



Material Safety Data Sheet

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	Tris(dimethylamino)cyclopentadienylzirconium, 98% (Hf<100 ppm)
CAS #	33271-88-4
Catalog #	0403115
Chemical family	Cyclopentadienyl metal amides

SECTION 2: Composition, Information on Ingredients

Component	%	CAS #	EINECS #	Hazard Symbol	R-Phrase
Tris(dimethylamino)cyclopentadienylzirconium	98	33271-88-4	none	Xi	36/37/38

SECTION 3: Hazard Identification

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

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	Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Inhalation	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.
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	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.
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. 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	
Handling	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.
Storage	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	
Eye protection	Always wear approved safety glasses when handling a chemical substance in the laboratory.
Skin protection	Wear protective gloves.
Ventilation	Always handle material 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	from pale yellow to yellow liq.
Odor	None
Melting point	No data
Boiling point	85.3 °C (2.5 mbar)
Flash point	No data
Solubility in water	No data
Density	1.17
Molecular formula	C ₁₁ H ₂₃ N ₃ Zr
Molecular weight	288.55
SECTION 10: Stability and Reactivity	
Stability	Air and moisture sensitive liquid.
Hazardous polymerization	No hazardous polymerization
Conditions to avoid	Contact with water, contact with ignition sources.
Incompatibilities with other materials	Water, air, oxidizing agents, heat.
Hazardous decomposition products	Carbon monoxide, carbon dioxide, zirconium oxide, nitrogen oxide, zirconium 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*
Hazard class (CFR)	4.3
Additional hazard class (CFR)	NA
Packing group (CFR)	II
UN ID number (CFR)	3398
Shipping name (IATA)	Organometallic substance, liquid, water-reactive*
Hazard class (IATA)	4.3
Additional hazard class (IATA)	NA
Packing group (IATA)	II
UN ID number (IATA)	3398
SECTION 15: Regulatory Information	
TSCA	Not listed in the TSCA inventory.
SARA	Not reportable under SARA Title 313.
SECTION 16: Other Information	
Preparation date	06.04.07
Last revision date	03.02.11
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