EREZTECH LLC
11555 Medlock Bridge Road, Suite 100, Johns Creek, GA 30097, USA
T: +1.888.658.1221 F: 1.678.619.2020
E: info@ereztech.com W: https://ereztech.com

SAFETY DATA SHEET

Section 1. Identification

Product Name: Cyclopentadienyltris(dimethylamino)zirconium(IV)
Product Type: Liquid
CAS Number: 33271-88-4
Product Number: ZR1884
Recommended Use: Laboratory chemicals, synthesis of substances.
Uses Advised Against: This product is being supplied under the TSCA R&D Exemption (40 CFR Section 720.36). It is the recipient's responsibility to comply with the requirements of the R&D exemption. The product may not be used for a non-exempt commercial purpose under TSCA unless appropriate consent is granted in writing by Ereztech LLC.
Product Manufacturer: Ereztech LLC
11555 Medlock Bridge Road, Suite 100
Johns Creek, GA 30097
Product Information: (888) 658-1221
In Case of an Emergency: CHEMTREC: 1-800-424-9300 (USA);
+1 703-527-3887 (International); CCN836180
*** Contact manufacturer for all non-emergency calls.

Section 2. Hazards Identification

Appearance/Odor: Colorless to yellow liquid, odor not determined.
Classification: FLAMMABLE LIQUIDS – Category 3, H226
SUBSTANCES AND MIXTURES WHICH, IN CONTACT WITH WATER, EMIT FLAMMABLE GASES – Category 2, H261
ACUTE TOXICITY, ORAL – Category 4, H302
ACUTE TOXICITY, DERMAL – Category 4, H312
SKIN CORROSION/IRRITATION – Category 1B, H314
SKIN SENSITIZATION – Category 1, H317
SERIOUS EYE DAMAGE/EYE IRRITATION – Category 1, H318
ACUTE TOXICITY, INHALATION – Category 4, H332
RESPIRATORY SENSITIZATION – Category 1, H334

Section 2. Hazards Identification

GHS Label Elements

Hazard Pictograms:

Signal Word: DANGER

Hazard Statements:

H226: Flammable liquid and vapor.
H261: In contact with water releases flammable gas.
H302: Harmful if swallowed.
H312: Harmful in contact with skin.
H314: Causes severe skin burns and eye damage.
H317: May cause an allergic skin reaction.
H318: Causes serious eye damage.
H332: Harmful if inhaled.
H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Precautionary Statements

Prevention:

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P223: Do not allow contact with water.
P231 + P232: Handle and store contents under inert gas. Protect from moisture.
P233: Keep container tightly closed.
P240: Ground and bond container and receiving equipment.
P241: Use explosion-proof electrical/ventilating/lighting/handling equipment.
P242: Use non-sparking tools.
P243: Take action to prevent static discharges.
P260: Do not breathe sprays, mists, vapors and gases.
P264 + P265: Wash hands and exposed skin thoroughly after handling. Do not touch eyes.
P270: Do not eat, drink or smoke when using this product.
P271: Use only outdoors or with adequate ventilation.
P272: Contaminated work clothing should not be allowed out of the workplace.
P280: Wear protective gloves/protective clothing/eye protection/ face protection/hearing protection.
P284: In case of inadequate ventilation wear respiratory protection.

Response:

P301 + P317: IF SWALLOWED: Get medical help.

Section 2. Hazards Identification

Response (cont.):

P301 + P330 + P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P302 + P335 + P334: IF ON SKIN: Brush off loose particles from skin and immerse in cool water.
P302 + P361 + P354: IF ON SKIN: Take off immediately all contaminated clothing. Immediately rinse with water for several minutes.
P303 + P361 + P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water.
P304 + P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305 + P354 + P338: IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P316: Get emergency medical help immediately.
P330: Rinse mouth.
P333 + P317: If skin irritation or rash occurs: Get medical help.
P342 + P316: If experiencing respiratory symptoms: Get emergency medical help immediately.
P362 + P364: Take off contaminated clothing and wash it before reuse.
P363: Wash contaminated clothing before reuse.
P370 + P378: In case of fire: Use dry chemical or carbon dioxide (CO_2) to extinguish. DO NOT USE WATER OR FOAM.

