

MATERIAL SAFETY DATA SHEET

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SECTION 1 Product Identification

CHEMICAL NAME: NIOBIUM n-BUTOXIDE
PRODUCT NUMBER: 2740
CAS REGISTRY NUMBER: 51030-47-8
EINECS NO: 256-923-6
FORMULA: Nb(OC₄H₉)₅

SECTION 2 Composition and Information on Ingredients

INGREDIENT:	CAS#	%	ACGIH (TWA)	OSHA (PEL)
Title Compound	51030-47-8	100	No data	No Data

SECTION 3 Hazards Identification

EMERGENCY OVERVIEW: CORROSIVE Causes Burns FLAMMABLE

PRIMARY ROUTES OF EXPOSURE: Inhalation, Ingestion, Skin and eye contact.

EYE CONTACT: Strong corrosive and irritating effect. Causes burns. May cause permanent damage.

SKIN CONTACT: Corrosive effect on skin. Causes burns

INHALATION: Corrosive and destructive to mucous membranes and respiratory tract.

INGESTION: Corrosive effect, burns, perforation

SUBACUTE TO CHRONIC TOXICITY: Niobium compounds have caused liver damage in animal studies. This material is acutely destructive to the respiratory tract, eyes, skin and digestive tract. Eye contact may result in permanent damage and complete vision loss. Inhalation may result in respiratory effects such as inflammation, edema, and chemical pneumonitis. May cause coughing, wheezing, laryngitis, shortness of breath, headache, nausea and vomiting. Ingestion may cause damage to the mouth, throat and esophagus. May cause skin burns or irritation depending on the severity of the exposure. n-Butanol, if generated or present, causes headache, nausea, vomiting, dizziness, gastrointestinal irritation, central nervous system depression, hearing loss and unconsciousness by ingestion. Inhalation may cause irritation and drying of mucous membranes, headache, nausea, vomiting, dizziness, narcosis, respiratory failure, low blood pressure, central nervous system depression and unconsciousness. May cause damage to the liver and kidneys. Swallowing will lead to a strong corrosive effect on mouth and throat and to the danger of perforation of esophagus and stomach.

SECTION 4 First Aid Measures

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

SKIN EXPOSURE: Wash affected area with soap and copious amounts of water; rinse thoroughly. Remove contaminated clothes if necessary. Seek medical assistance immediately.

INHALATION: Remove victim to fresh air. Closely monitor the victim for signs of respiratory problems, such as difficulty in breathing, coughing, wheezing, or pain. In such cases give oxygen if available. Seek immediate medical assistance. If not breathing, administer CPR.

INGESTION: Do not induce vomiting. Seek medical assistance immediately.

SECTION 5 Firefighting Measures

FLASH POINT: No Data

AUTOIGNITION TEMPERATURE: Not applicable

EXPLOSION LIMITS: Not applicable

EXTINGUISHING MEDIUM: Carbon dioxide, extinguishing powder, water spray.

SPECIAL FIREFIGHTING PROCEDURES: If this product is involved in a fire, fire fighters should be equipped with a NIOSH approved positive pressure self-contained breathing apparatus and full protective clothing.

HAZARDOUS COMBUSTION AND DECOMPOSITION PRODUCTS: CO, CO₂, metal oxide fumes.

UNUSUAL FIRE OR EXPLOSTION HAZARDS: None known

SECTION 6 Accidental Release Measures

SPILL AND LEAK PROCEDURES: Keep unprotected persons away. Wear adequate protective equipment. Isolate spill, keeping away from ignition sources. Use non-sparking tools. Absorb with inert material (sand, diatomite) sweep up and place in a well-marked container for disposal. Ventilate area.

DISPOSAL: Dispose of in accordance with all waste disposal regulations

SECTION 7 Handling and Storage

HANDLING AND STORAGE: Store under dry protective gas. Keep in a tightly sealed container. Store in a cool, dry, well-ventilated area away from incompatible materials. Keep ignition sources away. Protect against electrostatic charges. Vapor can combine with air to form an explosive mixture. Store away from oxidizers, acids, water/moisture. Avoid contact with air.

SECTION 8 Exposure Controls and Personal Protection

EYE PROTECTION: Always wear approved safety glasses w/side shields, or safety goggles when handling a chemicals substance in the laboratory.

SKIN PROTECTION: Wear appropriate chemical resistant gloves, rubber, neoprene

VENTILATION: Chemical fume hood

RESPIRATOR: If ventilation if not available, a respirator should be worn. The use of respirators requires a Respirator Protection Program to be in compliance with 29CFR 1910.34.

ADDITION INFORMATION: Eyewash station/safely shower in area. Use in a controlled environment. Do not eat, drink or smoke in area. Avoid contact with skin, eyes, clothing. Use with adequate ventilation. **CORROSIVE** Causes burns. **FLAMMABLE**. Keep away from all sources of ignition.

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SECTION 9 Physical and Chemical Properties

COLOR AND FORM: Yellow Liquid, alcohol like odor

MOLECULAR WEIGHT: 458.12

MELTING POINT (DEG. C.): No Data

SPECIFIC GRAVITY (WATER = 1): No Data

BOILING POINT: No Data

VAPOR PRESSURE: No Data

VAPOR DENSITY (AIR = 1): No Data

% VOLATILE BY VOLUME: No Data

SOLUBILITY: Decomposes

SECTION 10 Stability and Reactivity

STABILITY: Stable

HAZARDOUS POLYMERIZATION: Will not occur

CONDITIONS TO AVOID: Sparks, flame, heat, electrostatic charges, sources of ignition.

INCOMPATIBILITY: Oxidizing agents, acids, water/moisture, air

DECOMPOSITION PRODUCTS: Carbon monoxide, Carbon dioxide, metal oxide fume

SECTION 11 Toxicological Information

CARCINOGENIC EFFECTS: No Data

MUTAGENIC EFFECTS: No Data

TETRAOGENIC EFFECTS: No Data

To the best of our knowledge the toxicological effects of this compound have not been fully investigated.
For Research and Development purposes only.

SECTION 12 Ecological Information

ECOLOGICAL INFORMATION: Do not allow product to reach ground water, water course or sewage system.
Do not allow material to be released to the environment without proper governmental permits

SECTION 13 Disposal Considerations

DISPOSAL: Dispose of in according to local state and federal regulations.

SECTION 14 Transportation Information

Flammable liquid, corrosive, n.o.s.

Class 3 (8)

UN2924 PG III

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SECTION 15 Regulatory Information

TSCA: No Data

SARA (TITLE 313): No Data

RCRA: No Data

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.

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