

Material Safety Data Sheet

Version 3.0
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1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Diethylzinc solution

Product Number : 296112
Brand : Aldrich

Company : Sigma-Aldrich Canada, Ltd
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CANADA

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2. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Zincdiethyl

Formula : $C_4H_{10}Zn$

CAS-No.	EC-No.	Index-No.	Concentration
Diethylzinc			
557-20-0	209-161-3	030-004-00-8	17 %
n-Hexane			
110-54-3	203-777-6	601-037-00-0	83 %

3. HAZARDS IDENTIFICATION**Emergency Overview****Target Organs**

Peripheral nervous system., Kidney, Testes.

WHMIS Classification

B2 Flammable liquid
B6
E

Flammable liquid
Water Reactive
Corrosive

HMIS Classification

Health hazard: 3
Chronic Health Hazard: *
Flammability: 3
Physical hazards: 2

Potential Health Effects

Inhalation	May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. Vapours may cause drowsiness and dizziness.
Skin	May be harmful if absorbed through skin. Causes skin burns.
Eyes	Causes eye burns.
Ingestion	Aspiration hazard if swallowed - can enter lungs and cause damage. May be harmful if swallowed. Causes burns.

4. FIRST AID MEASURES

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician.

In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Continue rinsing eyes during transport to hospital. Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES

Flammable properties

Flash point -23 °C (-9 °F) - closed cup

Ignition temperature no data available

Suitable extinguishing media

Carbon dioxide (CO₂) Dry powder

Extinguishing media which shall not be used for safety reasons

Water

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods for cleaning up

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Do not flush with water.

7. HANDLING AND STORAGE

Handling

Avoid inhalation of vapour or mist.

Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

Storage

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in cool place.

Never allow product to get in contact with water during storage.

Air sensitive.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Update	Basis
n-Hexane	110-54-3	TWA	20 ppm	2006-11-29	Canada. British Columbia OEL
Remarks	Contributes significantly to the overall exposure by the skin route.				
		TWAE V	50 ppm 176 mg/m3	2005-12-17	Canada. Ontario OELs
		TWA	50 ppm 176 mg/m3	2007-01-01	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
	Substance may be readily absorbed through intact skin				
		TWAE V	50 ppm 176 mg/m3	2006-12-29	Canada. Quebec OELs
	Skin (percutaneous)				

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose 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).

Hand protection

Handle with gloves.

Eye protection

Tightly fitting safety goggles. Faceshield (8-inch minimum).

Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form liquid

Safety data

pH	no data available
Melting point	no data available
Boiling point	no data available
Flash point	-23 °C (-9 °F) - closed cup
Ignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Density	0.726 g/cm ³
Water solubility	no data available

10. STABILITY AND REACTIVITY

Storage stability

Stable under recommended storage conditions.

Conditions to avoid

Heat, flames and sparks. Exposure to moisture.

Materials to avoid

Oxidizing agents, Strong oxidizing agents, Reacts violently with water.

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Zinc/zinc oxides

Hazardous reactions

Vapours may form explosive mixture with air.
Reacts violently with water.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

no data available

Irritation and corrosion

no data available

Sensitisation

no data available

Chronic exposure

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Signs and Symptoms of Exposure

Warning: contains n-hexane (CAS#110-54-3) a suspected neurotoxin., Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache

Potential Health Effects

Inhalation	May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. Vapours may cause drowsiness and dizziness.
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Eyes	Causes eye burns.
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Target Organs	Peripheral nervous system., Kidney, Testes.,

12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)

no data available

Ecotoxicity effects

no data available

Further information on ecology

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

13. DISPOSAL CONSIDERATIONS

Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)

UN-Number: 3399 Class: 4.3 (3) Packing group: I
Proper shipping name: Organometallic substance, liquid, water-reactive, flammable (n-Hexane, Diethylzinc)
Reportable Quantity (RQ): 6024 lbs
Marine pollutant: No
Poison Inhalation Hazard: No

IMDG

UN-Number: 3399 Class: 4.3 (3) Packing group: I EMS-No: F-G, S-N
Proper shipping name: ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE, FLAMMABLE (Diethylzinc, n-Hexane)
Marine pollutant: No

IATA

UN-Number: 3399 Class: 4.3 (3) Packing group: I
Proper shipping name: Organometallic substance, liquid, water-reactive, flammable (Diethylzinc, n-Hexane)
IATA Passenger: Not permitted for transport

15. REGULATORY INFORMATION

DSL Status

This product contains the following components listed on the Canadian NDSL list. All other components are on the Canadian DSL list.

Diethylzinc

CAS-No.
557-20-0

WHMIS Classification

B2 Flammable liquid

Flammable liquid

B6

Water Reactive

E

Corrosive

16. OTHER INFORMATION

Further information

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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. Sigma-Aldrich Co., 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.