

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 : 1,4-Diethylbenzene
Product Number : D107653
Brand : aladdin
CAS-No. : 105-05-5

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)

Flammable liquids (Category 3), H226

Skin irritation (Category 2), H315

Serious eye damage (Category 1), H318

Aspiration hazard (Category 1), H304

Long-term (chronic) aquatic hazard (Category 2), H411

2.2 GHS Label elements, including precautionary statements

Pictogram



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Signal word	Danger
Hazard statement(s)	
H226	Flammable liquid and vapor
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H318	Causes serious eye damage
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.
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.
P264	Wash hands [and ...] thoroughly after handling.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P321	Specific treatment (see ... on this label).
P331	Do NOT induce vomiting.
P391	Collect spillage.
P302+P352	IF ON SKIN: wash with plenty of water.
P303+P361+P353	IF ON SKIN (or hair): Take off Immediately all contaminated clothing. Rinse SKIN with water [or shower].
P362+P364	Take off contaminated clothing and wash it before reuse.
P370+P378	In case of fire: Use ... to extinguish.
P405	Store locked up.
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.
P301+P316	IF SWALLOWED: Get emergency medical help immediately.
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.
P332+P317	If skin irritation occurs: Get medical help.

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

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms : PDEB

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Formula	: C10H14
Molecular weight	: 134.22
CAS No.	: 105-05-5
EC-NO.	: 203-265-2

Component	Classification	Concentration
1,4-Diethylbenzene	Flam. Liq. 3; Skin Irrit. 2; Eye Dam. 1; Asp. Tox. 1; Aquatic Chronic 2; H226, H315, H318, H304, H411	≥99%

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.

If inhaled

After inhalation: fresh air.

In case of skin contact

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

In case of eye contact

After eye contact: rinse out with plenty of water. Immediately 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

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

Carbon dioxide (CO2), Foam, Dry powder

Unsuitable extinguishing media

no data available

5.2 Special hazards arising from the substance or mixture

Carbon oxides. Combustible. Vapors are heavier than air and may spread along floors. Forms explosive mixtures with air at elevated temperatures.

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

Use water spray to cool unopened containers.

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.

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

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. Keep away from heat and sources of ignition.

7.3 Specific end use(s)

no data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

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.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance	form: Liquid color: Colorless
b) Odour	no data available
c) Odour Threshold	no data available
d) pH	no data available
e) Melting point/freezing point	-43 °C
f) Initial boiling point and boiling range	184 °C
g) Flash point	55 °C
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	Insoluble in water, soluble in most organic solvents such as ethanol, benzene and carbon tetrachloride.
o) Partition coefficient: n-octanol/water	no data available

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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

9.2 Other safety information

no data available

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

Violent reactions possible with:Oxidizing agents

10.4 Conditions to avoid

Heating

10.5 Incompatible materials

rubber, various plastics

10.6 Hazardous decomposition products

no data available

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - male and female - > 2.000 mg/kg

(OECD Test Guideline 401)

Symptoms: Gastrointestinal disturbance, gastric pain, Diarrhea, Vomiting

Symptoms: mucosal irritationsLC50 Inhalation - Rat - male and female - 4 h - > 5 mg/l

(OECD Test Guideline 403)

Skin corrosion/irritation

Skin - In vitro study. Result: irritating (OECD Test Guideline 439)

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Serious eye damage/eye irritation

Eyes - In vitro study. Result: Causes serious eye damage. (Hen's egg-membrane test for irritation (HET-CAM))

Respiratory or skin sensitisation

Local lymph node assay (LLNA) - Mouse. Result: negative (OECD Test Guideline 429)

Germ cell mutagenicity

no data available

Carcinogenicity

no data available

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

Aspiration may cause pulmonary edema and pneumonitis.

Additional Information

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

Systemic effects: Headache, Dizziness, Drowsiness

After absorption of large quantities: narcosis

Further data: Handle in accordance with good industrial hygiene and safety practice.

SECTION 12: Ecological information**12.1 Toxicity**

Toxicity to fish semi-static test LC50 - *Oryzias latipes* (Orange-red killifish) - 2.5mg/l - 96 h

(OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates static test EC50 - *Daphnia magna* (Water flea) - 32 mg/l - 24 h

(OECD Test Guideline 202)

Toxicity to algae

static test ErC50 - *Desmodesmus subspicatus* (green algae) - 1.9 mg/l - 72 h

(OECD Test Guideline 201)

static test NOEC - *Desmodesmus subspicatus* (green algae) - 0.6 mg/l - 72 h

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(OECD Test Guideline 201)

Toxicity to bacteria static test EC50 - activated sludge - > 250 mg/l - 3 h

(OECD Test Guideline 209)

12.2 Persistence and degradability

aerobic - Exposure time 28 d. Result: 0 % - Not biodegradable. (OECD Test Guideline 301F)

12.3 Bioaccumulative potential

Cyprinus carpio (Carp) - 42 d at 25 °C(1,4-Diethylbenzene) Bioconcentration factor (BCF): 362 - 598 (OECD Test Guideline 305C)

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: 2049

Packing group: III

Class: 3

Proper shipping name:

Reportable Quantity(RQ): no data
available

Poison Inhalation Hazard: no data
available

DIETHYLBENZENE

Environmental Hazards: Yes

IMDG

UN number: 2049

Packing group: III

EMS-No: no data available

Proper shipping name: DIETHYLBENZENE

IATA

UN number: 2049

Packing group: III

Class: 3

Proper shipping name: DIETHYLBENZENE

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SECTION 15: Regulatory information

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

SECTION 16: Other information

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