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# SAFETY DATA SHEET

### Section 1. Identification

Tert-butylimido tris(methylethylamino)niobium **Product Name:** 

**Product Type:** Liquid

864150-47-0 **CAS Number: Product Number:** NB0470

**Recommended Use:** Laboratory chemicals, synthesis of substances.

This product is being supplied under the TSCA R&D Exemption (40 **Uses Advised Against:** 

> CFR Section 720.36). It is the recipient's responsibility to comply with the requirements of the R&D exemption. The product may not be used for a non-exempt commercial purpose under TSCA unless

appropriate consent is granted in writing by Ereztech LLC.

Ereztech LLC **Product Manufacturer:** 

11555 Medlock Bridge Road, Suite 100

Johns Creek, GA 30097

**Product Information:** (888) 658-1221

CHEMTREC: 1-800-424-9300 (USA); In Case of an Emergency:

> +1 703-527-3887 (International); CCN836180 \*\*\* Contact manufacturer for all non-emergency calls.

### Section 2. Hazards Identification

Appearance/Odor: Yellow liquid, odor not determined.

Classification: FLAMMABLE LIQUIDS - Category 2, H225

SUBSTANCES AND MIXTURES WHICH, IN CONTACT WITH WATER,

EMIT FLAMMABLE GASES - Category 2, H261 ACUTE TOXICITY, ORAL – Category 4, H302

SKIN CORROSION/IRRITATION - Category 2, H315

SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A, H319 SPECIFIC ORGAN TOXICITY, SINGLE EXPOSURE; RESPIRATORY

TRACT IRRITATION - Category 3, H335

**GHS Label Elements Hazard Pictograms:** 



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#### Section 2. Hazards Identification

Signal Word: DANGER.

Hazard Statements: H225: Highly flammable liquid and vapor.

H261: In contact with water releases flammable gas.

H302: Harmful if swallowed. H315: Causes skin irritation.

H319: Causes serious eye irritation.

H335: May cause respiratory irritation.

#### **Precautionary Statements**

**Prevention:** 

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P223: Do not allow contact with water.

P231 + P232: Handle and store contents under inert gas. Protect from moisture.

P233: Keep container tightly closed.

P240: Ground and bond container and receiving equipment.

P241: Use explosion proof electrical/ventilating/lighting/processing equipment.

P242: Use non-sparking tools.

P243: Take action to prevent static discharges.

P261: Avoid breathing sprays/mists/vapors/gases.

P264 + P265: Wash hands and exposed skin thoroughly after handling. Do not touch eyes.

P270: Do not eat, drink or smoke when using this product.

P271: Use only outdoors or with adequate ventilation.

P280: Wear protective gloves/ protective clothing/ eye protection/ face protection/hearing protection.

P301 + P317: IF SWALLOWED: Get medical help.

P302 + P335 + P334: IF ON SKIN: Brush off loose particles from skin and immerse in cool water.

P302 + P352: IF ON SKIN: Wash with plenty of water.

P303 + P361 + P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water.

P304 + P340: IF INHALED: Remove person to fresh air and keep 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.

P319: Get medical help if you feel unwell.

P330: Rinse mouth.

P332 + P317: If skin irritation occurs: Get medical help.

P337 + P317: If eye irritation persists: Get medical help.

P362 + P364: Take off contaminated clothing and wash it before reuse.

#### Response:

#### Section 2. Hazards Identification

Response (cont.): P370 + P378: In case of fire: Use CO<sub>2</sub> or dry chemical to

extinguish.

P402 + P404: Store in a dry place. Store in a closed container. Storage:

P403 + P233 + P235: Store in a well ventilated place. Keep

container tightly closed. Keep cool.

P405: Store locked up.

P501: Dispose of contents/container in accordance with federal, Disposal:

state and local regulations.

**OSHA/HCS Status:** This material is considered hazardous by the OSHA Hazard

Communication Standard (29 CFR 1910.1200).

**Hazards Not Otherwise** Classified (HNOC):

Product reacts violently with water to release flammable gases.

