

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

# SAFETY DATA SHEET

Version: v1

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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifiers

Product name : Dimethylzinc solution  
Product Number : D432887  
Brand : aladdin  
CAS-No. : 544-97-8(solution)

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances.

### 1.3 Company

Company : ALADDIN SCIENTIFIC CORPORATION  
Address : 14078 Meridian Parkway,  
Riverside, CA. 92518  
Telephone : +1 (833) 552-7181  
Fax : no data available

### 1.4 Emergency telephone number

CHEMTREC®, Inside the USA : 1-800-424-9300  
CHEMTREC®, Outside the USA :

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

**Physical hazards**

Flammable liquids Category 2 (H225)

Substances/mixtures which, in contact with water, emit flammable gases Category 1 (H260)

**Health hazards**

Aspiration Toxicity Category 1 (H304)

Skin Corrosion/Irritation Category 1 B (H314)

Serious Eye Damage/Eye Irritation Category 1 (H318)

Reproductive Toxicity Category 2 (H361d)

Specific target organ toxicity - (single exposure) Category 3 (H336)

Specific target organ toxicity - (repeated exposure) Category 2 (H373)

**Environmental hazards**

Chronic aquatic toxicity Category 2 (H411)

## 2.2 GHS Label elements, including precautionary statements

### Pictogram



Danger

### Signal word

### Hazard statement(s)

H225	Highly Flammable liquid and vapor
H250	Catches fire spontaneously if exposed to air
H260	In contact with water releases flammable gases which may ignite spontaneously
H304	May be fatal if swallowed and enters airways
H314	Causes severe skin burns and eye damage
H336	May cause drowsiness or dizziness
H361d	Suspected of damaging the unborn child
H373	Causes damage to organs through prolonged or repeated exposure
H411	Toxic to aquatic life with long lasting effects

### Precautionary statement(s)

P210	Keep away from heat, hot surface, sparks, open flames and other ignition sources. - No smoking.
P222	Do not allow contact with air.
P223	Do not allow contact with water.
P231	Handle under inert gas.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof [electrical/ventilating/lighting/...] equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P264	Wash hands [and ...] thoroughly after handling.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P231+P232	Handle under inert gas/... Protect from moisture.
P321	Specific treatment (see ... on this label).
P363	Wash contaminated clothing before reuse.
P391	Collect spillage.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P302+P335+P334	Brush off loose particles from skin. Immerse in cool water [or wrap in wet bandages].
P303+P361+P353	IF ON SKIN (or hair): Take off Immediately all contaminated clothing. Rinse SKIN with water [or shower].
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P370+P378	In case of fire: Use ... to extinguish.
P405	Store locked up.

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14078 Meridian Parkway, Riverside, CA. 92518

P402+P404	Store in a dry place. Store in a closed container.
P403+P235	Store in a well-ventilated place. Keep cool.
P501	Dispose of contents/container to an approved waste disposal plant.
P264+P265	Wash hands [and ...] thoroughly after handling. Do not touch eyes.
P305+P354+P338	IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P317	Get emergency medical help.
P302+P361+P354	IF ON SKIN: Take off Immediately all contaminated clothing. Immediately rinse with water for several minutes.
P316	Get emergency medical help immediately.

### 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

Synonyms	: no data available
Formula	: C <sub>2</sub> H <sub>6</sub> Zn
Molecular weight	: 95.46

Component	Classification	Concentration
<b>Toluene</b>		
CAS-No. : 108-88-3	Flammable liquids Category 2; Acute toxicity Category 5; Skin corrosion/irritation Category 2; Reproductive toxicity Category 2; Specific target organ toxicity - single exposure Category 3; Specific target organ toxicity - repeated exposure Category 2; Aspiration hazard Category 2; Aquatic hazard Category 2; Long-term (chronic) aquatic hazard Category 3; H225, H333, H315, H361, H336, H373, H304, H401, H412 Concentration limits: 20 %: STOT SE 3, H336	
EC-No. : 203-625-9		
<b>Dimethylzinc</b>		
CAS-No. : 544-97-8	Pyrophoric liquids, Category 1; Substances and mixtures, which in contact with water, emit flammable gases, Category 1; Skin corrosion, Sub-category 1B; Hazardous to the aquatic environment, short-term (Acute) - Category Acute 1; Hazardous to the aquatic environment, long-term (Chronic) - Category Chronic 1	
EC-No. : 208-884-1		

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General advice

Show this material safety data sheet to the doctor in attendance.

