

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: **Niobium(V) ethoxide**  
 Product code: EO00931  
 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 GHS02 flame  
 Flam. Liq. 3 H226 Flammable liquid and vapour.  
 GHS05 corrosion  
 Skin Corr. 1C H314 Causes severe skin burns and eye damage.  
 Classification according to Directive 67/548/EEC or Directive 1999/45/EC C; Corrosive  
 Information concerning particular hazards R34: Causes burns.  
 for human and environment: R10: Flammable.  
 Other hazards that do not result in classification Not applicable  
 Label elements No information known.  
 Labelling according to Regulation (EC) No 1272/2008 The substance is classified and labelled according to the CLP regulation.



GHS02,



GHS05

Hazard pictograms  
 Signal word  
 Hazard statements

### Danger

H226 Flammable liquid and vapour.

H314 Causes severe skin burns and eye damage.

Precautionary statements

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

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

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

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS-No.: 3236-82-6  
EC-No.: 221-795-2

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### 4. FIRST AID MEASURES

General information	Instantly remove any clothing soiled by the product.
After inhalation	Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. Seek immediate medical advice.
After skin contact	Instantly wash with water and soap and rinse thoroughly. Seek immediate medical advice.
After eye contact	Rinse opened eye for several minutes under running water. Then consult doctor.
After swallowing	Seek medical treatment.
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.

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### 5. FIREFIGHTING MEASURES

Suitable extinguishing agents	CO <sub>2</sub> , sand, extinguishing powder. Do not use water.
Special hazards arising from the substance or mixture	If this product is involved in a fire, the following can be released: Carbon monoxide and carbon dioxide Metal oxide
Advice for firefighters	Protective equipment: Wear self-contained breathing apparatus. Wear full protective suit.

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### 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation
Environmental precautions:	Keep away from ignition sources Do not allow material to be released to the environment without proper governmental permits. Do not allow product to reach sewage system or water bodies. Do not allow to enter the ground/soil.
Methods and material for containment and cleaning up:	Keep away from ignition sources. Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Use neutralizing agent. Dispose of contaminated material as waste according to item 13. Ensure adequate ventilation.
Prevention of secondary hazards:	Keep away from ignition sources.
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 information on disposal.

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### 7. HANDLING AND STORAGE

Precautions for safe handling	Handle under dry protective gas. Keep containers tightly sealed. Store in cool, dry place in tightly closed containers. Ensure good ventilation/exhaustion at the workplace.
Information about protection against explosions and fires:	Protect against electrostatic charges. Fumes can combine with air to form an explosive mixture.
Conditions for safe storage, including any incompatibilities	
Storage	

Information about storage in one common storage facility:  
Further information about storage conditions:

Store away from oxidizing agents.  
Store away from water.  
Store under dry inert gas.  
This product is moisture sensitive.  
Keep container tightly sealed.  
Store in cool, dry conditions in well sealed containers.  
Protect from humidity and keep away from water.  
Store in a locked cabinet or with access restricted to technical experts or their assistants.  
No further relevant information available.

Specific end use(s)

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Additional information about design of technical systems:	Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.
Control parameters	Components with critical values that require monitoring at the workplace: Not required.
Additional information:	No data
Exposure controls	Personal protective equipment
General protective and hygienic measures	The usual precautionary measures should be adhered to in handling the chemicals. Keep away from foodstuffs, beverages and food. Instantly remove any soiled and impregnated garments. Wash hands during breaks and at the end of the work. Avoid contact with the eyes and skin. Maintain an ergonomically appropriate working environment.
Breathing equipment:	Use breathing protection with high concentrations.
Protection of hands:	Check protective gloves prior to each use for their proper condition. The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
Material of gloves	Impervious gloves
Penetration time of glove material	Not determined
Eye protection:	Tightly sealed safety glasses. Full face protection
Body protection:	Protective work clothing.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	
Form:	Liquid
Colour:	Pale yellow
Smell:	Not determined
Odour threshold:	Not determined.
pH-value:	Not determined.
Change in condition	
Melting point/Melting range:	Not determined
Boiling point/Boiling range:	140-142 °C (0.1 mmHg)
Sublimation temperature / start:	Not determined
Flash point:	36 °C
Inflammability (solid, gaseous)	Not determined.
Ignition temperature:	Not determined
Decomposition temperature:	Not determined
Self-inflammability:	Not determined.
Critical values for explosion:	
Lower:	Not determined
Upper:	Not determined
Steam pressure:	Not determined
Density at 20 °C	1,27 g/cm <sup>3</sup>
Relative density	Not determined.
Vapour density	Not determined.

