



Material Safety Data Sheet

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SECTION 1: Product Identification

Product name	Tetrakis(dimethylamino)zirconium, 99% (Hf<50 ppm)
CAS #	19756-04-8
Catalog #	0400970
Chemical family	Metal amide complex

SECTION 2: Composition, Information on Ingredients

Component	%	CAS #	EINECS #	Hazard Symbol	R-Phrase
Tetrakis(dimethylamino)-zirconium	99	19756-04-8	none	F C	11 15 34

SECTION 3: Hazard Identification

Emergency overview	Highly flammable. Causes burns. Reacts violently with water.
Eye contact	Causes burns to the eyes.
Skin contact	Causes burns to the skin.
Inhalation	Causes burns to the nose mucous membranes and respiratory tract.
Ingestion	May be harmful if swallowed. No information is available on the physiological effects of ingestion.
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 wash out mouth with 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. Flammable solid. Water Reactive. Material will react with water and may release a flammable and/or toxic gas. If involved in a fire this material may emit toxic organic fumes.
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. Remove all sources of ignition. Use a spark-proof tool. Do not expose spill to water.
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SECTION 7: Handling and Storage	
Handling	Avoid breathing dust. Avoid contact with skin and eyes. Do not allow contact with water. Use only in a chemical fume hood under inert atmosphere of argon or nitrogen.
Storage	Store in a cool, dry place. Store in a tightly closed container. Keep away from sources of ignition, heat, sparks, and open flame. Store protected from moisture.
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	Material may form a fine dust. Use in a chemical 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	Light yellow pwdr.
Odor	Slight amine odor
Melting point	57-60 °C
Flash point	No data
Solubility in water	Reacts with water
Specific gravity	No data
Molecular formula	C ₈ H ₂₄ N ₄ Zr
Molecular weight	267.53
SECTION 10: Stability and Reactivity	
Stability	Air and moisture sensitive solid.
Hazardous polymerization	No hazardous polymerization.
Conditions to avoid	Contact with water.
Incompatibilities with other materials	Strong oxygen agents, halogens, water, mineral acids.
Hazardous decomposition products	Carbon dioxide, carbon monoxide, nitrogen oxides, 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, solid, water-reactive, flammable*
Hazard class (CFR)	4.3
Additional hazard class (CFR)	4.1
Packing group (CFR)	II
UN ID number (CFR)	3396
Shipping name (IATA)	Organometallic substance, solid, water-reactive, flammable*
Hazard class (IATA)	4.3
Additional hazard class (IATA)	4.1
Packing group (IATA)	II
UN ID number (IATA)	3396
SECTION 15: Regulatory Information	
TSCA	Not listed in the TSCA inventory
SARA	Not reportable under SARA Title 313.
SECTION 16: Other Information	
Preparation date	18.03.10
Last revision date	18.03.10
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