

# SAFETY DATA SHEET

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## SECTION 1. IDENTIFICATION

**Product Identifier:** (4N) 99.99% Zirconium(IV) Trifluoroacetylacetonate

**Product Code:** ZR-FACA3-04

**CAS Number:** 17499-68-2

**Relevant identified uses of the substance:** Scientific research and development

Supplier details:

American Elements  
10884 Weyburn Ave.  
Los Angeles, CA 90024  
Tel: +1 310-208-0551  
Fax: +1 310-208-0351  
Emergency telephone number:  
+1 800-424-9300

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## SECTION 2. HAZARDS IDENTIFICATION

OSHA Haz Com: CFR 1910.1200: Not classifiable

Signal word: None

Hazard Statement(s): None

Pictogram(s) or Symbol(s): None

Precautionary Statement(s): None

Supplementary Information: While this material is not classified as hazardous under OSHA, this SDS contains valuable information

critical to safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

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## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Mixture: Substance

Components: Tetrakis(trifluoro-2,4-pentanedionato)zirconium(IV)

Percent: >98.0%(T)

CAS Number: 17499-68-2

Molecular Weight: 703.54

Chemical Formula: C<sub>20</sub>H<sub>16</sub>F<sub>12</sub>O<sub>8</sub>Zr

Synonyms: Trifluoroacetylacetonato Zirconium(IV) Salt , Zirconium(IV) Trifluoroacetylacetonate

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## SECTION 4. FIRST AID MEASURES

Inhalation: Move victim to fresh air. Call emergency medical service. Give artificial respiration if victim is not breathing.

Administer oxygen if breathing is difficult. Keep victim warm and quiet. Treat symptomatically and supportively. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

Skin contact: Remove and isolate contaminated clothing and shoes. In case of contact with substance, immediately

flush skin with running water for at least 20 minutes. Treat symptomatically and supportively. Ensure that

medical personnel are aware of the material(s) involved and take precautions to protect themselves.

### FIRST-AID MEASURES

Eye contact: Move victim to fresh air. Check for and remove any contact lenses. In case of contact with substance,

immediately flush eyes with running water for at least 20 minutes. Keep victim warm and quiet. Treat symptomatically and supportively. Effects of exposure to substance may be delayed. Ensure that medical

personnel are aware of the material(s) involved and take precautions to protect themselves.

Ingestion: If a person vomits place them in the recovery position so that vomit will not reenter the mouth and throat.

Rinse mouth. Keep victim warm and quiet. Loosen tight clothing such as a collar, tie, belt or waistband. If

swallowed, seek medical advice immediately and show the container or label. Treat symptomatically and

supportively. Ensure that medical personnel are aware of the material(s) involved and take precautions to

protect themselves. Effects of exposure (ingestion) to substance may be delayed.

Symptoms/effects:

Acute: No data available

Delayed: No data available

Immediate medical attention: If breathing has stopped, perform artificial respiration. Use first aid treatment according to the nature of the

injury. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

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## SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media: Dry chemical, CO<sub>2</sub>, water spray, or alcohol-resistant foam. Consult with local fire authorities before

attempting large scale fire fighting operations.

Specific hazards arising from the chemical

Hazardous combustion products: These products include: Carbon oxides Halogenated compounds  
Metallic oxides

Other specific hazards: WARNING: Highly toxic HF gas is produced during combustion.

Special precautions for fire-fighters:

Not available

Special protective equipment for fire-fighters:

Structural fire fighters' protective clothing provides limited protection in fire situations ONLY; it may not

be effective in spill situations

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## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions: Do not touch damaged containers or spilled material unless wearing appropriate protective clothing  
(Section 8).

Personal protective equipment: Wear protective clothing, gloves and eye protection.

Emergency procedures: In case of a spill and/or a leak, always shut off any sources of ignition, ventilate the area, and exercise caution.

Methods and materials for containment and cleaning up:

Dike far ahead of liquid spill for later disposal.

Environmental precautions:

Prevent entry into sewers, basements or confined areas.

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## **SECTION 7. HANDLING AND STORAGE**

Precautions for safe handling: Provide appropriate exhaust ventilation at places where dust is formed.

Normal measures for preventive

fire protection. Follow safe industrial hygiene practices and always wear proper protective equipment when

handling this compound.

Conditions for safe storage: Keep container tightly closed in a dry and well-ventilated place.

Storage incompatibilities: Store away from oxidizing agents

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## **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Exposure limits: No data available

Appropriate engineering controls:

Good general ventilation should be sufficient to control airborne levels. Eyewash fountains should be provided in areas where there is any possibility that

workers could be exposed to the substance. Follow safe industrial engineering/laboratory practices when handling any chemical.

