



SAFETY DATA SHEET

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SECTION 1 PRODUCT AND COMPANY INFORMATION

PRODUCT NAME: **Niobium (V) Ethoxide**
PRODUCT NUMBER: 2751
CAS NUMBER: 3236-83-6
SYNONYMS: Niobium ethanolate, Niobium alcoholate, Pentaethoxyniobium, Niobium pentaethoxide
MANUFACTURER:

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SECTION 2 HAZARDS IDENTIFICATION

CLASSIFICATION OF SUBSTANCE OR MIXTURE

Pictogram



Signal Word

Danger

Hazard Statements

H226	Flammable liquid and vapor.
H314	Causes severe skin burns and eye damage.

Precautionary Phrases

P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233	Keep container tightly closed.
P240	Ground/bond container and receive equipment.
P241	Use explosion-proof electrical/ventilating/lighting/equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P370+P378	In case of fire: use dry sand, dry chemical, or alcohol-resistant foam for extinction.

SECTION 2 HAZARDS IDENTIFICATION (Cont.)

HMIS CLASSIFICATION:

Health: 2 Fire: 3 Reactivity Hazard: 1

NFPA RATING:

Health: 2 Flammability: 3 Reactivity Hazard: 1

EYE CONTACT: The liquid and ethanol hydrolysis product causes irritation to the eyes.

SKIN CONTACT: Dehydrating agent. Liquid causes irritation of the skin.

INHALATION: Liquid causes irritation to the upper respiratory tract. Ethanol vapor may cause dizziness and drowsiness.

INGESTION: Ingestion may cause gastrointestinal distress, nausea, vomiting, and headache.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Formula: Nb(OC₂H₅)₅

Molecular Weight: 318.22

CHEMICAL NAME	CAS#	%
Niobium (V) Ethoxide	3236-83-6	100

SECTION 4 FIRST AID MEASURES

EYE EXPOSURE: Immediately flush the eyes with copious amounts of water for at least 15 minutes. Assure flushing under eyelids. A victim may need assistance in keeping their eyelids open. Get immediate competent medical attention.

SKIN EXPOSURE: Wash affected area with plenty of water. Remove contaminated clothes if necessary. Seek medical assistance if irritation persists.

INHALATION: Remove to fresh air and keep at rest. Closely monitor the victim for signs of respiratory problems, such as difficulty in breathing, coughing, wheezing, or pain. In such cases, seek immediate medical assistance.

INGESTION: Seek medical assistance immediately. Keep the victim calm. Give the victim water (only if conscious). Induce vomiting only if directed by medical personnel.

SECTION 5 FIREFIGHTING MEASURES

FLASH POINT: 36° C

AUTO IGNITION TEMPERATURE: Not available

EXPLOSION LIMITS: Product is not explosive. However, formation of explosive air/vapor mixture is possible.

EXTINGUISHING MEDIUM: Carbon dioxide, sand, or extinguishing powder. Do not use water.

SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.

HAZARDOUS COMBUSTION AND DECOMPOSITION PRODUCTS: Carbon oxides and niobium oxides

SECTION 6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Wear all appropriate equipment when using this material. Ensure adequate ventilation. Avoid dust formation. Avoid breathing dust. Eliminate all sources of ignition.

ENVIRONMENTAL PRECAUTIONS: Prevent spillage from entering drains or allowing to be released into the environment.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP: Absorbed spills with diatomaceous earth, sand, or other suitable absorbent. Sweep up and place in suitable container for proper disposal.

SECTION 7 HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING: Wear appropriate personal protective equipment. Ensure adequate ventilation. Avoid contact with skin and eyes. Keep away from sources of ignition.

CONDITIONS FOR SAFE STORAGE: Store in cool, dry, and well-ventilated area. Store under dry inert gas. Protect from humidity and water. Store away from oxidizing agents, water, and moisture.

SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

EXPOSURE CONTROLS: Contains no substances with occupational exposure limit values.

EYE PROTECTION: Wear chemical safety glasses or goggles and face shield.

SKIN PROTECTION: Wear nitrile or rubber gloves, and a complete suit protecting against chemicals.

VENTILATION: Provide local exhaust, preferably mechanical.

RESPIRATOR: Use an approved respirator.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

COLOR AND FORM: Yellow liquid

ODOR: None

MOLECULAR WEIGHT: 318.22

BOILING POINT: 142° C

MELTING POINT: 5-5 C

SPECIFIC GRAVITY: 1.268 gm/ml

SOLUBILITY: Reacts with water

SECTION 10 STABILITY AND REACTIVITY

STABILITY: Stable

HAZARDOUS POLYMERIZATION: Will not occur

CONDITIONS TO AVOID: Contact with heat, sparks, and ignition sources.

INCOMPATIBILITY: Strong acids and strong oxidizing agents.

DECOMPOSITION PRODUCTS: Carbon oxides and niobium oxides

SECTION 11 TOXICOLOGICAL DATA

ACUTE TOXICITY: Not available

CARCINOGENIC EFFECTS: No component of this product present at levels greater than or equal to 0.1% is considered to be a human carcinogen.

MUTAGENIC EFFECTS: Not available

TETRAOGENIC EFFECTS: Not available

CHRONIC TOXICITY: Not available

RTECS: No data

To the best of our knowledge the toxicological effects of this compound have not been fully investigated.

SECTION 12 ECOLOGICAL DATA

No information available

SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of in according to local, state, and federal regulations.

SECTION 14 TRANSPORTATION DATA

DOT: UN2924

Flammable liquids, corrosive, n.o.s.

(Niobium (V) Ethoxide)

CLASS 3 (8)

PG III

IATA: UN2924

Flammable liquid, corrosive, n.o.s.

(Niobium (V) Ethoxide)

CLASS 3 (8)

PG III

SECTION 15 REGULATORY INFORMATION

SARA 302/304: Not Listed

SARA 311/312: Acute Health Hazard

SARA (TITLE 313): Not listed

CALIFORNIA PROP. 65: Not Listed

MASSACHUSETTS RIGHT TO KNOW COMPONENTS: No components are subject to the Massachusetts Right to Know Act.

NEW JERSEY RIGHT TO KNOW COMPONENTS: Niobium (V) Ethoxide

PENNSYLVANIA RIGHT TO KNOW COMPONENTS: Niobium (V) Ethoxide

SECTION 16 OTHER INFORMATION

DISCLAIMER: The information herein is believed to be accurate and reliable as of the date compiled. However, Prochem, Inc. makes no representation, warranty, or guarantee of any kind with respect to the information in this document or any use of the product based on the information.

DATE PREPARED: 03/15

SDS DEPT.