

Material Safety Data Sheet

Diethylzinc, 15 wt.% solution in hexane

ACC# 46190

Section 1 - Chemical Product and Company Identification

MSDS Name: Diethylzinc, 15 wt.% solution in hexane

Catalog Numbers: AC205510000, AC205510150, AC205511000, AC205511001, AC205518000

Synonyms: Zinc ethide in hexane.

Company Identification:

Acros Organics N.V.

One Reagent Lane

Fair Lawn, NJ 07410

For information in North America, call: 800-ACROS-01

For emergencies in the US, call CHEMTREC: 800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
110-54-3	Hexane	85	203-777-6
557-20-0	Diethylzinc	15	209-161-3

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: colorless clear liquid. Flash Point: -40 deg C.

Danger! Causes eye and skin burns. Causes digestive and respiratory tract burns. Extremely flammable liquid and vapor. Vapor may cause flash fire. Reacts violently with water. Pyrophoric. Spontaneously flammable in air. Harmful if inhaled.

Target Organs: Nervous system.

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: None

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.

Skin: Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Destroy contaminated shoes.

Ingestion: 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.

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. Extremely flammable liquid and vapor. May re-ignite after fire is extinguished. Containers may explode when heated or if contaminated with water.

Extinguishing Media: Do NOT get water inside containers. Most foams will react with the material and release corrosive/toxic gases. Cool containers with flooding quantities of water until well after fire is out. DO NOT USE WATER OR FOAM. For small fires, use dry chemical, soda ash, lime or sand.

Flash Point: -40 deg C (-40.00 deg F)

Autoignition Temperature: Not available.

Explosion Limits, Lower:N/A

Upper: N/A

NFPA Rating: (estimated) Health: 1; Flammability: 4; Instability: 0

Section 6 - Accidental Release Measures

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

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Clean up spills immediately, observing precautions in the Protective Equipment section. Use a spark-proof tool. Do not get water on spilled substances or inside containers.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Avoid ingestion and inhalation. Do not allow contact with water. Avoid mechanical shock and friction. Discard contaminated shoes. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

Storage: Keep away from sources of ignition. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from water. Flammables-area. Keep containers tightly closed.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Hexane	50 ppm TWA; Skin - potential significant contribution to overall exposure by the cutaneous route	50 ppm TWA; 180 mg/m ³ TWA 1100 ppm IDLH	500 ppm TWA; 1800 mg/m ³ TWA
Diethylzinc	none listed	none listed	none listed

OSHA Vacated PELs: Hexane: 50 ppm TWA; 180 mg/m³ TWA Diethylzinc: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear safety glasses and chemical goggles if splashing is possible.

Skin: Wear appropriate protective gloves and clothing to prevent skin exposure.

Clothing: Wear appropriate protective clothing to minimize contact with skin.

Respirators: Wear a NIOSH/MSHA or European Standard EN 149 approved full-facepiece airline respirator in the positive pressure mode with emergency escape provisions.

Section 9 - Physical and Chemical Properties

Physical State: Clear liquid

Appearance: colorless

Odor: garlic-like odor

pH: Not available.

Vapor Pressure: 20 hPa @ 20.0 C(DZ)

Vapor Density: Not available.

Evaporation Rate: Not available.

Viscosity: .682 cP@20C(DZ)

Boiling Point: 117 deg C @ 760.00mm Hg(DZ)

Freezing/Melting Point: -28 deg C

Decomposition Temperature: Not available.

Solubility: reacts violently with water(DZ)

Specific Gravity/Density: .7260g/cm³(DZ)

Molecular Formula: C₄H₁₀Zn

Molecular Weight: 123.50(DZ)

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Incompatible materials, strong oxidants, exposure to moist air or water.

Incompatibilities with Other Materials: Water, oxidizing agents, acids, bases, alcohols, hydrazine, oxygen, chlorine.

Hazardous Decomposition Products: Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.

Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#:

CAS# 110-54-3: MN9275000

CAS# 557-20-0 unlisted.

