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INTATRADE MATERIAL SAFETY DATA SHEET according to 1907/2006/EC, Article 31

1. IDENTIFICATION OF SUBSTANCE AND OF THE COMPANY

Product name: Tetrakis(dimethylamino)titanium

Product code: EO00723

INTATRADE Chemicals GmbH Company:

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06774 Muldestausee OT Friedersdorf, Germany

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REACH No.: A registration number is not available for this substance as the substance

or its uses are exempted from registration, the annual tonnage does not

require a registration or the registration is envisaged for a later

registration deadline.

CAS No.: 3275-24-9

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture According to Regulation (EC) No1272/2008 Flammable liquids

(Category 2)

Substances, which in contact

with water, emit flammable gases Skin corrosion

(Category 1) (Category 1B)

According to European Directive 67/548/EEC as amended.

Highly flammable. Reacts violently with water. Causes burns.

Label elements Pictogram





Signal word **Danger**

Hazard statement(s) H225 Highly flammable liquid and vapour.

H260 In contact with water releases flammable gases which may ignite

spontaneously.

H314 Causes severe skin burns and eye damage.

EUH014 Reacts violently with water.

Precautionary statement(s) P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P223 Keep away from any possible contact with water, because of violent

reaction and possible flash fire.

P231 + P232 Handle under inert gas. Protect from moisture.

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

protection.

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant

foam for extinction.

P422 Store contents under inert gas.

Hazard symbol(s) Highly flammable

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C Corrosive

R-phrase(s) R11 Highly flammable.

R14 Reacts violently with water.

R34 Causes burns.

S-phrase(s) S16 Keep away from sources of ignition - No smoking.

S26 In case of contact with eyes, rinse immediately with plenty of water and

seek medical advice.

S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

S43 In case of fire, use fire-fighting equipment on basis class D.S45 In case of accident or if you feel unwell, seek medical advice

immediately (show the label where possible).

Other hazards none

3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula: $C_8H_{24}N_4Ti$ Molecular Weight: 224,17 g/mol CAS-No.: 3275-24-9 EC-No.: 221-904-3

4. FIRST AID MEASURES

If inhaled

General advice Consult a physician. Show this safety data sheet to the doctor in attendance.

If breathed in, move person into fresh air. If not breathing, give artificial

respiration. Consult a physician.

In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap

and plenty of water. Consult a physician.

In case of eye contact Rinse thoroughly with plenty of water for at least 15 minutes and consult a

physician.

If swallowed Do not induce vomiting. Never give anything by mouth to an unconscious

person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media Carbon dioxide (CO₂), dry powder

Extinguishing media which shall not be used

for safety reasons Water

Special protective equipment for fire-fighters Wear self contained breathing apparatus for fire fighting if

necessary.

6. ACCIDENTAL RELEASE MEASURES

Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive

concentrations. Vapours can accumulate in low areas.

Environmental precautions Prevent further leakage or spillage if safe to do so. Do not let product enter

drains

Methods and materials

for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local

regulations (see section 13). Do not flush with water.

7. HANDLING AND STORAGE

Precautions for safe handling Avoid inhalation of vapour or mist.

Keep away from sources of ignition - No smoking. Take measures to

prevent the build up of electrostatic charge.

Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept

upright to prevent leakage. Store in cool place.

Never allow product to get in contact with water during storage.

Store under inert gas.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protective equipment

Respiratory protection Where risk assessment shows air-purifying respirators are appropriate use a

full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the

respirator is the sole means of protection, use a full-face supplied air respirator.

Use respirators and components tested and approved under appropriate

government standards such as NIOSH (US) or CEN (EU).

Hand protection Handle with gloves. Gloves must be inspected prior to use. Use proper glove

removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in

accordance with applicable laws and good laboratory practices. Wash and dry

hands.

The selected protective gloves have to satisfy the specifications of EU

Directive 89/686/EEC and the standard EN 374 derived from it.

Eye protection Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for

eye protection tested and approved under appropriate government standards

such as NIOSH (US) or EN 166(EU).

Skin and body protection Complete suit protecting against chemicals, flame retardant antistatic

protective clothing. The type of protective equipment must be selected

according to the concentration and amount of the dangerous substance at the

specific workplace.

Hygiene measures Handle in accordance with good industrial hygiene and safety practice. Wash

hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form liquid

Safety data

pH no data available
Melting point no data available
Boiling point 50°C at 0,7hPa - lit.
Flash point -30°C - closed cup
Ignition temperature no data available
Lower explosion limit no data available
Upper explosion limit no data available
Density 0,947g/cm³ at 25°C
Water solubility no data available

10. STABILITY AND REACTIVITY

Chemical stability Stable under recommended storage conditions.

Possibility of hazardous reactions Reacts violently with water.

Conditions to avoid Heat, flames and sparks, extremes of temperature and direct sunlight,

exposure to moisture

Materials to avoid Strong oxidizing agents

Hazardous decomposition products Hazardous decomposition products formed under fire conditions:

Carbon oxides, nitrogen oxides (NOx), Titanium/titanium oxides.

11. TOXICOLOGICAL INFORMATION

Acute toxicity no data available

Skin corrosion/irritation Serious eye damage/eye irritation

Corrosive no data available Respiratory or skin sensitization no data available Germ cell mutagenicity no data available

Carcinogenicity IARC: No component of this product present at levels greater than or

equal to 0.1% is identified as probable, possible or confirmed human

carcinogen by IARC.

no data available

no data available

no data available

no data available

Reproductive toxicity

Specific target organ toxicity -

single exposure

Specific target organ toxicity –

repeated exposure

Aspiration hazard
Potential health effects
Inhalation

May be harmful if inhaled. Material is extremely destructive to the tissue

of the mucous membranes and upper respiratory tract.

Ingestion May be harmful if swallowed. Causes burns.

Skin May be harmful if absorbed through skin. Causes skin burns.

Eyes Causes eye burns.

Signs and Symptoms of Exposure Material is extremely destructive to tissue of the mucous membranes

and upper respiratory tract, eyes, and skin., spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing,

laryngitis, Shortness of breath, Headache, Nausea

Additional Information RTECS: Not available

12. ECOLOGICAL INFORMATION

Toxicity no data available
Persistence and degradability no data available
Bioaccumulative potential no data available
Mobility in soil no data available
PBT and vPvB assessment no data available
Other adverse effects no data available

13. DISPOSAL CONSIDERATIONS

Product Burn in a chemical incinerator equipped with an afterburner and

scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed

disposal company.

Contact a licensed professional waste disposal service to dispose of

this material.

Contaminated packaging Dispose of as unused product.

14. TRANSPORT INFORMATION

ADR/RID UN-Number: 3398

Class: 4.3 Packing group: I

Proper shipping name: ORGANOMETALLIC SUBSTANCE, LIQUID,

WATER-REACTIVE (Titanium tetrakis(dimethylammonium))

IMDG UN-Number: 3398

Class: 4.3 Packing group: I EMS-No: F-G, S-N

Proper shipping name: ORGANOMETALLIC SUBSTANCE, LIQUID,

WATER-REACTIVE (Titanium tetrakis(dimethylammonium))

Marine pollutant: No

UN-Number: 3398

Class: 4.3 Packing group: I

Proper shipping name: Organometallic substance, liquid, water-reactive

(Titanium tetrakis(dimethylammonium))
IATA Passenger: Not permitted for transport

15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

16. OTHER INFORMATION

Warranty

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Intatrade Chemicals GmbH shall not be held liable for any damage resulting from handling or from contact with the above product.