

ALFAAL18775

## 1,2-Diethylbenzene

### SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

产品说明: 1,2-二乙基苯  
Product Description: 1,2-Diethylbenzene

Cat No. : L18775  
CAS No 135-01-3  
Molecular Formula C10 H14

Supplier Avocado Research Chemicals Ltd.  
(Part of Thermo Fisher Scientific)  
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Recommended Use Laboratory chemicals.  
Uses advised against No Information available

### SECTION 2. HAZARD IDENTIFICATION

**Physical State**  
Liquid

**Appearance**  
No information available

**Odor**  
No information available

#### Emergency Overview

Flammable liquid and vapor. Causes serious eye irritation. Harmful to aquatic life with long lasting effects. May be fatal if swallowed and enters airways. Causes skin irritation. May cause respiratory irritation.

#### Classification of the substance or mixture

Flammable liquids.	Category 3
Aspiration Toxicity	Category 1
Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2
Specific target organ toxicity - (single exposure)	Category 3
Chronic aquatic toxicity	Category 3

#### Label Elements



Signal Word

Danger

**Hazard Statements**

H226 - Flammable liquid and vapor  
H319 - Causes serious eye irritation  
H412 - Harmful to aquatic life with long lasting effects  
H304 - May be fatal if swallowed and enters airways  
H315 - Causes skin irritation  
H335 - May cause respiratory irritation

**Precautionary Statements****Prevention**

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking  
P264 - Wash face, hands and any exposed skin thoroughly after handling  
P271 - Use only outdoors or in a well-ventilated area  
P280 - Wear protective gloves/protective clothing/eye protection/face protection  
P240 - Ground and bond container and receiving equipment  
P242 - Use non-sparking tools  
P243 - Take action to prevent static discharges  
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

**Response**

P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor  
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  
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P312 - Call a POISON CENTER or doctor if you feel unwell  
P331 - Do NOT induce vomiting  
P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish  
P362 + P364 - Take off contaminated clothing and wash it before reuse

**Storage**

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

**Disposal**

P501 - Dispose of contents/ container to an approved waste disposal plant

**Physical and Chemical Hazards**

Vapors may cause flash fire or explosion. Flammable liquid.

**Health Hazards**

Causes serious eye irritation. Aspiration hazard if swallowed - can enter lungs and cause damage. Causes skin irritation. May cause respiratory irritation.

**Environmental hazards**

Harmful to aquatic life with long lasting effects. Is not likely mobile in the environment due its low water solubility. Spillage unlikely to penetrate soil. The product is insoluble and floats on water. The product evaporates slowly.

This product does not contain any known or suspected endocrine disruptors.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Component	CAS No	Weight %
o-Diethyl benzene	135-01-3	<=100

**SECTION 4. FIRST AID MEASURES**

**General Advice**

If symptoms persist, call a physician.

**Eye Contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

**Skin Contact**

Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.

**Inhalation**

Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur. Risk of serious damage to the lungs (by aspiration).

**Ingestion**

Clean mouth with water and drink afterwards plenty of water. Do NOT induce vomiting. Call a physician or poison control center immediately. If vomiting occurs naturally, have victim lean forward.

**Most important symptoms and effects**

Difficulty in breathing. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting

**Self-Protection of the First Aider**

Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

**Notes to Physician**

Treat symptomatically.

**SECTION 5. FIRE-FIGHTING MEASURES****Suitable Extinguishing Media**

Water mist may be used to cool closed containers.

**Extinguishing media which must not be used for safety reasons**

No information available.

**Specific Hazards Arising from the Chemical**

Flammable. Containers may explode when heated. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back.

**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**SECTION 6. ACCIDENTAL RELEASE MEASURES****Personal Precautions**

Ensure adequate ventilation. Use personal protective equipment as required. Remove all sources of ignition. Take precautionary measures against static discharges.

**Environmental Precautions**

Should not be released into the environment. See Section 12 for additional Ecological Information. Avoid release to the environment. Collect spillage. Do not flush into surface water or sanitary sewer system.

**Methods for Containment and Clean Up**

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

## 1,2-Diethylbenzene

Refer to protective measures listed in Sections 8 and 13.

**SECTION 7. HANDLING AND STORAGE****Handling**

Wear personal protective equipment/face protection. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. Take precautionary measures against static discharges.

**Storage**

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat, sparks and flame.