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**If inhaled**

After inhalation: fresh air. Call in physician.

**In case of skin contact**

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.

**In case of eye contact**

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

**If swallowed**

After swallowing: caution if victim vomits. Risk of aspiration! Keep airways free. Pulmonary failure possible after aspiration of vomit. Call a physician immediately.

**4.2 Most important symptoms and effects, both acute and delayed**

no data available

**4.3 Indication of any immediate medical attention and special treatment needed**

no data available

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**SECTION 5: Firefighting measures****5.1 Extinguishing media****Suitable extinguishing media**

CO<sub>2</sub>, dry chemical, dry sand, alcohol-resistant foam. Water mist may be used to cool closed containers.

**Unsuitable extinguishing media**

no data available

**5.2 Special hazards arising from the substance or mixture**

Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), Toxic fumes, Zinc, Heavy metal oxides, Methane

**5.3 Advice for firefighters**

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

**5.4 Further information**

Remove container from danger zone and cool with water. Prevent fire extinguishing water from contaminating surface water or the ground water system.

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**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert.

**6.2 Environmental precautions**

Do not let product enter drains. Risk of explosion.

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**6.3 Methods and materials for containment and cleaning up**

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions(see sections 7 and 10). Take up carefully with liquid-absorbent material (e.g.Chemizorb®). Dispose of properly. Clean up affected area.

**6.4 Reference to other sections**

For disposal see section 13.

**SECTION 7: Handling and storage**

**7.1 Precautions for safe handling**

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.Keep away from open flames, hot surfaces and sources of ignition.Take precautionary measures against static discharge.

**7.2 Conditions for safe storage, including any incompatibilities**

Keep container tightly closed in a dry and well-ventilated place. Stay away from heat and ignition sources.

**7.3 Specific end use(s)**

no data available

**SECTION 8: Exposure controls/personal protection**

**8.1 Control parameters**

Component	The United Kingdom	European Union	Ireland
Toluene	STEL: 100 ppm 15 min STEL: 384 mg/m <sup>3</sup> 15 min TWA: 50 ppm 8 hr TWA: 191 mg/m <sup>3</sup> 8 hr Skin	TWA: 50 ppm (8hr) TWA: 192 mg/m <sup>3</sup> (8hr) STEL: 100 ppm (15min) STEL: 384 mg/m <sup>3</sup> (15min) Skin	TWA: 192 mg/m <sup>3</sup> 8 hr. TWA: 50 ppm 8 hr. STEL: 384 mg/m <sup>3</sup> 15 min STEL: 100 ppm 15 min Skin

**8.2 Exposure controls**

**Appropriate engineering controls**

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

**Personal protective equipment**

**Eye/face protection**

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN166(EU).

**Skin protection**

The gloves must be checked before use. Please use the correct method to remove the gloves (do not touch the outer surface of the gloves), and avoid any skin parts contacting the product. After use, please handle contaminated gloves carefully in accordance with relevant laws and regulations and effective laboratory procedures and procedures. Please clean and dry the protective gloves selected for your hands, which must comply with the specifications given in Regulation (EU) 2016/425 and the en 374 standard derived therefrom.

**Body Protection**

Impermeable clothing, flame-retardant and anti-static protective clothing, and the type of protective equipment must be selected according to the concentration and content of the dangerous substance in the specific workplace.

**Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a fullface 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).

**Control of environmental exposure**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

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**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties**

a) Appearance	no data available
b) Odour	no data available
c) Odour Threshold	no data available
d) pH	no data available
e) Melting point/freezing point	no data available
f) Initial boiling point and boiling range	no data available
g) Flash point	no data available
h) Evaporation rate	no data available
i) Flammability (solid, gas)	no data available
j) Upper/lower flammability or explosive limits	no data available
k) Vapour pressure	no data available
l) Vapour density	no data available
m) Relative density	no data available
n) Water solubility	no data available
o) Partition coefficient: n-octanol/water	no data available
p) Auto-ignition temperature	no data available
q) Decomposition temperature	no data available
r) Viscosity	no data available
s) Explosive properties N	no data available
t) Oxidizing properties N	no data available

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## 9.2 Other safety information

no data available

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

no data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

Reacts violently with water.

### 10.4 Conditions to avoid

Excess heat. Exposure to moist air or water. Exposure to moisture. Keep away from open flames, hot surfaces and sources of ignition.