Storage:

P402 + P404: Store in a dry place. Store in a closed container.
P403 + P235: Store in a well ventilated place. Keep cool.
P405: Store locked up.

Disposal:

P501: Dispose of contents/container in accordance with federal, state and local regulations.

OSHA/HCS Status:

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Hazards Not Otherwise Classified (HNOC):

None identified.

Section 3. Composition/Information on Ingredients

Substance Type: Mono-constituent.

Synonyms: Tris(dimethylamino)cyclopentadienyl Zirconium; Zirconium, (η5-2,4-cyclopentadien-1-yl)tris(N-methylmethanaminato)-; CpZr(NMe2)3.

Molecular Formula: $C_{11}H_{23}N_3Zr$

Molecular Weight: 288.54 g/mol.

EC-No. : 680-407-3

Section 3. Composition/Information on Ingredients

Component Name	%	CAS Number
Cyclopentadienyltris(dimethylamino)zirconium(IV)	≥ 98	33271-88-4

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First Aid Measures

Description of Necessary First Aid Measures

General Advice: Move out of dangerous area. Get emergency medical help immediately. Show this safety data sheet to the doctor in attendance. If unconscious, place in recovery position and get medical help immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Eye Contact: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Rinse for a minimum of 15 minutes. Check for and remove any contact lenses after initial rinse period and continue rinsing for an additional 15 minutes. Keep eyes wide open during rinsing process. Get emergency medical help immediately.

Skin Contact: Remove all contaminated clothing and shoes. Wash off contaminated skin with plenty of water for a minimum of 15 minutes. Do not allow contaminated clothing out of the workplace. Destroy/discard contaminated shoes. In the event of complaints or symptoms, avoid further exposure. Get emergency medical help immediately.

Inhalation: Remove person to fresh air and keep comfortable for breathing. Rescuer should wear a mask or self-contained breathing apparatus if it is suspected that fumes are still present. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Do not use the mouth-to-mouth method of resuscitation if victim ingested or inhaled the product; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Get emergency medical help immediately.

Ingestion: Rinse mouth, and then give water to drink (two glasses at most). Do NOT induce vomiting. Remove dentures if present. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If person is not breathing, if breathing is irregular or if respiratory arrest occurs, see the “Inhalation” first aid measures noted above. Get emergency medical help immediately.

Section 4. First Aid Measures

Most Important Symptoms/Effects, Acute and Delayed Potential Acute Health Effects

Eye Contact: Product causes serious eye damage. Symptoms may include watering, redness, pain, swelling of the eyelids, inability to keep eye open, blurred vison and temporary/permanent loss of vision.

Skin Contact: Skin contact with this product may cause an allergic skin reaction (allergic dermatitis) and may also be expected to result in chemical burns. Symptoms may include a burning or itching sensation, reddening of skin, rash, swelling, pain, blistering and tissue necrosis.

Inhalation: Product is extremely corrosive to mucous membranes and tissues of the upper respiratory tract. Symptoms may include a burning sensation, coughing, coughing up blood (hemoptysis), wheezing, laryngitis, allergy/asthma-like symptoms (shortness of breath/ difficulty in breathing (dyspnea)), blueness (cyanosis) of lips and skin, nausea, headaches, disorientation, general weakness and loss of consciousness.

Ingestion: Ingestion may be expected to result in burns of the mouth and throat and potential perforation of the esophagus and stomach. Symptoms may include pain when swallowing (odynophagia), difficulty swallowing (dysphagia), fever, nausea, recurrent vomiting (emesis) and vomiting of blood (hematemesis). Severe burns which may be accompanied by perforation of the esophagus and stomach may present additional symptoms of abdominal pain/rigidity, chest and/or back pain.