**Specific Use(s)**

Use in laboratories

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Control Parameters****Monitoring methods**

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents. MDHS70 General methods for sampling airborne gases and vapours MDHS 88 Volatile organic compounds in air. Laboratory method using diffusive samplers, solvent desorption and gas chromatography MDHS 96 Volatile organic compounds in air - Laboratory method using pumped solid sorbent tubes, solvent desorption and gas chromatography

**Exposure Controls****Engineering Measures**

Ensure adequate ventilation, especially in confined areas. Use explosion-proof electrical/ventilating/lighting equipment. Ensure that eyewash stations and safety showers are close to the workstation location. Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source.

**Personal protective equipment**

**Eye Protection** Goggles (European standard - EN 166)

**Hand Protection** Protective gloves

Glove material	Breakthrough time	Glove thickness	EU standard	Glove comments
Viton (R)	480 minutes	0.7 mm	EN 374	(minimum requirement)

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatibility, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

**Skin and body protection** Long sleeved clothing

**Respiratory Protection** When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.  
To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

**Large scale/emergency use** In case of insufficient ventilation, wear suitable respiratory equipment  
**Recommended Filter type:** Multi-purpose/ABEK conforming to EN14387

## 1,2-Diethylbenzene

## Small scale/Laboratory use

Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.  
When RPE is used a face piece Fit Test should be conducted

## Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

## Environmental exposure controls

Prevent product from entering drains.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

## Appearance

## Physical State

Liquid

## Odor

No information available

## Odor Threshold

No data available

## pH

No information available

## Melting Point/Range

-31 °C / -23.8 °F

## Softening Point

No data available

## Boiling Point/Range

183 °C / 361.4 °F

## Flash Point

55 °C / 131 °F

Method - No information available

## Evaporation Rate

No data available

## Flammability (solid,gas)

Not applicable

Liquid

## Explosion Limits

No data available

## Vapor Pressure

23 hPa @ 20 °C

## Vapor Density

No data available

(Air = 1.0)

## Specific Gravity / Density

0.88 g/cm3

@ 20 °C

## Bulk Density

Not applicable

Liquid

## Water Solubility

Immiscible

## Solubility in other solvents

No information available

## Partition Coefficient (n-octanol/water)

## Autoignition Temperature

380 °C / 716 °F

## Decomposition Temperature

No data available

## Viscosity

No data available

## Explosive Properties

explosive air/vapour mixtures possible

## Oxidizing Properties

No information available

## Molecular Formula

C10 H14

## Molecular Weight

134.22

## Refractive index

1.5022

## SECTION 10. STABILITY AND REACTIVITY

## Stability

Stable under normal conditions.

## Hazardous Reactions

None under normal processing.

## Hazardous Polymerization

No information available.

## Conditions to Avoid

Keep away from open flames, hot surfaces and sources of ignition.

## Materials to avoid

No information available.

**Hazardous Decomposition Products** Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).

## SECTION 11. TOXICOLOGICAL INFORMATION

# SAFETY DATA SHEET

## 1,2-Diethylbenzene

### Product Information

(a) acute toxicity;	
(b) skin corrosion/irritation;	Category 2
(c) serious eye damage/irritation;	Category 2
(d) respiratory or skin sensitization;	
Respiratory	No data available
Skin	No data available
(e) germ cell mutagenicity;	No data available
(f) carcinogenicity;	No data available
	There are no known carcinogenic chemicals in this product
(g) reproductive toxicity;	No data available
(h) STOT-single exposure;	Category 3
Results / Target organs	Respiratory system
(i) STOT-repeated exposure;	No data available
Target Organs	No information available.
(j) aspiration hazard;	Category 1
Symptoms / effects, both acute and delayed	Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting

### SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity effects	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains following substances which are hazardous for the environment.
Persistence and Degradability	
Persistence	Immiscible with water, May persist, based on information available.
Degradation in sewage treatment plant	Contains substances known to be hazardous to the environment or not degradable in waste water treatment plants.
Bioaccumulative Potential	May have some potential to bioaccumulate
Mobility in soil	Spillage unlikely to penetrate soil The product is insoluble and floats on water The product evaporates slowly Is not likely mobile in the environment due its low water solubility Spillage unlikely to penetrate soil
Endocrine Disruptor Information	This product does not contain any known or suspected endocrine disruptors

## SAFETY DATA SHEET

## 1,2-Diethylbenzene

**Persistent Organic Pollutant  
Ozone Depletion Potential**

This product does not contain any known or suspected substance  
This product does not contain any known or suspected substance

**SECTION 13. DISPOSAL CONSIDERATIONS****Waste from Residues/Unused  
Products**

Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.

