

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

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1. IDENTIFICATION OF SUBSTANCE AND OF THE COMPANY

Product name: **Tris(diethylamido)(tert-butylimido)niobium(V)**
 Product code: EO00072
 Company: INTATRADE Chemicals GmbH
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2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP] Flammable liquids (Category 2)
 Substances, which in contact with water, emit flammable gases (Category 2)
 Eye irritation (Category 2)

Classification according to EU Directives 67/548/EEC or 1999/45/EC

Specific target organ toxicity - single exposure (Category 3)
 Highly flammable. Reacts violently with water, liberating extremely flammable gases. Irritating to eyes, respiratory system and skin.

Label elements

Labelling according Regulation (EC) No 1272/2008 [CLP]



Pictogram

Signal word

Danger

Hazard statement(s)

H225 Highly flammable liquid and vapour.
 H261 In contact with water releases flammable gases.
 H319 Causes serious eye irritation.
 H335 May cause respiratory irritation.
 P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
 P231 + P232 Handle under inert gas. Protect from moisture.
 P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P422 Store contents under inert gas.

Supplemental Hazard Information (EU)

EUH014 Reacts violently with water.
 According to European Directive 67/548/EEC as amended.

Hazard symbol(s)

Flame; Exclamation mark

R-phrase(s)

R11 Highly flammable.
 R14/15 Reacts violently with water, liberating extremely flammable gases.

S-phrase(s)

R36/37/38 Irritating to eyes, respiratory system and skin.
 S43 In case of fire, use dry powder. Never use water.
 S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Other hazards

none

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3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms :	(tert-Butylimino)tris(diethylamino)niobium
Formula :	C ₁₆ H ₃₉ N ₄ Nb
Molecular Weight :	380,41 g/mol
CAS-No.:	210363-27-2

4. FIRST AID MEASURES

General advice	Consult a physician. Show this safety data sheet to the doctor in attendance.
If inhaled	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact	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.
Most important symptoms and effects, both acute and delayed	To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
Indication of any immediate medical attention and special treatment needed	no data available

5. FIREFIGHTING MEASURES

Suitable extinguishing media	Dry powder
Special hazards arising from the substance or mixture	no data available
Advice for firefighters	Wear self contained breathing apparatus for fire fighting if necessary.
Further information	no data available

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Use personal protective equipment. Avoid breathing vapors, mist or gas. 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.
Reference to other sections	For disposal see section 13.

7. HANDLING AND STORAGE

Precautions for safe handling	Avoid contact with skin and eyes. 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, including any incompatibilities	Store in cool place. 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. Never allow product to get in contact with water during storage. Handle and store under inert gas. Air sensitive.
Specific end use(s)	no data available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters	Components with workplace control parameters
Exposure controls	
Appropriate engineering controls	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
Personal protective equipment	
Eye/face protection	Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Skin 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.
Body Protection	Impervious clothing., 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.
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).

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties	
Appearance Form:	liquid
Odour	no data available
Odour Threshold	no data available
pH	no data available
Melting point/freezing point	no data available
Initial boiling point and boiling range	no data available
Flash point	-3 °C - closed cup
Evaporation rate	no data available
Flammability (solid, gas)	no data available
Upper/lower flammability or explosive limits	no data available
Vapour pressure	no data available
Vapour density	no data available
Relative density	1,015 g/cm ³
Water solubility	no data available
Partition coefficient: noctanol/water	no data available
Auto-ignition temperature	no data available
Decomposition temperature	no data available
Viscosity	no data available
Explosive properties	no data available
Oxidizing properties	no data available
Other safety information	no data available

10. STABILITY AND REACTIVITY

Reactivity	no data available
Chemical stability	no data available
Possibility of hazardous reactions	Reacts violently with water.Reacts violently with water.

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Conditions to avoid	Do not allow water to enter container. Heat, flames and sparks. Extremes of temperature and direct sunlight. Exposure to moisture.
Incompatible materials	Water, Acids, Alcohols, Oxygen, Polyethylene, Polypropylene, Carbon steel
Hazardous decomposition products	Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity	no data available
Skin corrosion/irritation	no data available
Serious eye damage/eye irritation	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.
Reproductive toxicity	no data available
Specific target organ toxicity – single exposure	Inhalation - May cause respiratory irritation.
Specific target organ toxicity – repeated exposure	no data available
Aspiration hazard	no data available
Potential health effects	
Inhalation	May be harmful if inhaled. Causes respiratory tract irritation.
Ingestion	May be harmful if swallowed.
Skin	May be harmful if absorbed through skin. May cause skin irritation.
Eyes	Causes serious eye irritation.
Signs and Symptoms of Exposure	To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
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
Results of PBT and vPvB assessment	no data available
Other adverse effects	no data available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods	
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.
Contaminated packaging	Dispose of as unused product.

14. TRANSPORT INFORMATION

UN number	ADR/RID: 3398 IMDG: 3398 IATA: 3398
UN proper shipping name	
ADR/RID:	ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE (Tris(diethylamido)(tertbutylimido)niobium(V))
IMDG:	ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE (Tris(diethylamido)(tertbutylimido)niobium(V))

IATA:	Organometallic substance, liquid, water-reactive (Tris(diethylamido)(tertbutylimido)niobium(V))
Transport hazard class(es)	ADR/RID: 4.3 IMDG: 4.3 IATA: 4.3
Packaging group	ADR/RID: II IMDG: II IATA: II
Environmental hazards	ADR/RID: no IMDG Marine Pollutant: no IATA: no
Special precautions for user	no data available

15. REGULATORY INFORMATION

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

Safety, health and environmental
regulations/legislation specific

for the substance or mixture no data available

Chemical Safety Assessment no data available

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.