Indication of Immediate Medical Attention and Special Treatment Needed, If Necessary

Notes to Physician: Treat symptomatically.

Specific Treatments: No specific treatment.

Protection of First Responders: No action taken shall be taken involving any personal risk without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See Toxicological Information (Section 11)

Section 5. Fire Fighting Measures

General Hazards: Product reacts with water to release flammable gases which, at elevated temperatures, may ignite spontaneously.

Suitable Extinguishing Media: THE MOST EFFECTIVE FIRE EXTINGUISHING AGENT IS DRY CHEMICAL POWDER PRESSURIZED WITH NITROGEN. Carbon dioxide (CO_2) may also be used.

Unsuitable Extinguishing Media: DO NOT USE WATER OR FOAM.

Unusual Fire and Explosion Hazards: Product reacts with water to release flammable gases which may form explosive mixtures with air.

Section 5. Fire Fighting Measures

Unusual Fire and Explosion Hazards (cont.):

In case of fire, reignition of the product may occur after the fire has been extinguished. Product runoff to sewer may create a fire or explosion hazard. Vapors and gases produced are heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to an ignition source and flashback.

Product of Combustion:

Decomposition products include carbon oxides (CO_X), nitrogen oxides (NO_X) and zirconium oxides. Irritating fumes and organic acid vapors may be generated during exposure to elevated temperatures or open flame.

Protection of Firefighters:

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Prevent contact with skin or eyes. Prevent the formation and inhalation of sprays, mists, vapors and gases.

Eliminate all local and distant ignition sources. Move containers from fire area if process can be accomplished without risk to firefighters. To reduce the possibility of explosion, use a water spray or fog to reduce direct vapors and to cool unopened containers. Do not apply water directly to product. Do not cut, grind, drill or weld on or near product containers (even empty) of this product because an explosion may result.

Fire-fighters should wear appropriate protection equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in a positive pressure mode.

Section 6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures

For Non-Emergency Personnel:

No action shall be taken involving any personal risk or without suitable training. Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Take action to prevent static discharges. Beware of vapors accumulating in low areas to form explosive concentrations. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment. Prevent contact with skin, eyes or clothing. Prevent the formation and inhalation of sprays, mists, vapors and gases. Provide adequate ventilation or wear respiratory protection.

Section 6. Accidental Release Measures

For Emergency Responders: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For Non-Emergency Personnel".

Environmental Precautions: Prevent spilled material and firefighting runoff from entering the surrounding environment (soil contact, entry into drains, sewers and waterways). Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods for Containment

General: Eliminate all local and distant ignition sources. Stop leakage and move containers from spill area if safe to do so. Prevent the formation and inhalation of sprays, mists, vapors and gases. Do not allow the spilled material to get wet or use water to clean up spillages or residues. Use spark-proof tools and explosion-proof equipment. In the event of combustion: use extinguishing materials/methods noted above or cover spillage with a dry, extinguishing material (e.g. dry sand, dry chemical, graphite powder) and allow time for decomposition or for fire to burn out (see Section 5 Firefighting Measures). Collect and place inert spillage in a dry, sealed container for disposal. Dispose of collected spillage in accordance with federal, state and local regulations. Contaminated absorbent material may pose the same hazard as the spilled product.

Small Spill: Collect spillage with a dry, non-combustible, absorbent material (e.g. dry sand, vermiculite or diatomaceous earth) and place in dry, sealed container for disposal.

Large Spill: Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with a dry, non-combustible, absorbent material (e.g. dry sand, vermiculite or diatomaceous earth) and place in dry, sealed container for disposal.

Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and Storage

Precautions: Product reacts with moisture in the air and water to release flammable gases; handle under a dry, inert gas. Nitrogen with less than 5 ppm each of moisture and oxygen is recommended. Keep away from all sources of ignition – NO SMOKING.

Section 7. Handling and Storage

Precautions (cont.): Prevent the formation and inhalation of sprays, mists, vapors and gases. Prevent contact with skin, eyes and clothing. Do not ingest. Avoid prolonged exposure. Keep container tightly sealed. Ensure adequate ventilation or wear respiratory protection.

