

Company: DALCHEM, MOSKOVSKOE SHOSSE, 85, Nizhny Novgorod, 603000, RUSSIA
TEL: + 7 (8312) 753-772, FAX: +7 (8312) 750-799

SECTION 1: Product Identification

| | |
|------------------------|--|
| Product name | (t-Butylimido)bis(diethylamino)(cyclopentadienyl)niobium |
| CAS # | NA |
| Catalog # | 0410400 |
| Chemical family | Cyclopentadienyl metal derivatives |

SECTION 2: Composition, Information on Ingredients

| Component | % | CAS # | EINECS # | Hazard Symbol | R-Phrase |
|--|----------|--------------|-----------------|----------------------|-----------------|
| (t-Butylimido)bis(diethylamino)(cyclopentadienyl)niobium | | NA | none | F | 10 20/21/22 |

SECTION 3: Hazard Identification

| | |
|-------------------------------|---|
| Emergency overview | Flammable liquid. Harmful by inhalation, if swallowed and if absorbed through the skin. |
| Eye contact | May cause severe irritation of the eyes. |
| Skin contact | May cause severe irritation of the skin. Harmful if absorbed through the skin. |
| Inhalation | May cause severe irritation of the respiratory tract. Harmful if inhaled. |
| Ingestion | Harmful if swallowed. Causes pain, vomiting, ringing in the ears. |
| Chronic health effects | No available information about long-term effects. |

SECTION 4: First Aid Measures

| | |
|----------------------|--|
| Eye exposure | Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately. |
| Skin exposure | Wash the affected area with water. Remove contaminated clothes if necessary. Seek medical assistance if irritation persists. |
| Inhalation | Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. In such cases seek immediate medical assistance. |
| Ingestion | Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Get medical aid immediately. |

SECTION 5: Fire Fighting Measures

| | |
|----------------------------|---|
| General information | Flammable liquid. As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. If involved in fire material may emit toxic and corrosive fumes. |
| Extinguishing media | Don't use water! Use dry chemical or carbon dioxide. |

SECTION 6: Accidental Release Measures

| | |
|----------------------------------|---|
| Spill and leak procedures | Small spills can be mixed with vermiculite or other suitable inert absorbents and placed in a suitable container. Ventilate area after material is removed. |
|----------------------------------|---|

| SECTION 7: Handling and Storage | |
|---|--|
| Handling | Avoid inhalation. Don't get in eyes, on skin or on clothing. Handle under an inert atmosphere of argon or nitrogen. |
| Storage | Store in a cool, dry place. Keep away from ignition sources and open flame. Avoid contact with water and heat. Store in a tightly closed container under an inert atmosphere. |
| 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 | Handling material in an efficient fume hood. Work with this substance in a well-ventilated area. |
| Respirator | Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary. |
| SECTION 9: Physical and Chemical Properties | |
| Appearance | Orange liq. |
| Odor | None |
| Melting point | No data |
| Boiling point | 130°C/0.1 mmHg |
| Flash point | No data |
| Solubility in water | No data |
| Specific gravity | 1.0 g/cm ³ |
| Molecular formula | C ₁₆ H ₃₂ N ₃ Nb |
| Molecular weight | 359.36 |
| SECTION 10: Stability and Reactivity | |
| Stability | Air and moisture sensitive. |
| Hazardous polymerization | No hazardous polymerization. |
| Conditions to avoid | Contact with air, moisture and ignition sources. |
| Incompatibilities with other materials | Strong oxidizing agents. |
| Hazardous decomposition products | Carbon monoxide, carbon dioxide, oxides of niobium. |
| SECTION 11: Toxicological Information | |
| RTECS Data | No data available. |
| Carcinogenic effects | No data available. |
| Mutagenic effects | No data available. |
| Tetratogenic 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) | Flammable liquid, N.O.S. |
| Hazard class (CFR) | 3 |
| Additional hazard class (CFR) | NA |
| Packing group (CFR) | III |
| UN ID number (CFR) | 1993 |
| Shipping name (IATA) | Flammable liquid, N.O.S. |
| Hazard class (IATA) | 3 |
| Additional hazard class (IATA) | NA |
| Packing group (IATA) | III |
| UN ID number (IATA) | 1993 |

SECTION 15: Regulatory Information

| | |
|-------------|----------------------------------|
| TSCA | Not listed in the TSCA inventory |
| SARA | Not reported |

SECTION 16: Other Information

| | |
|-------------------------|----------|
| Preparation date | 26.02.09 |
| Revision date | 26.02.09 |

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.