

TIER I CHEMICALS:

AN EXAMPLE

1. LIST

2. LABORATORY SAFETY PLAN

3. SPECIFIC RISK ASSESSMENT WORKSHEETS

4. TRAINING RECORD

5. MSDS

LIST & REQUIREMENTS

Georgia Tech Tier I chemicals listed below are identified as highly hazardous and/or reactive chemicals. The list of dangerous gases can be found in the GT's dangerous gas safety manual (<http://ehs.gatech.edu/chemical/dangerousGasSafetyProgram.pdf>)

To safely handle Tier I chemicals, GT requires that each laboratory prepared (i) tailored laboratory safety plan, (ii) chemical-specific risk assessment worksheet with MSDS. The chemicals listed below require.

Tier I List			
Chemical	CAS #	Chemical	CAS #
<u>Pyrophoric Solids and Liquids</u>		<u>Self-Heating Substances</u>	
Barium Alloys	7440-39-3	aluminum borohydride	16962-07-5
bis(dimethylphosphino)methane	64065-08-3	Carbon, activate	7440-44-0
Calcium dithionite	15512-36-4	Celluliod, scarp	8050-88-2
Cyclopentylmagnesium bromide	33240-34-5	Hafnium powder, dry	7440-58-6
Dichlorosilane	4109-96-0	Magnesium Diamide	7803-54-5
Diethylaluminum chloride	96-10-6	Maneb	12427-38-2
Diethylboron methoxide	7397-46-8	Pentaborane	19624-22-7
Digermane	13818-89-8	p-Nitrosodimethylaniline	138-89-6
Dimethylzinc	544-97-8	Potassium hydrosulphite	14293-73-3
Disilane*	1590-87-0	Potassium Sulphide	1312-73-8
Germane	7782-65-2	Sodium Dithionite	7775-14-6
Methylithium	917-54-4	Sodium Hydrosulphide	16721-80-5
n-Butyllithium	109-72-8	Sodium Sulphide	1313-82-2
Phenyllithium	591-51-5	tert-Butyl hypochlorite	507-40-4
Phosphine*	7803-51-2	Titanium Disulphide	12039-13-3
rubidium	7440-17-7	Titanium Powder, Dry	7440-32-6
sec-Butyllithium	598-30-1	Xanthates	151-01-9
Silane	7803-62-5	Zinc Powder	7440-66-6
sodium methylate	124-41-4	Zirconium powder, Dry	7440-67-7
tert-Butyllithium	594-19-4		
Titanium trichloride	7705-07-9		
Tributylphosphine	998-40-3		
Triethylaluminum	97-93-8		
Triethylborane	97-94-9		
Triisobutylaluminum	100-99-2		
Trimethylaluminum	75-24-1		
Tri-n-butylborane	122-56-5		
white or yellow phosphorus	7723-14-0		

Laboratory Safety Plan

This Laboratory Safety Plan is specific to lab 2183 in MS&E _____.

Contact Information:

Primary Contact:	Pamela Pollet
Phone day/night:	404-385-4484
Department:	Chemistry and Biochemistry

Inventory: The following **extremely hazardous materials** are used and/or stored in this lab:

Name	CAS	Hazard
Diethyl Zinc	557-20-0	HEALTH=3 ; FIRE = 4 ; REACTIVITY = 3 H225 Highly flammable liquid and vapour. H250 Catches fire spontaneously if exposed to air. H260 In contact with water releases flammable gases which may ignite spontaneously. H314 Causes severe skin burns and eye damage. H400 Very toxic to aquatic life.

Material Safety Data Sheets: are attached to this document but can also be found on www.chematix.gatech.edu and www.hazard.com

PERSONAL PROTECTIVE EQUIPMENT

- Safety glasses
- Lab coat
- Close shoes and long pants (or over pants)
- Gloves when handling chemicals

LABORATORY GENERAL OPERATING PROCEDURES

Before starting an experiment:

- A written procedure with a hazard assessment must be approved in writing by the PI supervising the research.
- The persons carrying out the experiment must have received training in the safe use of the equipment and facilities.
- All people must wear appropriate personal protective equipment. As a minimum this consists of: safety glasses, a lab coat and any gloves identified in the specific procedure.
- The approved procedure, hazard assessment and copies of the MSDS for materials that are being used must be printed and posted outside the laboratory.