## Section 3. Composition/Information on Ingredients

**Substance Type:** Mono-constituent.

Tert-butylimido tris(ethylmethylamido) niobium; Synonyms:

(t-Butylimido)tris(methylethylamino)niobium;

Tris(ethylmethylamido)(tert-butylimido)niobium; Tertiary-butylimido

tris(methylethylamino) niobium; TBTEMN; TBTMEN.

Formula:  $C_{13}H_{33}N_4Nb$ Molecular Weight: 338.33 g/mol. EC-No.: 632-927-7

**Component Name** % **CAS Number** ≥ 98 864150-47-0 <u>Tert-butylimido tris(methylethylamino)niobium</u>

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First Aid Measures

#### **Description of Necessary First Aid Measures**

General Advice: Move out of dangerous area. If unconscious, place in recovery position and get

> medical help immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical help if symptoms develop or if you feel unwell. Show this safety data sheet to the doctor in attendance.

Immediately flush eyes with plenty of water, occasionally lifting the upper and **Eye Contact:** 

lower eyelids. Check for and remove any contact lenses if easy to do. Continue

rinsing. Get medical help if eye irritation develops and persists.

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#### Section 4. First Aid Measures

**Skin Contact:** Take off contaminated clothing and shoes immediately. Wash off contaminated

skin with plenty of water. Get medical help if irritation develops and persists, if

symptoms develop or if you feel unwell.

Inhalation: Get medical help. Rescuer should wear a mask or self-contained breathing

> apparatus if it is suspected that fumes or gases are still present. Remove person to fresh air and keep comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Do not use the mouth-to-mouth method of resuscitation if victim ingested or inhaled the product; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper

respiratory medical devices.

Get medical help. Rinse mouth, and then give water to drink (two glasses at Ingestion:

> most). Do NOT induce vomiting. Remove dentures if any. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If person is not breathing, if breathing is irregular or if respiratory arrest occurs, see the "Inhalation" first aid

measures noted above.

Most Important Symptoms/Effects, Acute And Delayed Potential Acute Health Effects

Symptoms may include stinging, tearing, redness, swelling and blurred vision. **Eye Contact:** Inhalation:

May be irritating to respiratory system. Symptoms may include coughing, sore

throat, nausea, headache, vomiting.

Symptoms may include an itching or burning sensation, reddening and swelling. **Skin Contact:** Ingestion:

Product is harmful if ingested. Symptoms may include cramping, localized pain,

headache, nausea and vomiting.

Indication of Immediate Medical Attention and Special Treatment Needed, If Necessary

**Notes to Physician:** Treat symptomatically. **Specific Treatments:** No specific treatment.

**Protection of First Responders:** No action taken shall be taken involving any personal risk without

suitable training. It may be dangerous to the person providing

aid to give mouth-to-mouth resuscitation.

**See Toxicological Information (Section 11)** 

## Section 5. Fire Fighting Measures

**General Hazards:** Product reacts violently with water to release flammable gases.

THE MOST EFFECTIVE FIRE EXTINGUISHING AGENT IS DRY **Suitable Extinguishing Media:** 

CHEMICAL POWDER PRESSURIZED WITH NITROGEN. Carbon

dioxide  $(CO_2)$  may also be used.

## Section 5. Fire Fighting Measures

**Unsuitable Extinguishing Media:** DO NOT USE WATER OR FOAM.

Product reacts violently with water and protic solvents to **Unusual Fire and** release highly flammable gases. Gases released may form **Explosion Hazards:** 

> explosive mixtures with air. Product runoff to sewer may create a fire or explosion hazard. Gases released when product is exposed to moisture in air, water or protic solvents are heavier

than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable

distance to an ignition source and flashback.

**Product of Combustion:** Decomposition products include carbon oxides (CO<sub>x</sub>), nitrogen

> oxides (NO<sub>x</sub>) and niobium oxides. Irritating and potentially harmful fumes may be generated during exposure to elevated

temperatures or open flame.

Promptly isolate the scene by removing all persons from the **Protection of Firefighters:** 

> vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Avoid contact with skin or eyes. Avoid the formation and inhalation of

sprays, mists, vapors and gases.