Protective Measures: Put on appropriate personal protective equipment (see Section 8). Keep in the original container kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

General Occupational Hygiene: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Safe Storage Conditions: Product reacts with moisture in the air and water to release flammable gases; store under an inert gas. Nitrogen with less than 5 ppm each of moisture and oxygen and a temperature range of 2 – 8 °C is recommended. Keep away from all sources of ignition – NO SMOKING. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials and food and drink. Keep container tightly closed and sealed until ready for use. Store locked up.

Section 8. Exposure Controls/Personal Protection

Introductory Remarks: These recommendations provide general guidance for handling this product. Because work environments and material handling practices vary, safety procedures should be developed for each intended application. While developing safe handling procedures, do not overlook the need to clean equipment and conduct regular repairs. Waste from these procedures should be handled in accordance with Section 13.

Occupational Exposure Limits: Product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region-specific regulatory bodies.

Engineering Controls: Properly operating explosion-proof, chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute. Provide an eyewash/shower station.

Section 8. Exposure Controls/Personal Protection

Environmental Exposure Controls: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual Protection Measures

Hygiene Measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Remove all soiled and contaminated clothing immediately. Do not inhale sprays, mists, vapors or gases. Prevent contact with eyes and skin. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/Face Protection: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to sprays and mists. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles, faceshield (8-inch minimum). Refer to 29 CFR 1910.133, ANSI Z87.1, or European Standard EN166.

Skin Protection

Hand Protection: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: Chemical-resistant gloves.

Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. For full contact, wear Neoprene or nitrile rubber gloves.

Section 8. Exposure Controls/Personal Protection

Other Skin Protection: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity discharges, wear anti-static, flame retardant protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Respiratory Protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Section 9. Physical and Chemical Properties

Physical State:	Liquid.
Color:	Clear to yellow.
Odor:	No data available.
Odor Threshold:	No data available.
pH:	No data available.
Melting Point:	No data available.
Boiling Point:	No data available.
Flash Point:	No data available.
Flammability (solid/gas):	Not applicable.
Autoignition Temperature:	No data available.
Density:	No data available.
Vapor Pressure:	No data available.
Water Solubility:	Product reacts with water to release flammable gases.
Evaporation Rate:	No data available.
Viscosity:	No data available.

Section 10. Stability and Reactivity

Reactivity: Product reacts with water, moisture in the air and protic solvents to release flammable gases.

Section 10. Stability and Reactivity

Chemical Stability: This product is stable when stored under a dry, inert atmosphere and away from heat. Nitrogen containing less than 5 ppm each moisture and air and a temperature range of 2 – 8 °C is recommended.

Conditions to Avoid: Exposure to air/water/moisture, sources of ignition (heat, flames, sparks, electrostatic discharges), extremes of temperature and direct sunlight.

Incompatible Materials: Strong oxidizing agents.

Hazardous Decomposition Products: Hazardous decomposition products formed under fire conditions: carbon oxides (CO_X), nitrogen oxides (NO_X) and zirconium oxides. Irritating fumes and organic acid vapors may be generated during exposure to elevated temperatures or open flame. In the event of a fire: see Section 5.

Possibility of Hazardous Reactions: Under normal conditions of storage and use noted above, hazardous reactions will not occur. Hazardous reactions or instability may occur under certain conditions of storage or use.

Section 11. Toxicological Information

Information on Toxicological Effects

Acute Toxicity: No specific data available.

Irritation/Corrosion: No specific data available. Product causes severe skin burns and severe eye damage.

Sensitization: Product may cause an allergic skin reaction.

Germ Cell Mutagenicity: No specific data available.

Carcinogenicity

Component	CAS No	ACGIH	IARC	NTP	OSHA
Cyclopentadienyltris-(dimethylamino)zirconium(IV)	33271-88-4	Not listed	Not listed	Not listed	Not listed

Reproductive Toxicity: No specific data available.