When experiments are conducted:

- Two people must be present in the labs.
- If a reaction is left unattended:
 - An “Unattended Experiment” form must be completed and posted outside the laboratory.
 - A “Reaction in Progress” form should be posted on the hood and outside the laboratory.

At the end of an experiment:

- Clean the laboratory bench and hood space that you have used.
- Lab inspection check list must be completed

EMERGENCY PROCEDURES

Contacts:

Name	Phone Numbers Day/Night
Pollet Pamela	404-385-4484
Mark Smith	404-XXX-XXXX
Vic Summey	404-894-5155

In case of HOOD FAILURE DURING AN EXPERIMENT

- Turn off all heating equipment within the hood
- Close the hood
- Evacuate the lab and inform emergency contacts
 - Pamela Pollet: 404-385-4484
 - Building Manager: 404-894-5155

In case of POWER FAILURE DURING AN EXPERIMENT

- Turn off all heating equipment within the hood
- Close the hood
- Evacuate the lab and inform emergency contacts:
 - Pamela Pollet: 404-385-4484
 - Vic Summer (Building Manager): 404-894-5155

In case of leak or alarm:

- LEAVE the laboratory while SHOUTING “EVACUATE” to lab-mates
- Call EH&S (404-216-5237)
- Wait outside lab for emergency response to come in order to provide information

If leak/alarm involves H₂ gas:

- Pull fire alarm to initiate building evacuation
- Call Police/EH&S (404-894-2500)—communicate meeting point

In case of a FIRE:

- Pull the fire alarm on your way out of the building
- Call 404-894-2500 and let them know what is happening

If chemical exposure occurred:

- Remove the victim to fresh air & call GT Police (404-894-2500)

- Have them remove all contaminated clothing and shower in an emergency shower for 15 minutes & call GT Police (404-894-2500)
- Have them rinse their eyes in an eyewash for 15 minutes & call GT Police (404-894-2500)

When calling GT Police, provide the following information:

- I am on the Georgia Tech Campus
- The Street Address of this Building is **Molecular Science and Engineering (building 167), 901 Atlantic Dr**
- My room number is **2381**
- Describe the nature of the emergency: e.g. *Spill with human exposure, Electrocution, Large spill without human exposure, seizure etc..*
- Tell them if you think you will need an ambulance
- If the chemical is known, print out 4 copies of the MSDS, one for the Victim, one for First Responders, One for Ambulance Crew, One for the police/EHS
- Give this sheet and one MSDS to the ambulance crew
- Do not transport the victim yourself
- EH&S Recommends that all chemical exposure cases go to Grady Hospital

If no chemical exposure occurred:

- Go to the group assembly point: the campus directory panel by the Parking Deck.

LABORATORY LAYOUT

Legend:

