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**SECTION 1: Product Identification**

|                        |   |
|------------------------|---|
| <b>Product name</b>    | (t-Butylimido)tris(t-butoxy)tantalum, 98% |
| <b>CAS #</b>           | NA  |
| <b>Catalog #</b>       | 0731150                                   |
| <b>Chemical family</b> | Organic metal derivatives                 |

**SECTION 2: Composition, Information on Ingredients**

| <b>Component</b>                     | <b>%</b> | <b>CAS #</b> | <b>EINECS #</b> | <b>Hazard Symbol</b> | <b>R-Phrase</b> |
|--------------------------------------|----------|--------------|-----------------|----------------------|-----------------|
| (t-Butylimido)tris(t-butoxy)tantalum | 98       | NA           | none            | F Xn                 | 10 14 20/21/22  |

**SECTION 3: Hazard Identification**

|                               |  |
|-------------------------------|--|
| <b>Emergency overview</b>     | Flammable liquid. Reacts with water. Harmful by inhalation, if swallowed and if absorbed through the skin. |
| <b>Eye contact</b>            | May cause irritation of the eyes.  |
| <b>Skin contact</b>           | May cause irritation of the skin.  |
| <b>Inhalation</b>             | Harmful if inhaled. May cause severe irritation of the respiratory tract.                                  |
| <b>Ingestion</b>              | Harmful if swallowed.  |
| <b>Chronic health effects</b> | No available information about long-term effects.  |

**SECTION 4: First Aid Measures**

|                      |  |
|----------------------|--|
| <b>Eye exposure</b>  | Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.                                    |
| <b>Skin exposure</b> | Wash the affected area with water. Remove contaminated clothes if necessary. Seek medical assistance if irritation persists.   |
| <b>Inhalation</b>    | 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. |
| <b>Ingestion</b>     | Don't 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**

|                            |   |
|----------------------------|---|
| <b>General information</b> | 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 fumes. |
| <b>Extinguishing media</b> | Don't use water. Use dry chemical or carbon dioxide.  |

**SECTION 6: Accidental Release Measures**

|                                  |   |
|----------------------------------|---|
| <b>Spill and leak procedures</b> | 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                      |  |
|--|--|
| <b>Handling</b>                                      | Avoid inhalation. Don't get in eyes, on skin or on clothing. Handle under an inert atmosphere of argon or nitrogen. Keep away from water.                                      |
| <b>Storage</b>                                       | Store in a cool, dry place. Keep away from heat, sparks and open flame. Avoid contact with water. Store in a tightly closed container under an inert atmosphere.               |
| SECTION 8: Exposure Controls and Personal Protection |  |
| <b>Eye protection</b>                                | Always wear approved safety glasses when handling a chemical substance in the laboratory.  |
| <b>Skin protection</b>                               | Wear protective gloves.  |
| <b>Ventilation</b>                                   | Handling material in an efficient fume hood. Work with this substance in a well-ventilated area.   |
| <b>Respirator</b>                                    | 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          |  |
| <b>Appearance</b>                                    | Colourless liq.  |
| <b>Odor</b>  | No data  |
| <b>Melting point</b>                                 | No data  |
| <b>Boiling point</b>                                 | No data  |
| <b>Flash point</b>                                   | No data  |
| <b>Solubility in water</b>                           | Reacts with water  |
| <b>Specific gravity</b>                              | No data  |
| <b>Molecular formula</b>                             | C16H36NO3Ta  |
| <b>Molecular weight</b>                              | 471.41   |
| SECTION 10: Stability and Reactivity                 |  |
| <b>Stability</b>                                     | Air and moisture sensitive.  |
| <b>Hazardous polymerization</b>                      | No hazardous polymerization.   |
| <b>Conditions to avoid</b>                           | Avoid contact with moist air, water and ignition sources.  |
| <b>Incompatibilities with other materials</b>        | Strong oxidizing agents.   |
| <b>Hazardous decomposition products</b>              | Carbon monoxide, carbon dioxide, nitrogen oxides, tantalum oxides.   |
| SECTION 11: Toxicological Information                |  |
| <b>RTECS Data</b>                                    | No data available.   |
| <b>Carcinogenic effects</b>                          | No data available.   |
| <b>Mutagenic effects</b>                             | No data available.   |
| <b>Tetragenic effects</b>                            | No data available.   |
| SECTION 12: Ecological Information                   |  |
| <b>Ecological information</b>                        | No information available.  |
| SECTION 13: Disposal Considerations                  |  |

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

### SECTION 14: Transport Information

|                                       |  |
|---------------------------------------|--|
| <b>Shipping name (CFR)</b>            | Organometallic substance, liquid, water-reactive, flammable* |
| <b>Hazard class (CFR)</b>             | 4.3  |
| <b>Additional hazard class (CFR)</b>  | NA   |
| <b>Packing group (CFR)</b>            | II   |
| <b>UN ID number (CFR)</b>             | 3399   |
| <b>Shipping name (IATA)</b>           | Organometallic substance, liquid, water-reactive, flammable* |
| <b>Hazard class (IATA)</b>            | 4.3  |
| <b>Additional hazard class (IATA)</b> | NA   |
| <b>Packing group (IATA)</b>           | II   |
| <b>UN ID number (IATA)</b>            | 3399   |

### SECTION 15: Regulatory Information

|             |                                  |
|-------------|----------------------------------|
| <b>TSCA</b> | Not listed in the TSCA inventory |
| <b>SARA</b> | Not reported                     |

### SECTION 16: Other Information

|                         |          |
|-------------------------|----------|
| <b>Preparation date</b> | 02.09.09 |
| <b>Revision date</b>    | 02.09.09 |

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