Eliminate all local and distant ignition sources. Move containers from fire area if process can be accomplished without risk to firefighters. To reduce the possibility of explosion, use a water spray or fog to reduce direct vapors and to cool unopened containers. Do not cut, grind, drill or weld on or near product containers (even empty) of this product because an explosion

may result.

Fire-fighters should wear appropriate protection equipment and self-contained breathing apparatus (SCBA) with a full face-piece

operated in a positive pressure mode.

### Section 6. Accidental Release Measures

#### Personal Precautions, Protective Equipment and Emergency Procedures

For Non-Emergency Personnel: No action shall be taken involving any personal risk or without

suitable training. Evacuate surrounding areas. Keep

unnecessary and unprotected personnel from entering. Remove all sources of ignition. Beware of vapors accumulating to form

explosive concentrations.

For Non-Emergency Personnel: Vapors can accumulate in low areas. Do not touch or walk

> through spilled material. Avoid the formation and inhalation of sprays, mists, vapors and gases. Provide adequate ventilation.

Wear respiratory protection.

#### Section 6. Accidental Release Measures

For Non-Emergency Personnel:

(cont.)

Put on appropriate personal protective equipment.

For Emergency Responders:

If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For Non-Emergency Personnel".

**Environmental Precautions:** 

Do not allow dispersal of spilled material and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

**Methods for Containment** 

General:

Eliminate all local and distant ignition sources. Move containers from spill area if safe to do so. Avoid the formation and inhalation of sprays, mists, vapors and gases. Avoid allowing the spilled material to get wet or using water to clean up spillages or residues. Use spark-proof tools and explosion-proof equipment. Dispose of collected spillage in accordance with federal, state and local regulations. Contaminated extinguishing material may pose the same hazard as the spilled product.

**Small Spill:** 

Collect spillage using a dry, non-combustible, absorbent material (e.g. dry sand, vermiculite or diatomaceous earth) and place in dry, sealed container for disposal.

Large Spill:

Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with dry, non-combustible, absorbent material (e.g. dry sand, vermiculite or diatomaceous earth) and place in dry, sealed container for disposal.

Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

### Section 7. Handling and Storage

**Precautions:** 

Product reacts with water and moisture in the air to release flammable gases; handle under a dry, inert gas. Nitrogen with less than 5 ppm each of moisture and oxygen is recommended. Keep away from all sources of ignition – NO SMOKING. Keep container tightly sealed. Avoid contact with skin, eyes and clothing. Avoid the formation and inhalation of sprays, mists, vapors and gases. Do not ingest. Avoid prolonged exposure. Ensure adequate ventilation.

## Section 7. Handling and Storage

Protective Measures: Protect against electrostatic discharges. Use explosion-proof

electrical/ventilating/lighting/handling equipment. Use nonsparking tools and equipment. Put on appropriate personal protective equipment (see Section 8). Keep in the original container kept tightly closed when not in use. Empty

containers retain product residue and can be hazardous. Do not

reuse container.

**General Occupational Hygiene:** Eating, drinking and smoking should be prohibited in areas

where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective

equipment before entering eating areas. See also Section 8 for

additional information on hygiene measures.

Safe Storage Conditions: Product reacts with water and moisture in the air to release

flammable gases; store under an inert gas. Nitrogen with less than 5 ppm each of moisture and oxygen and a temperature range of 2 – 8 °C is recommended. Keep away from all sources of ignition. NO SMOKING. Store in original container

sources of ignition – NO SMOKING. Store in original container protected from direct sunlight in a dry and well-ventilated area, away from incompatible materials noted above and food and drink. Keep container tightly closed and sealed until ready for

use. Store locked up.

### Section 8. Exposure Controls/Personal Protection

Introductory Remarks: These recommendations provide general guidance for handling

this product. Because work environments and material handling practices vary, safety procedures should be developed for each

intended application. While developing safe handling

procedures, do not overlook the need to clean equipment and conduct regular repairs. Waste from these procedures should

be handled in accordance with Section 13.

Occupational Exposure Limits: Product, as supplied, does not contain any hazardous materials

with occupational exposure limits established by the region-

specific regulatory bodies.