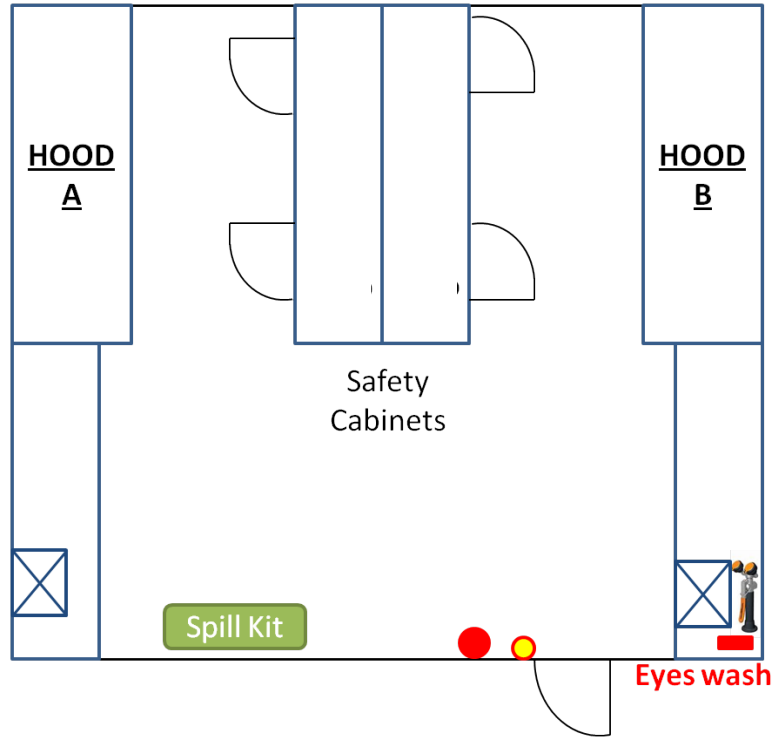
Spill Kit



Emergency Shutdown



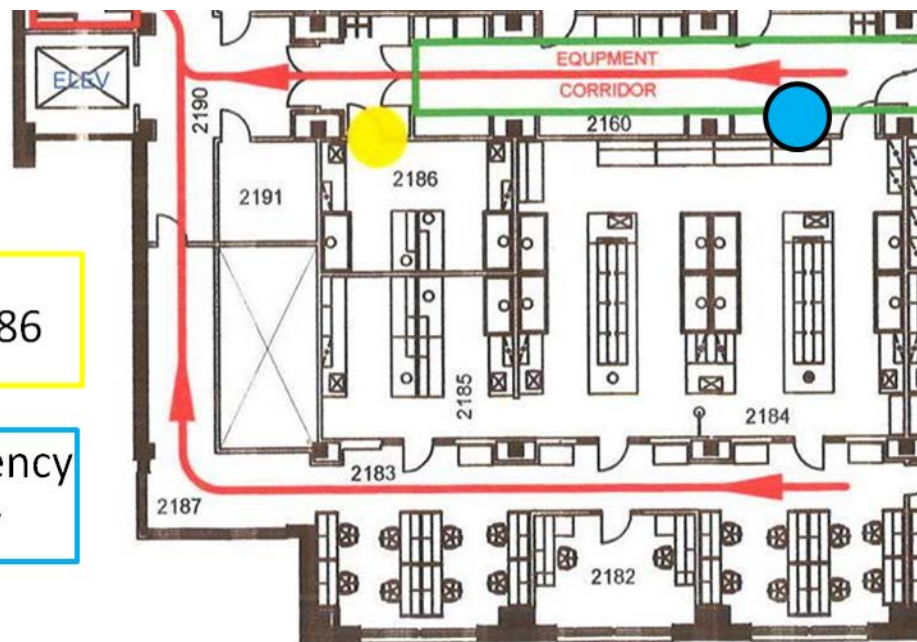
Fire Extinguisher



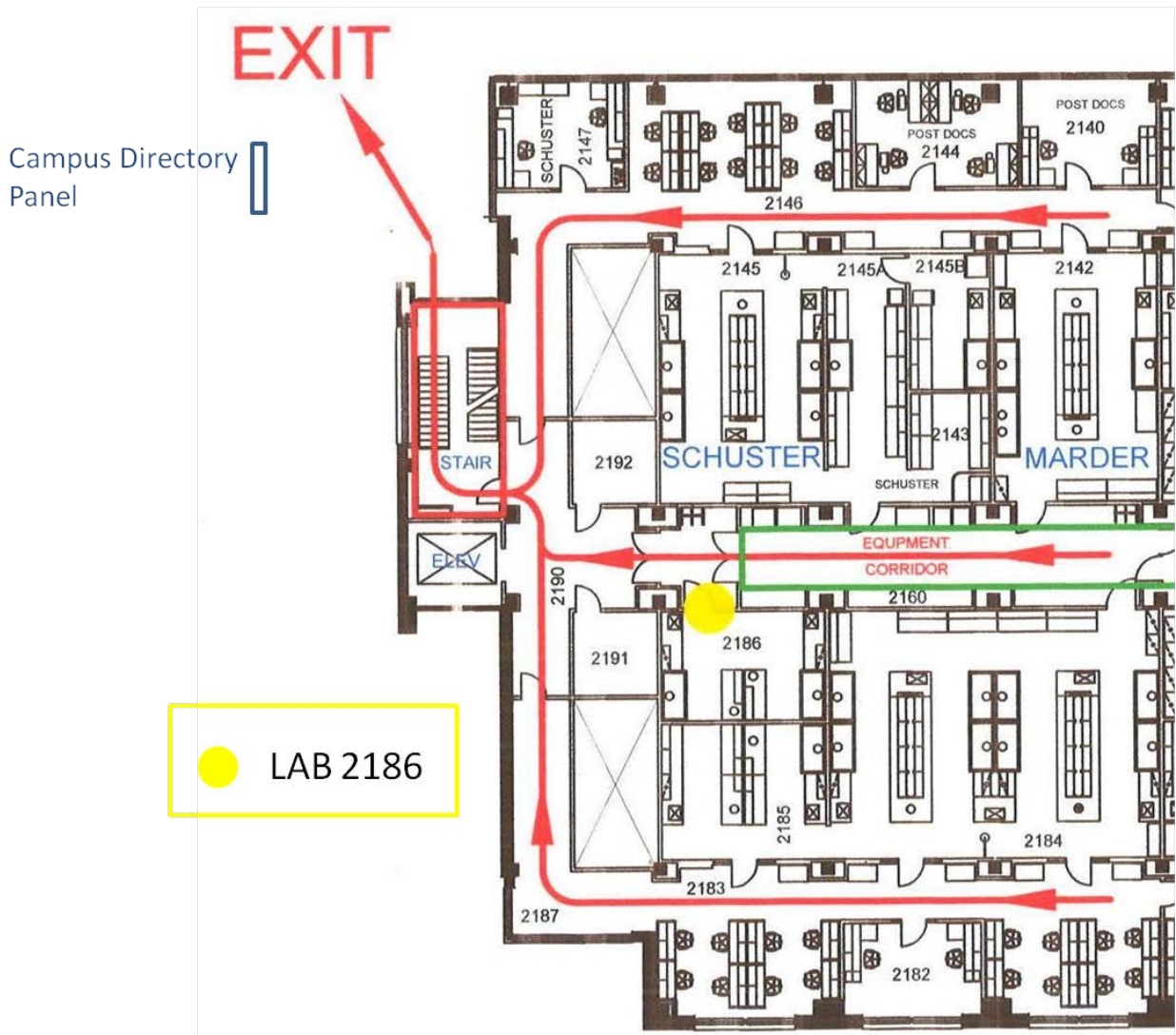
Emergency Shower

LAB 2186

Emergency shower



LABORATORY FLOOR PLANS:



ENGINEERING CONTROLS

Engineering Controls installed in the lab to prevent chemical exposures include:

- 1- Matheson gas panels 5000 series with automatic alarm and shut-off system;
- 2- Gas-specific sensors connected to GT permanent and central gas monitoring,
- 3- Gas cabinets,
- 4- Ventilated hoods,
- 5- Negative pressure ventilating system for the all laboratory, visual alarm system inside and outside the laboratory, laboratory door with glass panel.
- 6- Glove box

