

[Bis\(cyclopentadienyl\)zirconium\(IV\)  
Dichloride](#)

[Pricing >](#)

Linear Formula	(C <sub>5</sub> H <sub>5</sub> ) <sub>2</sub> ZrCl <sub>2</sub>
Pubchem CID	10891641
MDL Number	MFCD00003726
EC No.	215-066-8
IUPAC Name	cyclopentane; dichlorozirconium
Beilstein/Reaxys No.	N/A
SMILES	[CH]1[CH][CH][CH][CH]1.[CH]1[CH][CH][CH][CH]1.Cl[Zr]Cl
InchI Identifier	InChI=1S/2C5H5.2ClH.Zr/c2*1-2-4-5-3-1;;;/h2*1-5H;2*1H;/q;;;+2/p-2
InchI Key	QRUYYSPOGSGZGQ-UHFFFAOYSA-L

Signal Word	Warning
Hazard Statements	H315-H319-H335
Hazard Codes	Xi
Risk Codes	36/37/38
Safety Statements	26-36
RTECS Number	ZH7525000
Transport Information	N/A
WGK Germany	3

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## SAFETY DATA SHEET

Date Accessed: 05/05/2024

Date Revised: 01/15/2022

### SECTION 1. IDENTIFICATION

**Product Identifiers:** All applicable American Elements product codes for CAS #1291-32-3

**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:

## SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

STOT SE 3 H335 May cause respiratory irritation.

GHS label elements

The substance is classified and labeled according to the Globally Harmonized System (GHS).



Hazard pictograms

GHS07

Signal word Warning

Hazard-determining components of labeling:

Zirconocene dichloride

Hazard statements

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

Precautionary statements

P231 Handle under inert gas.

P222 Do not allow contact with air.

P262 Do not get in eyes, on skin, or on clothing.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present

and easy to do. Continue rinsing.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Classification system:

NFPA ratings (scale 0 - 4)

1

0

0

Health = 1

Fire = 0

Reactivity = 0

HMIS-ratings (scale 0 - 4)

HEALTH

FIRE

REACTIVITY

1

0

0  
Health = 1  
Fire = 0  
Reactivity = 0  
Other hazards  
Results of PBT and vPvB assessment  
PBT: N/A  
vPvB: N/A

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### **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substances  
CAS # / Substance Name  
1291-32-3 Zirconocene dichloride  
Identification number(s)  
EC number: 215-066-8

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### **SECTION 4. FIRST AID MEASURES**

Description of first aid measures  
If inhaled: In case of unconsciousness place patient stably in side position for transportation.  
In case of skin contact: Immediately wash with soap and water; rinse thoroughly.  
In case of eye contact:  
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.  
If swallowed: If symptoms persist consult doctor.  
Information for doctor:  
Most important symptoms and effects, both acute and delayed:  
No data available  
Indication of any immediate medical attention and special treatment needed  
No data available

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### **SECTION 5. FIREFIGHTING MEASURES**

Extinguishing media  
Suitable extinguishing agents:  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.  
Special hazards arising from the substance or mixture  
No data available  
Advice for firefighters  
Protective equipment: No special measures required.

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

Personal precautions, protective equipment and emergency procedures Not required.

Environmental precautions: No special measures required.

Methods and materials for containment and cleanup: Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

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

Handling:

Precautions for safe handling No special precautions are necessary if used correctly.

Information about protection against explosions and fires: No special measures required.

Conditions for safe storage, including any incompatibilities:

Requirements to be met by storerooms and

receptacles: No special requirements.

Information about storage in one common storage facility: Not required.

Further information about storage conditions:

Keep receptacle tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

Specific end use(s) No data available

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

Additional information about design of technical systems: No further data; see item 7.

Control parameters

Components with limit values that require monitoring at the workplace:

1291-32-3 Zirconocene dichloride

PEL Long-term value: 5 mg/m<sup>3</sup>  
as Zr

REL Short-term value: 10 mg/m<sup>3</sup>

Long-term value: 5 mg/m<sup>3</sup>  
as Zr

TLV Short-term value: 10 mg/m<sup>3</sup>

Long-term value: 5 mg/m<sup>3</sup>  
as Zr

Additional information: The lists that were valid during the creation were used as basis.

Exposure controls

Personal protective equipment:

General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Breathing equipment:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use

respiratory protective device that is independent of circulating air.

