[1] CAMEO Chemicals, website: http://cameochemicals.noaa.gov/search/simple

[2] ChemlDplus, website: http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp

[3] ECHA - European Chemicals Agency, website: https://echa.europa.eu/

[4] eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website:

http://www.echemportal.org/echemportal/index?pageID=0&request\_locale=en

- [5] ERG Emergency Response Guidebook by U.S. Department of Transportation, website: http://www.phmsa.dot.gov/hazmat/library/erg
- [6] Germany GESTIS-database on hazard substance, website: http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp
- [7] HSDB Hazardous Substances Data Bank, website: https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm
- [8] IARC International Agency for Research on Cancer, website: http://www.iarc.fr/
- [9] IPCS The International Chemical Safety Cards (ICSC), website: http://www.ilo.org/dyn/icsc/showcard.home
- [10] Sigma-Aldrich, website: https://www.sigmaaldrich.com/

#### Other Information

Combustion in a confined space may turn into detonation.

#### Disclaimer:

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.