Risk Assessment Forms

PI: Sadighi and Pollet		Department: Chemistry & Biochemistry	
Location: ES&T		Room: 2386	
Chemical: Ethyl Zinc (Et₂Zn)		Cylinder Volume: N/A Container Volume / Wt _10-50 mL_	
Chemical		Formula:	CAS:
Diethylzinc solution	1 M in hexanes	(C₂H₅)₂Zn	557-20-0
	15 wt % in toluene	(C₂H₅)₂Zn	557-20-0
Diethyl Zinc	52.0 wt %	(C₂H₅)₂Zn	557-20-0
Specific hazard: Toxic <input type="checkbox"/> Corrosive <input checked="" type="checkbox"/> Highly Reactive <input checked="" type="checkbox"/> Pyrophoric Other <input type="checkbox"/>			
Reaction Brief Description: N/A.			
Process designed by: Mark Smith		Approved By PI: Pamela Pollet	
Date: 6/2/2014		Date: 6/2/2014	
Training requirements for this procedure: Special training: 1) Pyrophoric liquid transfer: UCLA-produced video available through EH&S website. 2) Relevant sections of D.F. Shriver's <i>Manipulations of Air-Sensitive Compounds.</i>		<input checked="" type="checkbox"/> Review of MSDS <input checked="" type="checkbox"/> Review of Laboratory Safety Plan <input type="checkbox"/> Review of GT Dangerous Gas Alarm Procedures (Appendix D) <input checked="" type="checkbox"/> Special Training from the lab PI/supervisor <input checked="" type="checkbox"/> Other <input type="checkbox"/> Special Training/Fit Testing for Respirator Use	
Personal protective equipment (PPE) requirements Type of gloves: nitrile gloves		<input checked="" type="checkbox"/> Safety Glasses or Goggles (circle one) <input checked="" type="checkbox"/> Lab Coat Cotton (OR) Flame Resistant <input type="checkbox"/> Face Shield <input type="checkbox"/> Apron (specify type) <input checked="" type="checkbox"/> Chemically Resistant Gloves <input type="checkbox"/> Thermally protective gloves <input type="checkbox"/> Respirator <input type="checkbox"/> Other (Specify)	

Hazard Assessment Worksheet

Sequence of Steps	Potential Accidents or Hazards	Preventative Measures
1) Unpacking and moving diethylzinc into glovebox (where it will be stored).	Rupture of Et ₂ Zn container: Et ₂ Zn would catch fire on exposure to air. Violent water-reactivity means water cannot be used to extinguish. CO ₂ is not chemically reactive with Et ₂ Zn, but a blast of high-pressure gas could spread the pyrophoric liquid around, followed by reignition and new fires.	a) Great caution in handling the container. b) Ensure no other flammable materials are in position to be ignited by a fire involving Et ₂ Zn. c) Have dry chemical fire extinguisher, or dry sand, within easy reach; ensure availability immediately prior to moving Et ₂ Zn.
2) Working with diethylzinc in glovebox.	Glovebox in normal operation provides atmosphere in which Et ₂ Zn is stable. Compromised atmosphere (would have to be severe) could lead to reactivity hazard.	a) Keep Et ₂ Zn container sealed when not in use. b) Before opening Et ₂ Zn container, check glovebox sensor readings to ensure that O ₂ , H ₂ O are below ~10ppm, preferably below 5 ppm. c) Watch carefully as Et ₂ Zn container is opened. Et ₂ Zn vapor gives rise to visible white ZnO smoke in the presence of ~ 5ppm O ₂ or H ₂ O.
3) Working with diethylzinc on Schlenk line.	Spillage from syringe causing fire. Once diluted into reaction mixtures, concentrations will be below pyrophoric threshold (<<10% by volume).	a) Ensure no other flammable materials are in the Schlenk line workspace (fume hood) where they could be ignited in the event of a mishap involving Et ₂ Zn. b) Have dry sand available in case of Et ₂ Zn fire. (Given quantities handled, this would be a small fire.)
4) Disposal of Et ₂ Zn residues	Exposure to air causing fire; exotherm during quenching causing violent reaction or container rupture.	a) Prior to quench, all unnecessary flammable materials will be removed from the hood, and a dry chemical fire extinguisher will be readily accessible nearby. b) Et ₂ Zn will be diluted with hexanes under inert atmosphere to below 10% concentration (v/v), i.e. below normal pyrophoric threshold. Solution will be quenched by careful addition, dropwise at first, of isopropanol via syringe, with cooling. Effective venting will be ensured prior to quench, to prevent pressurization by liberated ethane. Careful addition of methanol, then