### 10.5 Incompatible materials

Acids. Water. Alcohols. oxygen. Oxidizing agent

### 10.6 Hazardous decomposition products

Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Toxic fumes. Zinc. Heavy metal oxides. Methane.

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

#### Toluene :

LD50 Oral - Rat - male - 5.580 mg/kg

(Tested according to Directive 92/69/EEC.)

LC50 Inhalation - Rat - male and female - 4 h - 25,7 mg/l

(OECD Test Guideline 403)

LD50 Dermal - Rabbit - > 5.000 mg/kg

Remarks: (ECHA)

#### Skin corrosion/irritation

Skin - Rabbit Result: irritating - 4 h Remarks: (ECHA)

#### Serious eye damage/eye irritation

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Eyes - Rabbit Result: slight irritation (OECD Test Guideline 405)

**Respiratory or skin sensitisation**

Maximization Test - Guinea pig Result: negative (Regulation (EC) No. 440/2008, Annex, B.6)

**Germ cell mutagenicity**

Test Type: In vitro mammalian cell gene mutation test Test system: Mouse lymphoma test Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: negative Test Type: Ames test Test system: S. typhimurium Metabolic activation: with and without metabolic activation Method: Mutagenicity (Salmonella typhimurium - reverse mutation assay) Result: negative Test Type: Chromosome aberration test Species: Rat Cell type: Bone marrow Application Route: i.p. Result: negative Remarks: (ECHA)

**Carcinogenicity**

no data available

**Reproductive toxicity**

Suspected of damaging the unborn child.

**Specific target organ toxicity - single exposure**

May cause drowsiness or dizziness. - Central nervous system

**Specific target organ toxicity - repeated exposure**

May cause damage to organs through prolonged or repeated exposure. - Central nervous system

**Aspiration hazard**

Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation

**Additional Information**

**Toluene :**

RTECS: XS5250000

Drowsiness, irritant effects, Dizziness, Convulsions, Headache, Nausea, Vomiting, Circulatory collapse, somnolence, inebriation, Unconsciousness, respiratory arrest, CNS disorders, respiratory paralysis, death.

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

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## SECTION 12: Ecological information

### 12.1 Toxicity

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Component	Freshwater Fish	Water Flea	Freshwater Algae
Toluene	50-70 mg/L LC50 96 h ;5-7 mg/L LC50 96 h ;15-19 mg/L LC50 96 h ;28 mg/L LC50 96 h ;12 mg/L LC50 96 h	EC50: = 11.5 mg/L, 48h (Daphnia magna) EC50: 5.46 - 9.83 mg/L, 48h Static (Daphnia magna)	EC50: = 12.5 mg/L, 72h static(Pseudokirchneriella subcapitata) EC50: > 433 mg/L, 96h(Pseudokirchneriella subcapitata)

**12.2 Persistence and degradability**

aerobic - Exposure time 20 d Result: 86 % - Readily biodegradable. Remarks: (IUCLID)

**12.3 Bioaccumulative potential**

Leuciscus idus (Golden orfe) - 3 d - 0,05 mg/l(Toluene) Bioconcentration factor (BCF): 90

**12.4 Mobility in soil**

no data available

**12.5 Results of PBT and vPvB assessment**

no data available

**12.6 Other adverse effects**

no data available

**SECTION 13:**

**13.1 Disposal considerations**

**Product**

Offer surplus and non-recyclable solutions to a licensed disposal company.

**Contaminated packaging**

Dispose of as unused product.

**SECTION 14: Transport information**

**DOT (US)**

UN number: 3399

Packing group: I

Class: 4.3(3)

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Proper shipping name: DIMETHYLZINC, Reportable Quantity(RQ): no data  
TOLUENE available

Poison Inhalation Hazard: no data  
available

Environmental Hazards: No

**IMDG**

UN number: 3399

Packing group: I

EMS-No: no data available

Proper shipping name: DIMETHYLZINC, TOLUENE

**IATA**

UN number: 3399

Packing group: I

Class: 4.3(3)

Proper shipping name: DIMETHYLZINC, TOLUENE

**SECTION 15: Regulatory information**

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

**SECTION 16: Other information**

**Prepared By**

Regulatory Affairs

ALADDIN SCIENTIFIC CORPORATION

Email: QualityAssurance@aladdinsci.com

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**Revision Summary**

SDS sections updated v1

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