LD50/LC50:

CAS# 110-54-3:

Draize test, rabbit, eye: 10 mg Mild;

Inhalation, mouse: LC50 = 150000 mg/m³/2H;

Inhalation, rat: LC50 = 48000 ppm/4H;

Inhalation, rat: LC50 = 627000 mg/m³/3M;

Oral, rat: LD50 = 25 gm/kg;

CAS# 557-20-0:

Carcinogenicity:

CAS# 110-54-3: Not listed by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 557-20-0: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information found
Teratogenicity: No information found
Reproductive Effects: No information found
Mutagenicity: No information found
Neurotoxicity: No information found
Other Studies:

Section 12 - Ecological Information

Ecotoxicity: No data available. Cas# 110-54-3:LC50(96Hr.) Rainbow Trout = 4.14 mg/L; Flow-through BioassayLC50(96Hr.)Fathead Minnow=5.10 mg/LLC50(96Hr.)Bluegill = 4.12 mg/LLC50 (48Hr.) Water Flea = 3.87 mg/L
Environmental: Photolysis or hydrolysis of n-hexane are not expected to be important in soils. The biodegradation of n-hexane may occur in soils; however, volatilization and adsorption are expected to be far more important fate processes. A calculated Koc range for n-hexane of 1250 to 4100 indicates a low to slight soil mobility class. Based upon an estimated Henry's Law constant of 1.81 atm-cu m/mole, n-hexane is expected to rapidly volatilize from moist surface soils.
Physical: Photolysis or hydrolysis of n-hexane in aquatic systems are not expected to be important. The log biodegradation of n-hexane may occur in aquatic environments; however, volatilization and adsorption are expected to be far more important fate processes.
Other: No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.
RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	DIETHYLZINC	No information available.
Hazard Class:	4.2	
UN Number:	UN1366	
Packing Group:	I	

Section 15 - Regulatory Information

US FEDERAL

TSCA
CAS# 110-54-3 is listed on the TSCA inventory.
CAS# 557-20-0 is listed on the TSCA inventory.

Health & Safety Reporting List
None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules
None of the chemicals in this product are under a Chemical Test Rule.

Section 12b
None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule
None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs
CAS# 110-54-3: 5000 lb final RQ; 2270 kg final RQ

SARA Section 302 Extremely Hazardous Substances
None of the chemicals in this product have a TPQ.

SARA Codes
CAS # 110-54-3: immediate, delayed, fire.

Section 313
This material contains Hexane (CAS# 110-54-3, 85%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.
This material contains Diethylzinc (listed as Zinc compounds), 15%, (CAS# 557-20-0) which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

Clean Air Act:
CAS# 110-54-3 is listed as a hazardous air pollutant (HAP).

This material does not contain any Class 1 Ozone depleters.
This material does not contain any Class 2 Ozone depleters.

Clean Water Act:
None of the chemicals in this product are listed as Hazardous Substances under the CWA.
None of the chemicals in this product are listed as Priority Pollutants under the CWA. CAS# 557-20-0 is listed as a Toxic Pollutant under the Clean Water Act.

OSHA:
CAS# 557-20-0 is considered highly hazardous by OSHA.

STATE

CAS# 110-54-3 can be found on the following state right to know lists: New Jersey, Pennsylvania, Minnesota, Massachusetts.
CAS# 557-20-0 can be found on the following state right to know lists: California, (listed as Zinc compounds), New Jersey, Pennsylvania, Massachusetts.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

XN F C

Risk Phrases:

- R 11 Highly flammable.
- R 14 Reacts violently with water.
- R 17 Spontaneously flammable in air.
- R 34 Causes burns.
- R 48/20 Harmful : danger of serious damage to health by prolonged exposure through inhalation.

Safety Phrases:

- S 16 Keep away from sources of ignition - No smoking.
- S 24/25 Avoid contact with skin and eyes.
- S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
- S 9 Keep container in a well-ventilated place.
- S 43A In case of fire, use dry chemical (never use water).

WGK (Water Danger/Protection)

- CAS# 110-54-3: 1
- CAS# 557-20-0: No information available.

Canada - DSL/NDSL

- CAS# 110-54-3 is listed on Canada's DSL List.
- CAS# 557-20-0 is listed on Canada's NDSL List.

Canada - WHMIS

This product has a WHMIS classification of B2, 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.

Canadian Ingredient Disclosure List

- CAS# 110-54-3 is listed on the Canadian Ingredient Disclosure List.
- CAS# 557-20-0 is not listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 6/03/1999

Revision #4 Date: 10/05/2004

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 Fisher 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 Fisher has been advised of the possibility of such damages.