Protection of hands:

SProtective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:

RTightly sealed goggles

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## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance:

Form: Powder

Color: Whitish

Odor: Odorless

Odor threshold: No data available.  
pH: N/A  
Melting point/Melting range: No data available.  
Boiling point/Boiling range: No data available.  
Flash point: N/A  
Flammability (solid, gas): Product is not flammable.  
Ignition temperature:  
Decomposition temperature: No data available.  
Autoignition: No data available.  
Danger of explosion: Product does not present an explosion hazard.  
Explosion limits:  
Lower: No data available.  
Upper: No data available.  
Vapor pressure: no data hPa  
Density: No data available.  
Relative density No data available.  
Vapor density N/A  
Evaporation rate N/A  
Solubility in / Miscibility with  
Water: Insoluble.  
Partition coefficient (n-octanol/water): No data available.  
Viscosity:  
Dynamic: N/A  
Kinematic: N/A  
Solvent content:  
Organic solvents: 0.0 %  
VOC content: 0.0 g/l / 0.00 lb/gl  
Solids content: 100.0 %  
Other information No data available

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## **SECTION 10. STABILITY AND REACTIVITY**

Reactivity No data available  
Chemical stability  
Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.  
Possibility of hazardous reactions No dangerous reactions known.  
Conditions to avoid No data available  
Incompatible materials: No data available  
Hazardous decomposition products: No dangerous decomposition products known.

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## **SECTION 11. TOXICOLOGICAL INFORMATION**

Information on toxicological effects  
Acute toxicity:  
Primary irritant effect:

on the skin: Irritant to skin and mucous membranes.  
on the eye: Irritating effect.  
Sensitization: No sensitizing effects known.  
Additional toxicological information:  
Carcinogenic categories  
IARC (International Agency for Research on Cancer)  
Substance is not listed.  
NTP (National Toxicology Program)  
Substance is not listed.  
OSHA-Ca (Occupational Safety & Health  
Administration)  
Substance is not listed.

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## **SECTION 12. ECOLOGICAL INFORMATION**

Toxicity  
Aquatic toxicity: No data available  
Persistence and degradability No data available  
Behavior in environmental systems:  
Bioaccumulative potential No data available  
Mobility in soil No data available  
Additional ecological information: Not known to be  
hazardous to water.  
Results of PBT and vPvB assessment  
PBT: N/A  
vPvB: N/A  
Other adverse effects No data available

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## **SECTION 13. DISPOSAL CONSIDERATIONS**

Waste treatment methods  
Recommendation:  
Must not be disposed of together with household  
garbage. Do not allow product to enter drains, sewage  
systems, or other water courses system.  
Uncleaned packagings:  
Recommendation: Disposal must be made according  
to official regulations.

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## **SECTION 14. TRANSPORT INFORMATION**

UN-Number  
DOT, ADN, IMDG, IATA not regulated  
UN proper shipping name  
DOT, ADN, IMDG, IATA not regulated  
Transport hazard class(es)  
DOT, ADN, IMDG, IATA  
Class not regulated  
Packing group

DOT, IMDG, IATA not regulated  
Environmental hazards:  
Marine pollutant: No  
Special precautions for user N/A  
Transport in bulk according to Annex II of  
MARPOL73/78 and the IBC Code N/A  
UN "Model Regulation": not regulated

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## **SECTION 15. REGULATORY INFORMATION**

Safety, health and environmental regulations/legislation specific for the substance or mixture  
Sara  
Section 355 (extremely hazardous substances):  
Substance is not listed.  
Section 313 (Specific toxic chemical listings):  
Substance is not listed.  
TSCA (Toxic Substances Control Act):  
Substance is listed.  
Proposition 65  
Chemicals known to cause cancer:  
Substance is not listed.  
Chemicals known to cause reproductive toxicity for females:  
Substance is not listed.  
Chemicals known to cause reproductive toxicity for males:  
Substance is not listed.  
Chemicals known to cause developmental toxicity:  
Substance is not listed.  
Carcinogenic categories  
EPA (Environmental Protection Agency)  
Substance is not listed.  
TLV (Threshold Limit Value established by ACGIH)  
Substance is not listed.  
NIOSH-Ca (National Institute for Occupational Safety and Health)  
Substance is not listed.  
GHS label elements  
The substance is classified and labeled according to the Globally Harmonized System (GHS).  
Hazard pictograms  
GHS07  
Signal word Warning  
Hazard-determining components of labeling:  
Zirconocene dichloride  
Hazard statements  
H315 Causes skin irritation.  
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P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P403+P233 Store in a well-ventilated place. Keep container tightly closed.  
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.  
Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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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.

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