



Material Safety Data Sheet

Bis(cyclopentadienyl)zirconium chloride hydride

MSDS# 92796

Section 1 - Chemical Product and Company Identification

MSDS Name: Bis(cyclopentadienyl)zirconium chloride hydride

Catalog Numbers: AC207890000, AC207890010, AC207890050

Synonyms: Schwartz's reagent; Zirconocene chloride hydride.

Company Identification: Acros Organics BVBA
Janssen Pharmaceuticaaan 3a
2440 Geel, Belgium

Company Identification: (USA) Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

For information in the US, call: 800-ACROS-01

For information in Europe, call: +32 14 57 52 11

Emergency Number, Europe: +32 14 57 52 99

Emergency Number US: 201-796-7100

CHEMTREC Phone Number, US: 800-424-9300

CHEMTREC Phone Number, Europe: 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#: 37342-97-5
Chemical Name: Bis(cyclopentadienyl)zirconium chloride hydride
%: 95
EINECS#: 253-479-5

Hazard Symbols:



Risk Phrases:

F C



11 15 34

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Danger! Highly flammable. Causes burns by all exposure routes. Contact with water liberates extremely flammable gases.

Target Organs: Respiratory system, gastrointestinal system, eyes, skin.

Potential Health Effects

Eye: Causes eye burns.

Skin: Causes skin burns.

Ingestion: Causes gastrointestinal tract burns.

Inhalation: Causes chemical burns to the respiratory tract.

Chronic: No information found.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin: Get medical aid. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion: Get medical aid immediately. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

Inhalation: Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Get medical aid. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Will burn if involved in a fire. Water reactive. Reacts with water to form explosive hydrogen gas. Flammable solid. Dangerous fire hazard in the form of dust when exposed to heat or flame.

Extinguishing Media: Use foam, dry chemical, or carbon dioxide. **DO NOT USE WATER!**

Autoignition Temperature: Not available

Flash Point: Not available

Explosion Limits: Lower: Not available

Explosion Limits: Upper: Not available

NFPA Rating: ; Special Hazard: -W-

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Avoid generating dusty conditions. Remove all sources of ignition. Use a spark-proof tool. Do not expose spill to water. Do not let this chemical enter the environment.

Section 7 - Handling and Storage

Handling: Do not allow water to get into the container because of violent reaction. Minimize dust generation and accumulation. Use spark-proof tools and explosion proof equipment. Do not breathe dust, mist, or vapor. Do not get in eyes, on skin, or on clothing. Do not ingest or inhale. Use and store under nitrogen. Use only in a chemical fume hood.

Storage: Keep away from sources of ignition. Do not store in direct sunlight. Store in a tightly closed container. Keep under a nitrogen blanket. Flammables-area. Keep refrigerated. (Store below 4°C/39°F.)

Section 8 - Exposure Controls, Personal Protection

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Bis(cyclopentadienyl)zirconium chloride hydride	5 mg/m3 TWA (as Zr) (listed under Zirconium compounds, n.o.s.).10 mg/m3 STEL (as Zr) (listed under Zirconium compounds, n.o.s.).	5 mg/m3 TWA (as Zr, except Zirconium tetrachloride) (listed under Zirconium compounds, n.o.s.).50 mg/m3 IDLH (as Zr, except Zirconium tetrachloride) (listed under Zirconium compounds,	5 mg/m3 TWA (as Zr) (listed under Zirconium compounds, n.o.s.).

OSHA Vacated PELs: Bis(cyclopentadienyl)zirconium chloride hydride: 5 mg/m³ TWA (as Zr) (listed under Zirconium compounds, n.o.s.)

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local explosion-proof ventilation to keep airborne levels to acceptable levels.

Exposure Limits

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State: Powder

Color: white to beige

Odor: Not available

pH: Not available

Vapor Pressure: Not available

Vapor Density: Not available

Evaporation Rate: Not available

Viscosity: Not available

Boiling Point: Not available

Freezing/Melting Point: > 300 deg C (> 572.00°F)

Decomposition Temperature: Not available

Solubility in water: reacts with water

Specific Gravity/Density:

Molecular Formula: C₁₀H₁₁ClZr

Molecular Weight: 257.86

Section 10 - Stability and Reactivity

Chemical Stability: Air sensitive. Moisture sensitive. Light sensitive. Water contact produces hydrogen gas.

Conditions to Avoid: Incompatible materials, light, ignition sources, dust generation, exposure to air, exposure to moist air or water.

Incompatibilities with Other Materials: Oxidizing agents, acids, bases, acid chlorides, alcohols, halogens, moisture, air.

Hazardous Decomposition Products: Hydrogen chloride, carbon monoxide, carbon dioxide.

Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#: CAS# 37342-97-5: None listed

LD50/LC50: RTECS: Not available.

Carcinogenicity: Bis(cyclopentadienyl)zirconium chloride hydride - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Other: No information found.

Section 12 - Ecological Information

Other: Do not empty into drains.

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

Shipping Name: WATER-REACTIVE SOLID, Corrosive, N.O.S.
Hazard Class: 4.3
UN Number: UN3131
Packing Group: II
Canada TDG
Shipping Name: Not available
Hazard Class:
UN Number:
Packing Group:

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: F C

Risk Phrases:

R 11 Highly flammable.

R 15 Contact with water liberates extremely flammable gases.

R 34 Causes burns.

Safety Phrases:

S 8 Keep container dry.

S 16 Keep away from sources of ignition - No smoking.

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

WGK (Water Danger/Protection)

CAS# 37342-97-5: Not available

Canada

Canadian WHMIS Classifications: B6, B3, E

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

CAS# 37342-97-5 is not listed on Canada's Ingredient Disclosure List.

US Federal

TSCA

CAS# 37342-97-5 is not listed on the TSCA Inventory. It is for research and development use only.

Section 16 - Other Information

MSDS Creation Date: 4/05/1997

Revision #13 Date 7/20/2009

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.
