



Material Safety Data Sheet

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SECTION 1: Product Identification

Product name	Tetrakis(diethylamino)niobium (IV)
CAS #	19824-60-3
Catalog #	0411250
Chemical family	Metal amide complex

SECTION 2: Composition, Information on Ingredients

Component	%	CAS #	EINECS #	Hazard Symbol	R-Phrase
Tetrakis(diethylamino)niobium (IV)	-	19824-60-3	none	F Xi	11 14 36/37/38

SECTION 3: Hazard Identification

Emergency overview	Highly flammable. Reacts violently with water. Irritating to eyes, respiratory system and skin.
Eye contact	Causes irritation of the eyes.
Skin contact	Causes irritation of the skin.
Inhalation	Causes irritation of the nose mucous membranes and respiratory tract. May be harmful if inhaled.
Ingestion	No information is available on the physiological effects of ingestion. May be harmful if swallowed.
Chronic health effects	Not available.

SECTION 4: First Aid Measures

Eye exposure	Flush eyes with of water for at least 10-15 minutes, get medical aid immediately.
Skin exposure	Wash the affected area with water. Remove contaminated clothes if necessary. Get medical aid.
Inhalation	Remove the victim from exposure to fresh air. Closely monitor the victim for signs of respiratory problems, such as difficulty in breathing, pain, etc. In such cases seek immediate medical assistance.
Ingestion	Do NOT induce vomiting without medical consultation. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Seek medical attention.

SECTION 5: Fire Fighting Measures

General information	If this material is involved in a fire, fire fighters should be equipped with a NIOSH approved positive pressure self-contained breathing apparatus and full protective clothing. Under reacting with water material may release flammable toxic gas. Flammable liquid and vapor.
Extinguishing media	Dry chemical, carbon dioxide, or chemical foam. DO NOT USE WATER!

SECTION 6: Accidental Release Measures

Spill and leak procedures	Small spills can be mixed with vermiculite or sodium carbonate or other inert material and swept up.
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SECTION 7: Handling and Storage	
Handling	Avoid breathing vapor or gas. Avoid contact with skin, eyes and clothing. Don't allow contact with water. Handling under inert atmosphere of nitrogen and in an efficient fume hood.
Storage	Store in a cool, dry place. Store in a tightly closed container under inert atmosphere of nitrogen. Don't allow contact with water.
SECTION 8: Exposure Controls and Personal Protection	
Eye protection	Always wear approved safety glasses when handling a chemical substance in the laboratory.
Skin protection	Wear protective gloves.
Ventilation	Handle the material only in an efficient fume hood.
Respirator	If ventilation is not available a respirator should be worn. The use of respirators requires Respirator Protection Program to be in compliance with 29CFR 1910.134.
SECTION 9: Physical and Chemical Properties	
Appearance	Red to violet liq.
Odor	Slight amine odor
Melting point	None
Boiling point	None
Flash point	No data
Solubility in water	React violently with water
Specific gravity	No data
Molecular formula	C16H40N4Nb
Molecular weight	381.42
SECTION 10: Stability and Reactivity	
Stability	Air and moisture sensitive liq.
Hazardous polymerization	No hazardous polymerization.
Conditions to avoid	Contact with water.
Incompatibilities with other materials	Strong oxygen agents, halogens, water.
Hazardous decomposition products	Carbon dioxide, carbon monoxide, nitrogen oxides, niobium oxide, organic fumes.
SECTION 11: Toxicological Information	
RTECS Data	No information available in the RTECS files.
Carcinogenic effects	No data available.
Mutagenic effects	No data available.
Tetragenic effects	No data available.
SECTION 12: Ecological Information	
Ecological information	No information available.

SECTION 13: Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

SECTION 14: Transport Information

Shipping name (CFR)	Organometallic substance, liquid, water-reactive, flammable*
Hazard class (CFR)	4.3
Additional hazard class (CFR)	3
Packing group (CFR)	II
UN ID number (CFR)	3399
Shipping name (IATA)	Organometallic substance, liquid, water-reactive, flammable*
Hazard class (IATA)	4.3
Additional hazard class (IATA)	3
Packing group (IATA)	II
UN ID number (IATA)	3399

SECTION 15: Regulatory Information

TSCA	Not listed in the TSCA inventory
SARA	Not reportable under SARA Title 313

SECTION 16: Other Information

Preparation date	21.05.12
Last revision date	21.05.12

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.