**Engineering Controls:** Properly operating explosion-proof, chemical fume hood

designed for hazardous chemicals and having an average face

velocity of at least 100 feet per minute. Provide an

eyewash/shower station.

### Section 8. Exposure Controls/Personal Protection

**Environmental Exposure Controls:** 

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**Individual Protection Measures** 

**Hygiene Measures:** 

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Remove all soiled and contaminated clothing immediately. Avoid the formation and inhalation of sprays, mists, vapors or gases. Avoid contact with eyes and skin. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/Face Protection:** 

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to sprays or mists. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles, faceshield (8-inch minimum). Refer to 29 CFR 1910.133, ANSI Z87.1, or European Standard EN166.

**Skin Protection** 

**Hand Protection:** 

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: Chemical-resistant gloves. For full contact, wear Neoprene or nitrile rubber 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.

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## Section 8. Exposure Controls/Personal Protection

Other Skin Protection: Appropriate footwear and any additional skin protection measures

should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity

discharges, wear anti-static, flame retardant protective clothing. For the greatest protection from static discharges, clothing should include anti-

static overalls, boots and gloves.

**Respiratory Protection:** Where risk assessment shows air-purifying respirators are appropriate

use a full-face respirator with multipurpose 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).

## Section 9. Physical and Chemical Properties

Physical State: Liquid. Color: Yellow.

Odor:

Odor Threshold:

No data available.

No data available.

No data available.

Melting Point: No data available.

**Boiling Point:** 86 – 87 °C (186.8 – 188.6 °F) @ 1.5 mmHg.

Flash Point:

Flammability (solid):

No data available.

Vapor Pressure:

1 mmHg @ 78 °C.

Vapor Density:

No data available.

Water Solubility: Reacts violently with water to release highly flammable gases.

### Section 10. Stability and Reactivity

**Reactivity:** This product reacts violently with water and protic solvents to release a

highly flammable gas.

Chemical Stability: This product is stable when stored under a dry, inert atmosphere and

away from heat. Nitrogen containing less than 5 ppm each moisture

and air and a temperature range of 2 – 8 °C is recommended.

## Section 10. Stability and Reactivity

**Conditions to Avoid:** Exposure to air/water/moisture, sources of ignition (heat,

flames, sparks, electrostatic discharges), extremes of

temperature and direct sunlight.

Strong oxidizing agents. **Incompatible Materials:** 

Under normal conditions of storage and use, hazardous **Hazardous Decomposition Products:** 

> decomposition products should not be produced. In contact with water, product releases highly flammable gases. Hazardous decomposition products formed under fire conditions: carbon oxides (CO<sub>X</sub>), nitrogen oxides (NO<sub>x</sub>) and niobium oxide particles and fumes. Irritating fumes and organic acid vapors may be generated during exposure to elevated temperatures or open flame. In the

event of a fire: see Section 5.

Under normal conditions of storage and use noted above, **Possibility of Hazardous Reactions:** 

hazardous reactions will not occur. Hazardous reactions or instability may occur under certain conditions of storage or use. In contact with water, product releases

highly flammable gases.

# Section 11. Toxicological Information

No specific data available. **Acute Toxicity:** 

Causes skin irritation and serious eye irritation. Irritation/Corrosion:

No specific data available. Sensitization:

**Germ Cell Mutagenicity:** No specific data available.

Carcinogenicity

**ACGIH** No component of this product present at levels greater

than 0.1% is identified as probable, possible or confirmed

human carcinogen by ACGIH.

No component of this product present at levels greater **IARC** 

than 0.1% is identified as probable, possible or confirmed

human carcinogen by IARC.

No component of this product present at levels greater **NTP** 

than 0.1% is identified as probable, possible or confirmed

human carcinogen by NTP.

**OSHA** No component of this product present at levels greater

than 0.1% is identified as probable, possible or confirmed

human carcinogen by OSHA.