Partition coefficient (n-octanol/water): Not determined.  
Viscosity:  
    dynamic: Not determined.  
    kinematic: Not determined.  
Other information No further relevant information available.

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## 10. STABILITY AND REACTIVITY

Reactivity No information known.  
Chemical stability Stable under recommended storage conditions.  
Thermal decomposition /  
conditions to be avoided: No decomposition if used and stored according to specifications.  
Possibility of hazardous reactions No dangerous reactions known  
Incompatible materials: Oxidizing agents  
Water/moisture  
Hazardous decomposition products: Carbon monoxide and carbon dioxide  
Metal oxide

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## 11. TOXICOLOGICAL INFORMATION

Acute toxicity: Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.  
LD/LC50 values that are relevant for classification: No data  
Skin irritation or corrosion: Causes severe skin burns.  
Eye irritation or corrosion: Causes serious eye damage.  
Sensitization: No sensitizing effect known.  
Germ cell mutagenicity: No effects known.  
Carcinogenicity: 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.  
Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

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## 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.  
Water hazard class 1 (Self-assessment): slightly hazardous for water.  
Do not allow undiluted product or large quantities of it to reach ground water, water bodies 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.

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## 13. DISPOSAL CONSIDERATIONS

Waste treatment methods  
Recommendation Hand over to disposers of hazardous waste.

Uncleaned packagings:

Recommendation:

Disposal must be made according to official regulations.

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#### 14. TRANSPORT INFORMATION

UN-Number

ADR, IMDG, IATA

UN2924

UN proper shipping name

ADR

2924 FLAMMABLE LIQUID, CORROSIVE, N.O.S.  
(Niobium(V) ethoxide)

IMDG, IATA

FLAMMABLE LIQUID, CORROSIVE, N.O.S. (Niobium(V) ethoxide)

Transport hazard class(es)

ADR

Class 3 (FC) Flammable liquids.

IMDG, IATA

Label 3+8

Class 3 Flammable liquids.

Label 3+8

Packing group

ADR, IMDG, IATA

III

Environmental hazards:

Not applicable.

Special precautions for user

Warning: Flammable liquids.

Kemler Number:

38

Transport in bulk according to

Annex II of MARPOL73/78

and the IBC Code

Not applicable.

Transport/Additional information:

ADR

Excepted quantities (EQ): E1

Limited quantities (LQ) 5L

Transport category 3

Tunnel restriction code D/E

UN "Model Regulation":

UN2924, FLAMMABLE LIQUID, CORROSIVE, N.O.S. (Niobium(V) ethoxide), 3 (8), III

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#### 15. REGULATORY INFORMATION

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

Australian Inventory of

Chemical Substances

Substance is not listed.

Standard for the Uniform

Scheduling of Drugs and Poisons

Substance is not listed.

National regulations

Information about limitation of use:

Employment restrictions concerning young persons must be observed.  
For use only by technically qualified individuals.

Water hazard class:

Water hazard class 1 (Self-assessment): slightly hazardous for water.

Other regulations, limitations and prohibitive regulations

ELINCS (European List of

Notified Chemical Substances)

Substance is not listed.

Substances of very high

concern (SVHC) according to

REACH, Article 57

Substance is not listed.

REACH - Pre-registered

substances

Substance is listed.

Chemical safety assessment:

A Chemical Safety Assessment has not been carried out.

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#### 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.