		<p>water will ensure that no active material can remain.</p> <p>c) All residues in container, syringes or needles, will be presumed active until quenched as described above.</p>
For all situations listed above	Spillage or splashing on researcher handling the material or on neighboring researchers	<p>a) Transfer only in glovebox or in hood with sash as low as practical.</p> <p>b) Alert coworkers when about to handle pyrophoric material.</p> <p>c) Wear eye protection meeting ANSI Z87.1 standards for impact resistance and side-protection (required at all times anyway).</p> <p>d) Wear nitrile gloves (n.b.: <i>still flammable</i>, but provide acceptable short-term protection)</p> <p>e) Wear flame resistant (FR) lab coat meeting Georgia Tech PPE and Appropriate Attire Policy, IAW section 7.3.7 (requirement of FR lab coats when working with pyrophorics), 7.3.8 (fabric weight, arc rating, hazard risk category for FR lab coats) and 7.4.1 (lab coat cleanliness).</p> <p>f) Wear 100% cotton, (avoiding easily ignited synthetics) under protective garments, per PPE/AA policy requirement 7.3.7.</p>

<p>Training required for this procedure</p> <p>1) Pyrophoric liquid transfer: UCLA-produced video available through EH&S website.</p> <p>2) Relevant sections of D.F. Shriver's <i>Manipulations of Air-Sensitive Compounds</i>.</p>	<p>Note: Pyrophoric liquid transfer techniques themselves are not relevant, but sections on familiarization with reaction hazards, on PPE and on contingency planning are most germane.</p>	<p>Completion Date(s)</p> <p>1) PI reviewed on 30JAN14; lab personnel, on 29–31JAN14.</p> <p>2) Book is present in student office. Students are required to read/review relevant sections prior to any work with pyrophorics.</p>
<p>MSDS Reviews Required for this Procedure</p> <p>Diethylzinc in hexanes.</p>		<p>MSDS must be attached</p> <p>See attached.</p>

MSDS

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Diethylzinc

Product Number : 256781
Brand : Aldrich

Supplier : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA

Telephone : +1 800-325-5832
Fax : +1 800-325-5052
Emergency Phone # (For both supplier and manufacturer) : (314) 776-6555

Preparation Information : Sigma-Aldrich Corporation
Product Safety - Americas Region
1-800-521-8956

2. HAZARDS IDENTIFICATION**Emergency Overview****OSHA Hazards**

Pyrophoric, Corrosive

GHS Classification

Flammable liquids (Category 2)

Pyrophoric liquids (Category 1)

Substances, which in contact with water, emit flammable gases (Category 1)

Skin corrosion (Category 1B)

Serious eye damage (Category 1)

Acute aquatic toxicity (Category 1)

GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

H225

Highly flammable liquid and vapour.

H250

Catches fire spontaneously if exposed to air.

H260

In contact with water releases flammable gases which may ignite spontaneously.

H314

Causes severe skin burns and eye damage.

H400

Very toxic to aquatic life.

Precautionary statement(s)

P210

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P222

Do not allow contact with air.

P223

Keep away from any possible contact with water, because of violent reaction and possible flash fire.

P231 + P232

Handle under inert gas. Protect from moisture.

P273

Avoid release to the environment.

P280

Wear protective gloves/ protective clothing/ eye protection/ face protection.

P305 + P351 + P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if

P310 present and easy to do. Continue rinsing.
P370 + P378 Immediately call a POISON CENTER or doctor/ physician.
P422 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
Store contents under inert gas.

Other hazards

Reacts violently with water.

HMIS Classification

Health hazard: 3
Flammability: 4
Physical hazards: 3

NFPA Rating

Health hazard: 3
Fire: 0
Reactivity Hazard: 3

Potential Health Effects

Inhalation May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Skin May be harmful if absorbed through skin. Causes skin burns.
Eyes Causes eye burns.
Ingestion May be harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Zincediethyl
DEZ
DEZn
Et2Zn

Formula : C₄H₁₀Zn
Molecular Weight : 123.51 g/mol

Component	Concentration
Diethylzinc	
CAS-No.	557-20-0
EC-No.	209-161-3
Index-No.	030-004-00-8

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

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

If swallowed

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

5. FIREFIGHTING MEASURES

Conditions of flammability

Not flammable or combustible.