No specific data available. **Reproductive Toxicity:** 

No specific data available. **Teratogenicity:** 

## Section 11. Toxicological Information

**Specific Target Organ Toxicity:** Inhalation – May cause respiratory tract irritation.

(Single Exposure)

**Specific Target Organ Toxicity:** No specific data available.

(Repeated Exposure)

**Routes of Exposure:** 

**Aspiration Hazard:** No specific data available.

Information on the Likely Common routes of exposure: inhalation, dermal (failure

to use skin protection), eye (failure to use safety eyewear). Less common: ingestion (failure to employ recommended hygiene measures (e.g. smoking or eating after handling product without washing hands or using

hand protection).

Additional Information: To the best of our knowledge, the chemical, physical and

toxicological properties of this product have not been

thoroughly investigated.

# Section 12. Ecological Information

**Ecotoxicity:** The environmental impact of this product on the

environment has not been tested.

Numerical Measures of Toxicity: No specific data available.

Persistence and Degradability

Biodegradability: No specific data available.

Bioaccumulative Potential: No specific data available.

Mobility in Soil: No specific data available.

Results of PBT and vPvB Assessment: PBT/vPvB assessment not available as chemical safety

assessment not required/not conducted.

**Endocrine Disrupting Properties:** No specific data available.

Other Adverse Effects: An environmental hazard cannot be excluded in the event

of unprofessional handling or disposal.

# Section 13. Disposal Considerations

**Waste Treatment Methods** 

**Product:** Dispose of in accordance with local, state, and federal

regulations. Refer to 40 CFR 260-299 for complete waste disposal regulations. Consult your local, state, or federal

agency before disposing of any chemicals.

**Contaminated Packaging:** Empty containers retain product residue (liquids, vapors

and gases) and can be dangerous. Dispose of as unused

product.

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## Section 13. Disposal Considerations

Contaminated Packaging (cont.):

DO NOT EXPOSE OPENED/EMPTY CONTAINERS TO MOISTURE/WATER, HEAT, FLAME, SPARKS, STATIC

ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY

EXPLODE AND CAUSE INJURY OR DEATH.

### Section 14. Transport Information

	DOT	IMDG	IATA	
UN Number	UN3399	UN3399	UN3399	
UN Proper Shipping Name	Organometallic ORGANOMETALLIC Substance, liquid, water-reactive, flammable (tert-butylimido)  ORGANOMETALLIC SUBSTANCE, LIQUID, su WATER-REACTIVE, water-reactive, butylimido)  ORGANOMETALLIC SUBSTANCE, LIQUID, su WATER-REACTIVE, water-reactive, butylimido)		Organometallic substance, liquid, water-reactive, flammable (tert-butylimido) tris(methylethylamino) niobium)	
Transport Hazard Classes	4.3(3)	4.3(3)	4.3(3)	
Packing Group	Ш	H H	II.	
Environmental Hazards				
Additional Information		EMS-No: F-G, S-N	-	

**Special Precautions for User:** 

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

## Section 15. Regulatory Information

#### Toxic Substance Control Act (TSCA):

This product is not listed on the U.S. Toxic Substances Control Act Chemical Inventory (TSCA Inventory). Use of this product is restricted to research and development only. This product must be used under the supervision of a technically qualified individual as defined by the TSCA. This product must not be used for commercial purposes or in formulations for commercial purposes.

This product as supplied is not subject to the TSCA Significant New Use Rule.

This product as supplied is not subject to TSCA 12(b) export notification requirements.

#### **SARA 302 Components**

This product does not contain any components which are subject to the reporting requirements of SARA Title III, Section 302 EHS TPQ.

## Section 15. Regulatory Information

#### **SARA 304 Components**

This product does not contain any components which are subject to the reporting requirements of SARA Title III, Section 304 RQ.

#### SARA 311/312 Hazards

Fire Hazard (Flammable Liquid), Reactivity Hazard (In contact with water emits flammable gas), Acute Health Hazard (Acute toxicity (Oral); Serious eye damage or eye irritation; Specific Target Organ Toxicity (STOT), single exposure: respiratory irritation).

#### **SARA 313 Components**

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

#### **Clean Water Act**

Not applicable.

#### **Clean Air Act**

Not applicable.