Teratogenicity: No specific data available.

Specific Target Organ Toxicity: (Single Exposure) No specific data available.

Specific Target Organ Toxicity: (Repeated Exposure) No specific data available.

Aspiration Hazard: No specific data available.

Section 11. Toxicological Information

Information on the Likely Routes of Exposure: Common routes of exposure: inhalation, dermal (failure to use skin protection), eye (failure to use safety eyewear). Less common: ingestion (failure to employ recommended hygiene measures (e.g. smoking or eating after handling product without washing hands or using hand protection).

Additional Information: To the best of our knowledge, the chemical, physical and toxicological properties of this product have not been thoroughly investigated.

Section 12. Ecological Information

Ecotoxicity: Product may cause long-term adverse effects in the aquatic environment.

Numerical Measures of Toxicity: No specific data available.

Persistence and Degradability

Biodegradability: No specific data available.

Bioaccumulative Potential: No specific data available.

Mobility in Soil: No specific data available.

Results of PBT and vPvB Assessment: PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

Endocrine Disrupting Properties: No specific data available.

Other Adverse Effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Section 13. Disposal Considerations

Waste Treatment Methods

Product: Dispose of in accordance with local, state, and federal regulations. Refer to 40 CFR 260-299 for complete waste disposal regulations. Consult your local, state, or federal agency before disposing of any chemicals.

Contaminated Packaging: Empty containers retain product residue (liquid and/or vapors/gases) and can be dangerous. Dispose of as unused product. DO NOT EXPOSE OPENED/EMPTY CONTAINERS TO HEAT, FLAME, SPARKS, STATIC DISCHARGES, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

Section 14. Transport Information

	DOT	IMDG	IATA
UN Number	UN3399	UN3399	UN3399
UN Proper Shipping Name	Organometallic substance, liquid, water-reactive, flammable, n.o.s. (Cyclopentadienyltris (dimethylamino) zirconium(IV))	ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE, FLAMMABLE, N.O.S. (Cyclopentadienyltris (dimethylamino) zirconium(IV))	Organometallic substance, liquid, water-reactive, flammable, n.o.s. (Cyclopentadienyltris (dimethylamino) zirconium(IV))
Transport Hazard Classes	4.3 (3)	4.3 (3)	4.3 (3)
Packing Group	II	II	II
Environmental Hazards	-	-	-
Additional Information	-	EMS-No: F-G, S-N	IATA Passenger: Not permitted for transport.

Special Precautions for User: Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15. Regulatory Information

Toxic Substance Control Act (TSCA)

This product is not listed on the U.S. Toxic Substances Control Act Chemical Inventory (TSCA Inventory). Use of this product is restricted to research and development only. This product must be used under the supervision of a technically qualified individual as defined by the TSCA. This product must not be used for commercial purposes or in formulations for commercial purposes.

This product as supplied is not subject to the TSCA Significant New Use Rule.

This product as supplied is not subject to TSCA 12(b) export notification requirements.

SARA 302 Components

This product does not contain any components which are subject to the reporting requirements of SARA Title III, Section 302 EHS TPQ.

SARA 304 Components

This product does not contain any components which are subject to the reporting requirements of SARA Title III, Section 304 RQ.

SARA 311/312 Hazards

Fire Hazard (Flammable liquid; In contact with water releases flammable gas), Acute Health Hazard (Acute toxicity (Oral, Dermal, Inhalation); Skin corrosion or irritation; Serious eye damage or eye irritation; Respiratory or skin sensitization).

Section 15. Regulatory Information

SARA 313 Components
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Water Act
Not applicable.

Clean Air Act
Not applicable.

CERCLA Reportable Quantity
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US Department of Homeland Security (DHS)
This product does not contain any DHS chemicals.