**Contaminated Packaging**

Dispose of this container to hazardous or special waste collection point. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep product and empty container away from heat and sources of ignition.

**Other Information**

Waste codes should be assigned by the user based on the application for which the product was used. Do not flush to sewer. Can be landfilled or incinerated, when in compliance with local regulations. Do not let this chemical enter the environment. Do not empty into drains.

**SECTION 14. TRANSPORT INFORMATION****Road and Rail Transport**

UN-No UN2049  
Proper Shipping Name DIETHYLBENZENE  
Hazard Class 3  
Packing Group III

**IMDG/IMO**

UN-No UN2049  
Proper Shipping Name DIETHYLBENZENE  
Hazard Class 3  
Packing Group III

**IATA**

UN-No UN2049  
Proper Shipping Name DIETHYLBENZENE  
Hazard Class 3  
Packing Group III

**Special Precautions for User** No special precautions required

**SECTION 15. REGULATORY INFORMATION****International Inventories**

X = listed, China (IECSC), Europe (EINECS/ELINCS/NLP), U.S.A. (TSCA), Canada (DSL/NDSL), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), Korea (KECL).

Component	The Inventory of Hazardous Chemicals (2015 Edition)	List of dangerous goods GB 12268 - 2012	TCSI	IECSC	EINECS	TSCA	DSL	PICCS	ENCS	ISHL	AICS	KECL
o-Diethyl benzene	X	-	X	X	205-170-1	-	-	X	X	X	-	-

**National Regulations**

## SECTION 16. OTHER INFORMATION

**Prepared By** Health, Safety and Environmental Department  
**Revision Date** 01-May-2024  
**Revision Summary** New emergency telephone response service provider.

**Training Advice**

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

**Legend**

<b>CAS</b> - Chemical Abstracts Service	<b>TSCA</b> - United States Toxic Substances Control Act Section 8(b) Inventory
<b>EINECS/ELINCS</b> - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances	<b>DSL/NDL</b> - Canadian Domestic Substances List/Non-Domestic Substances List
<b>PICCS</b> - Philippines Inventory of Chemicals and Chemical Substances	<b>ENCS</b> - Japanese Existing and New Chemical Substances
<b>IECSC</b> - Chinese Inventory of Existing Chemical Substances	<b>AICS</b> - Australian Inventory of Chemical Substances
<b>KECL</b> - Korean Existing and Evaluated Chemical Substances	<b>NZIoC</b> - New Zealand Inventory of Chemicals
<b>WEL</b> - Workplace Exposure Limit	<b>TWA</b> - Time Weighted Average
<b>ACGIH</b> - American Conference of Governmental Industrial Hygienists	<b>IARC</b> - International Agency for Research on Cancer
<b>DNEL</b> - Derived No Effect Level	<b>PNEC</b> - Predicted No Effect Concentration
<b>RPE</b> - Respiratory Protective Equipment	<b>LD50</b> - Lethal Dose 50%
<b>LC50</b> - Lethal Concentration 50%	<b>EC50</b> - Effective Concentration 50%
<b>NOEC</b> - No Observed Effect Concentration	<b>POW</b> - Partition coefficient Octanol:Water
<b>PBT</b> - Persistent, Bioaccumulative, Toxic	<b>vPvB</b> - very Persistent, very Bioaccumulative
<b>ICAO/IATA</b> - International Civil Aviation Organization/International Air Transport Association	<b>IMO/IMDG</b> - International Maritime Organization/International Maritime Dangerous Goods Code
<b>ADR</b> - European Agreement Concerning the International Carriage of Dangerous Goods by Road	<b>MARPOL</b> - International Convention for the Prevention of Pollution from Ships
<b>OECD</b> - Organisation for Economic Co-operation and Development	<b>ATE</b> - Acute Toxicity Estimate
<b>BCF</b> - Bioconcentration factor	<b>VOC</b> - (Volatile Organic Compound)

**Key literature references and sources for data**

<https://echa.europa.eu/information-on-chemicals>  
Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of Safety Data Sheet**