



## Material Safety Data Sheet

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### SECTION 1: Product Identification

<b>Product name</b>	Tris(dimethylamino)cyclopentadienylzirconium, 98%
<b>CAS #</b>	Not available
<b>Catalog #</b>	0403110
<b>Chemical family</b>	Cyclopentadienyl metal amides

### SECTION 2: Composition, Information on Ingredients

Component	%	CAS #	EINECS #	Hazard Symbol	R-Phrase
Tris(dimethylamino)cyclopentadienylzirconium	98	Not available	none	F Xi	11 14 36/37/38

### SECTION 3: Hazard Identification

<b>Emergency overview</b>	Flammable. Reacts with water. Irritating to eyes, respiratory system and skin.
<b>Eye contact</b>	May cause burns of the eyes
<b>Skin contact</b>	May cause burns of the skin.
<b>Inhalation</b>	May cause severe irritation of the respiratory tract.
<b>Ingestion</b>	No information available about toxicological effect of the ingestion.
<b>Chronic health effects</b>	Not available.

### 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>	Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
<b>Inhalation</b>	Remove 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.
<b>Ingestion</b>	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

<b>General information</b>	Flammable liquid. 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. If involved in a fire this material may emit toxic organic fumes. Water reactive material.
<b>Extinguishing media</b>	Dry chemical, carbon dioxide, or chemical foam. Do not use water!

### SECTION 6: Accidental Release Measures

<b>Spill and leak procedures</b>	Small spills can be mixed with vermiculite or sodium carbonate or other inert material and swept up. Place in covered containers using non-sparking tools and transport outdoors. Do not expose spill to water. Ventilate area.
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SECTION 7: Handling and Storage	
<b>Handling</b>	Avoid breathing vapor. Avoid contact with skin and eyes. Do not allow contact with water. Use only in a chemical fume hood. Handle under inert gas.
<b>Storage</b>	Store in a cool, dry place. Store in a tightly closed container under inert atmosphere of nitrogen and argon. Keep away from the sources of ignition, heat and direct sunlight. Avoid contact with moisture and water.
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>	Always handle material in an efficient fume hood.
<b>Respirator</b>	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	
<b>Appearance</b>	Pale yellow liquid
<b>Odor</b>	None
<b>Melting point</b>	No data
<b>Boiling point</b>	85.3 °C (2.5 mbar)
<b>Flash point</b>	No data
<b>Solubility in water</b>	No data
<b>Density</b>	1.17
<b>Molecular formula</b>	C <sub>11</sub> H <sub>23</sub> N <sub>3</sub> Zr
<b>Molecular weight</b>	288.55
SECTION 10: Stability and Reactivity	
<b>Stability</b>	Air and moisture sensitive liquid.
<b>Hazardous polymerization</b>	No hazardous polymerization
<b>Conditions to avoid</b>	Contact with water, contact with ignition sources.
<b>Incompatibilities with other materials</b>	Water, air, oxidizing agents, heat.
<b>Hazardous decomposition products</b>	Carbon monoxide, carbon dioxide, zirconium oxide, nitrogen oxide, zirconium oxide, organic fumes.
SECTION 11: Toxicological Information	
<b>RTECS Data</b>	No information available in the RTECS files.
<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>	3
<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>	3
<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 reportable under SARA Title 313.
SECTION 16: Other Information	
<b>Preparation date</b>	06.04.07
<b>Last revision date</b>	19.03.08
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