#### **CERCLA Reportable Quantity**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

#### **US Department of Homeland Security (DHS)**

This product does not contain any DHS chemicals.

#### **US Department of Transportation (DOT)**

Component A D D	Reportable Quantity	DOT Marine Pollutant	DOT Severe Marine Pollutant
Tert-butylimido tris(methylethylamino) niobium	No	No	No

#### **US State Right-to-Know Listings**

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Tert-butylimido tris(methylethylamino) niobium	-	-	-	-	-

<sup>&</sup>quot;X" - Listed.

## Section 15. Regulatory Information

#### **US State Chemicals of High Concern Listings**

Component	Maine	Vermont	Washington
Tert-butylimido	-	-	-
tris(methylethylamino)niobium			

<sup>&</sup>quot;X" - Listed.

#### **California Proposition 65 Components**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

### Section 16. Other Information

#### **National Fire Protection Association (U.S.A.)**



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Copyright © 2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

#### **HMIS Rating**

HEALTH	2
FLAMMABILITY	3
PHYSICAL HAZARD	2

#### **History**

5/15/2025. Date of Issue/Date of Revision: **Date of Previous Issue:** None.

None available. References:

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### Section 16. Other Information

#### **Abbreviations and Acronyms**

ACGIH American Conference of Governmental Industrial Hygienists.

American Industrial Hygiene Association. AIHA

ATE Acute Toxicity Estimate (per Chapter 3.1 of GHS 10 standard).

BFI Biological Exposure Indices (ACGIH).

CAS Chemical Abstracts Service (division of the American Chemical Society).

: Chemical Hazards Response Information System (US DOT). CHRIS CLP Classification, Labeling and Packaging (European Union (EU)).

DOT : US Department of Transportation.

EC-No. : The EC Inventory (EINECS, ELINCS and the NLP-list is the source of the seven digit

EC number, an identifier of substances commercially available with the EU (European

Union).

**EINECS** European Inventory of Existing Commercial Chemical Substances.

EHS Extremely Hazardous Substance.

: European List of Notified Chemical Substances. **ELINCS** 

Globally Harmonized System of Classification and Labeling of Chemicals. GHS

Hazardous Air Pollutants (Clean Air Act). HAP **HMIS** : Hazardous Materials Identification System.

HNOC : Hazards Not Otherwise Classified.

**IARC** : International Agency for Research on Cancer.

IATA International Air Transport Association.

Dangerous Goods Regulations by the "International Air Transport Association" IATA-DGR

(IATA).

**IDLH** : Immediately Dangerous to Life or Health (US National Institute for Occupation Health

and Safety (NIOSH)).

**IMDG** International Maritime Code for Dangerous Goods.

IΡ Intraperitoneal. IV Intravenous.

**NFPA** National Fire Protection Association.

National Institute of Occupational Safety and Health. NIOSH

NSRL No Significant Risk Levels. NTP National Toxicology Program.

ODS Ozone Depleting Substances (US Clean Air Act).

: Organization for Economic Co-Operation and Development. OECD

OEL : Occupational Exposure Limit.

Occupational Safety and Health Administration. OSHA

: Persistent Bioaccumulative and Toxic. PBT

PEL Permissible Exposure Limits. REL : Recommended Exposure Limits.

RQ Reportable Quantity.

SARA Superfund Amendments and Reauthorization Act.

Short Term Exposure Limit (ACGIH/NIOSH) STEL (ST)

**STOT** Specific Target Organ Toxicity.

### Section 16. Other Information

#### Abbreviations and Acronyms (cont.)

TLV : Threshold Limit Values (ACGIH).TPQ : Threshold Planning Quantity.TWA : Time Weighted Average.VOC : Volatile Organic Compound.

vPvB : Very Persistent and Very Bioaccumulative.

WEEL: Workplace Environmental Exposure Level (AIHA).

#### **Disclaimer**

The information herein is believed to be accurate and is presented in good faith; however, no warranties or representations are made by Ereztech LLC regarding the accuracy or completeness of the information. Ereztech LLC shall not be liable for any damages resulting from the handling, or from the contact with the above product.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