US Department of Transportation (DOT)

Component	Reportable Quantity	DOT Marine Pollutant	DOT Severe Marine Pollutant
Cyclopentadienyltris-(dimethylamino)zirconium(IV)	No	No	No

US State Right-to-Know Listings

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Cyclopentadienyltris-(dimethylamino)zirconium(IV)	-	-	-	-	-

"X" – Listed.

US State Chemicals of High Concern Listings

Component	Maine	Vermont	Washington
Cyclopentadienyltris-(dimethylamino)zirconium(IV)	-	-	-

"X" – Listed.

California Proposition 65 Components
This product does not contain any Proposition 65 chemicals.

Section 16. Other Information

National Fire Protection Association (U.S.A.)

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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

HMIS Rating

HEALTH	3
FLAMMABILITY	3
PHYSICAL HAZARD	2

History

Date of Issue/Date of Revision: 12/8/2025.

Date of Previous Issue: None.

References: None available.

Abbreviations and Acronyms

ACGIH	:	American Conference of Governmental Industrial Hygienists.
AIHA	:	American Industrial Hygiene Association.
ATE	:	Acute Toxicity Estimate (per Chapter 3.1 of GHS 10 standard).
BEI	:	Biological Exposure Indices (ACGIH).
CAS	:	Chemical Abstracts Service (division of the American Chemical Society).
CHRIS	:	Chemical Hazards Response Information System (US DOT).
CLP	:	Classification, Labeling and Packaging (European Union (EU)).
DOT	:	US Department of Transportation.
EC-No.	:	The EC Inventory (EINECS, ELINCS and the NLP-list is the source of the seven digit EC number, an identifier of substances commercially available with the EU (European Union).

EINECS : European Inventory of Existing Commercial Chemical Substances.

Section 16. Other Information

Abbreviations and Acronyms (cont.)

EHS	:	Extremely Hazardous Substance.
ELINCS	:	European List of Notified Chemical Substances.
GHS	:	Globally Harmonized System of Classification and Labeling of Chemicals.
HAP	:	Hazardous Air Pollutants (Clean Air Act).
HMIS	:	Hazardous Materials Identification System.
HNOC	:	Hazards Not Otherwise Classified.
IARC	:	International Agency for Research on Cancer.
IATA	:	International Air Transport Association.
IATA-DGR	:	Dangerous Goods Regulations by the "International Air Transport Association" (IATA).
IDLH	:	Immediately Dangerous to Life or Health (US National Institute for Occupation Health and Safety (NIOSH)).
IMDG	:	International Maritime Code for Dangerous Goods.
IP	:	Intraperitoneal.
IV	:	Intravenous.
NFPA	:	National Fire Protection Association.
NIOSH	:	National Institute of Occupational Safety and Health.
NSRL	:	No Significant Risk Levels.
NTP	:	National Toxicology Program.
ODS	:	Ozone Depleting Substances (US Clean Air Act).
OECD	:	Organization for Economic Co-Operation and Development.
OEL	:	Occupational Exposure Limit.
OSHA	:	Occupational Safety and Health Administration.
PBT	:	Persistent Bioaccumulative and Toxic.
PEL	:	Permissible Exposure Limits.
REL	:	Recommended Exposure Limits.
RQ	:	Reportable Quantity.
SARA	:	Superfund Amendments and Reauthorization Act.
STEL (ST)	:	Short Term Exposure Limit (ACGIH/NIOSH)
STOT	:	Specific Target Organ Toxicity.
TLV	:	Threshold Limit Values (ACGIH).
TPQ	:	Threshold Planning Quantity.
TWA	:	Time Weighted Average.
VOC	:	Volatile Organic Compound.
vPvB	:	Very Persistent and Very Bioaccumulative.
WEEL	:	Workplace Environmental Exposure Level (AIHA).

Disclaimer

The information herein is believed to be accurate and is presented in good faith; however, no warranties or representations are made by Ereztech LLC regarding the accuracy or completeness of the information. Ereztech LLC shall not be liable for any damages resulting from the handling, or from the contact with the above product.

Section 16. Other Information

Disclaimer (cont.)

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.