Suitable extinguishing media

Dry powder

Special protective equipment for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

Hazardous combustion products

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

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 and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Do not flush with water.

7. HANDLING AND STORAGE**Precautions for safe handling**

Avoid inhalation of vapour or mist.

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

Conditions for safe 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.

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

Air sensitive.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

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. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. Protective gloves against thermal risks

Eye protection

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

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
Colour	colourless

Safety data

pH	no data available
Melting point/freezing point	Melting point/range: -28 °C (-18 °F) - lit.
Boiling point	117 °C (243 °F) - lit.
Flash point	no data available
Ignition temperature	no data available
Auto-ignition temperature	The substance or mixture is pyrophoric with the category 1.
Lower explosion limit	no data available
Upper explosion limit	no data available
Vapour pressure	no data available
Density	1.205 g/cm ³ at 25 °C (77 °F)
Water solubility	no data available
Partition coefficient: n-octanol/water	no data available
Relative vapor density	no data available
Odour	no data available
Odour Threshold	no data available
Evaporation rate	no data available

10. STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

Reacts violently with water.

Conditions to avoid

Heat, flames and sparks. Extremes of temperature and direct sunlight. Exposure to moisture.

Materials to avoid

Reacts violently with water., Strong oxidizing agents

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Zinc/zinc oxides
Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral LD50

no data available

Inhalation LC50

no data available

Dermal LD50

no data available

Other information on acute toxicity

no data available

Skin corrosion/irritation

no data available

Serious eye damage/eye irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

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.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

no data available

Teratogenicity

no data available

Specific target organ toxicity - single exposure (Globally Harmonized System)

no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)

no data available

Aspiration hazard

no data available

Potential health effects

- | | |
|-------------------|---|
| Inhalation | May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. |
| Ingestion | May be harmful if swallowed. |
| Skin | May be harmful if absorbed through skin. Causes skin burns. |
| Eyes | Causes eye burns. |

Signs and Symptoms of Exposure

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath, Headache, Nausea

Synergistic effects

no data available

Additional Information

RTECS: Not available

12. ECOLOGICAL INFORMATION

Toxicity

no data available

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

PBT and vPvB assessment

no data available

Other adverse effects

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

Very toxic to aquatic life.

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. Offer surplus and non-recyclable solutions to a licensed disposal company. 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: 3394 Class: 4.2 (4.3) Packing group: I
Proper shipping name: Organometallic substance, liquid, pyrophoric, water-reactive (Diethylzinc)
Reportable Quantity (RQ):
Marine Pollutant: No
Poison Inhalation Hazard: No

IMDG

UN number: 3394 Class: 4.2 (4.3) Packing group: I EMS-No: F-G, S-M
Proper shipping name: ORGANOMETALLIC SUBSTANCE, LIQUID, PYROPHORIC, WATER-REACTIVE (Diethylzinc)
Marine Pollutant: Marine pollutant

IATA

UN number: 3394 Class: 4.2 (4.3)
Proper shipping name: Organometallic substance, liquid, pyrophoric, water-reactive (Diethylzinc)
IATA Passenger: Not permitted for transport
IATA Cargo: Not permitted for transport

15. REGULATORY INFORMATION

OSHA Hazards

Pyrophoric, Corrosive

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

	CAS-No.	Revision Date
Diethylzinc	557-20-0	1993-04-24

SARA 311/312 Hazards

Reactivity Hazard, Acute Health Hazard

Massachusetts Right To Know Components

Diethylzinc

CAS-No.
557-20-0Revision Date
1993-04-24**Pennsylvania Right To Know Components**

Diethylzinc

CAS-No.
557-20-0Revision Date
1993-04-24**New Jersey Right To Know Components**

Diethylzinc

CAS-No.
557-20-0Revision Date
1993-04-24**California Prop. 65 Components**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION**Further information**

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