Personal protective equipment

Respiratory protection: Dust respirator. Be sure to use a MSHA/NIOSH approved respirator or equivalent.

Hand protection: Wear protective gloves.

Eye protection: Safety glasses.

Skin and body protection: Lab coat.

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## **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Physical state (20°C): Solid

Form: Crystal - Powder

Color: White - Slightly pale yellow

Odor: No data available

Odor threshold: No data available

Melting point/freezing point: 130°C (266°F)  
Boiling point/range: No data available  
Decomposition temperature: No data available  
Relative density: No data available  
Kinematic Viscosity: No data available  
Partition coefficient: No data available  
n-octanol/water (log Pow)  
Flash point: No data available  
Flammability (solid, gas): No data available

pH: No data available  
Vapor pressure: No data available  
Vapor density: No data available  
Dynamic Viscosity: No data available  
Evaporation rate: No data available  
(Butyl Acetate = 1)  
Autoignition temperature: No data available  
Flammability or explosive limits: No data available  
Lower: No data available  
Upper: No data available

Solubility(ies):  
Water: Insoluble  
Slightly soluble: Acetylacetone

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## SECTION 10. STABILITY AND REACTIVITY

Reactivity: Not Available.  
Chemical Stability: Stable under recommended storage conditions. (See Section 7)  
Possibility of Hazardous Reactions: No hazardous reactivity has been reported.  
Conditions to avoid: Avoid excessive heat and light.  
Incompatible materials: Oxidizing agents  
Hazardous Decomposition Products: No data available

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## SECTION 11. TOXICOLOGICAL INFORMATION

Acute Toxicity:  
No data available  
Skin corrosion/irritation:  
No data available  
Serious eye damage/irritation:  
No data available  
Respiratory or skin sensitization:  
No data available  
Germ cell mutagenicity:  
No data available  
Carcinogenicity:  
No data available  
IARC: No data available NTP: No data available OSHA: No data available  
Reproductive toxicity:  
No data available  
Routes of Exposure: Inhalation, Eye contact, Ingestion.

Symptoms related to exposure:

No specific information is available in our data base regarding the toxic effects of this material for humans. However, exposure to any chemical should be kept to a minimum. Always follow safe industrial hygiene practices and wear proper protective equipment when handling this compound.

Potential Health Effects:

No specific information available; skin and eye contact may result in irritation. May be harmful if inhaled or ingested.

Target organ(s): No data available

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## **SECTION 12. ECOLOGICAL INFORMATION**

Ecotoxicity

Fish: No data available

Crustacea: No data available

Algae: No data available

Persistence and degradability: No data available

Bioaccumulative potential (BCF): No data available

Mobility in soil: No data available

Partition coefficient:

n-octanol/water (log Pow)

No data available

Soil adsorption (Koc): No data available

Henry's Law:

constant (PaM<sup>3</sup>/mol)

No data available

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## **SECTION 13. DISPOSAL CONSIDERATIONS**

Disposal of product: Recycle to process if possible. It is the generator's responsibility to comply with Federal, State and Local

rules and regulations. You may be able to dissolve or mix material with a combustible solvent and burn in a

chemical incinerator equipped with an afterburner and scrubber system. This section is intended to provide

assistance but does not replace these laws, nor does compliance in accordance with this section ensure

regulatory compliance according to the law. US EPA guidelines for Identification and Listing of Hazardous

Waste are listed in 40 CFR Parts 261.

Disposal of container: Dispose of as unused product.

Other considerations: Observe all federal, state and local regulations when disposing of the substance.

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## **SECTION 14. TRANSPORT INFORMATION**

DOT (US) Non-hazardous for transportation.

IATA Non-hazardous for transportation.

IMDG Non-hazardous for transportation.

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## SECTION 15. REGULATORY INFORMATION

Toxic Substance Control Act (TSCA 8b.):

This product is NOT on the EPA Toxic Substances Control Act (TSCA) inventory. The following notices are required by 40 CFR 720.36 (C) for those products not on the inventory list:

(i) These products are supplied solely for use in research and development by or under the supervision of a technically qualified individual as defined in 40 CFR 720.0 et sec.

(ii) The health risks of these products have not been fully determined. Any information that is or becomes available will be supplied on a SDS sheet.

US Federal Regulations

CERCLA Hazardous substance and Reportable Quantity:

SARA 313: Not Listed

SARA 302: Not Listed

State Regulations

State Right-to-Know

Massachusetts Not Listed

New Jersey Not Listed

Pennsylvania Not Listed

California Proposition 65: Not Listed

Other Information

NFPA Rating:

Health: 0

Flammability: 0

Instability: 0

HMIS Classification:

Health: 0

Flammability: 0

Physical: 0

International Inventories

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## 16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. American Elements shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. COPYRIGHT 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.