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	Product Name: LAB (linear alkyl benzene)	

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION

Identification of the substance or preparation: Linear alkyl benzene
Country of origin: Iran (Islamic Republic of Iran)
CAS Number: 67774-74-7
Synonyms: Linear Alkyl Benzene / LAB


2. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous substances: It is dangerous for environment also high toxic for aquatic organisms.
Hazardous label(s): Very toxic to aquatic organisms.
Toxicological characteristics: It is dangerous for environment also high toxic for aquatic organisms.
Substances present at a concentration below the minimum danger: ACUTE TOXICITY
Oral:
LD50: > 5000 mg/kg (rats)
Dermal:
LD50: > 2000 mg/kg (rats)
Inhalation:
LC50: > 1.82 mg/l (rats)

Other component:

3. IDENTIFICATION OF HAZARDS

Risk phrases: Very toxic to aquatic organisms.
Skin contact: Rabbits: Negligible to slight irritation
Eye contact: Negligible irritant properties
Inhalation : LC50: > 1.82 mg/l (rats)
If swallowed: Do not induce vomiting. Medical attention must be taken.
Other information: None

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4. FIRST AID MEASURES

As a general rule, in case of doubt or if symptoms persist, always call a doctor
NEVER induce swallowing in an unconscious person.

Skin contact :

Wash skin with soap and upon contact.
Remove contaminated clothing. If irritation persists, get medical attention.
Wash clothing before reuse.

In case of exposure by inhalation:

Take the exposures person to fresh air.
Artificial respiration or giving oxygen is necessary if not breathing or breathing is difficult.

In case of splashes or contact with eyes:

Wash the eyes with current water for at least 20 minutes. Get medical attention.

In case of swallowing:

Note of physician. Do not induce vomiting. Get medical attention.

Note of physician:

5. FIRE FIGHTING MEASURES

Flammable class:

Flammable.

Suitable extinguishing media:

CO₂ , water spray or AFFF foam

Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases:

Toxic fumes of carbon oxides produced on combustion.

Special protective equipment for fire fighting :

Fire extinguishing from maximum distance or use hose holder or monitor nozzle.

Other information:

After fire is extinguished, use cooling water over the hot containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:

Respiration: air-purifying or air-supplied equipment depending on concentration.

Environmental precautions:


Dike flow of spilled material using soil or sandbags to minimize contamination of drains, surface and ground waters. If LAB has flowed into drains, ponds or sewage systems, inform appropriate authority.

Methods for cleaning up and disposal:

Wastes must be incinerated under controlled conditions or disposed under ground by the regulations.

Other information:

None

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7. HANDLING AND STORAGE

The regulations relating to storage premises apply to workshop where the product is handled :

Handling:	Handle in accordance with good hygiene and safety procedures. Avoid contact with eyes, skin and clothing Wash thoroughly after handling. Keep away from source of ignition. Tank cars, Tank trucks
Storage:	Store in original closed containers in a cool, dry, well-ventilated area. This product is non-corrosive Carbon steel, Baked epoxy, Phenolic resin coatings or Aluminum Drums is suitable. Store separately from all combustible, organic and oxidizable materials.
Other information:	Detergent intermediate.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limit values:	Not established
Exposure controls:	Ventilation: Local exhaust or mechanical ventilation; the recent method is necessary if the workshop temperature is high.
Personal protective equipment:	
Eye protection:	Chemical goggles or face shield
Respiratory protection:	Air-purifying or air-supplied equipment depending on concentration.
Hand protection:	Rubber gloves or other similar impervious material to prevent repeated contact.
Skin and body protection:	Dependent upon degree of potential exposure , additional personal protective equipment may be required , for example chemical boots and full protective clothing.
Health measures:	Boiling point/Boiling range: 278 – 314 C at 1013 KPa , Flash point: 120-140 C , Explosive properties: None
Environmental exposure controls:	Highly biodegradable (95% or greater)

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9. PHYSICAL AND CHEMICAL PROPERTIES

General information:

Appearance (at 20°C):

Colour:

Odour:

PH (at 20°C):

Boiling point/range (°C):

Flash point (°C):

Flammability:

Auto-ignition temperature:

Explosive properties:

Oxidising properties:

Vapour pressure (at 20°C):

Density (at 20°C):

Solubility (at 20°C):

Detergent intermediate

Oily liquid

Colourless

Odourless

Not instant

275°C – 314°C

120°C -140°C

Flammable.

Not available

None

Not available

0.01 mmHg

Specific Gravity: 0.86

water solubility: Insoluble

Solubility in fats: Soluble

Viscosity (40°C):

5 – 10 cps at 20°C

Evaporation rate:

Not available

Other information:

10. STABILITY AND REACTIVITY

Stability:

Chemically stable but strong oxidizers can affect it

Conditions to avoid:


Not available

Material to avoid:

Not available

Hazardous decomposition products:

Carbon oxides as toxic fumes (on combustion)

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11. TOXICOLOGICAL INFORMATION


Acute toxicity:	- LD ₅₀ , oral, rat (mg.kg ⁻¹): > 5000 mg/kg - LD ₅₀ , oral, mouse (mg.kg ⁻¹): Not available - LD ₅₀ , dermal (mg.kg ⁻¹): > 2000 mg/kg
Sub chronic – chronic toxicity:	Unknown
Sensibilization:	Not a skin sensitizer
Carcinogenicity:	Not available
Reproductive effects:	Not available
Human experience:	Not available
Other information:	Not available

12. ECOLOGICAL INFORMATION

Ecotoxicity:	It is dangerous for environment also high toxic for aquatic organisms.
Bioaccumulative potential:	Lepomis macrochirus: BCF = 35 (measured)
Mobility:	Moderate volatilization from water medium
Persistence and degradability:	Aerobic biodegradation: LAB biodegrades readily ; OECD 301 F: biodegradation of 64% after 28 days ; OECD 301 B: biodegradation of 67% (measured by CO ₂ evolution) after 28 days ; Standard River Die-away Test: concentrations of 100-500 ppb – primary degradation > 90% and a half – life of 4-15 days ; Trickling filter and activated sludge plants: Average % removals > 69% to >98%
Other adverse effects:	Anaerobic biodegradation : Biodegradation of > 70% LAB biodegrades readily. It is toxic to Daphnia, shows no adverse effects in fish and Algae. LAB has low solubility in water (0.041 mg/l).

13. DISPOSAL CONSIDERATIONS

Disposal of product:	Disposal is to be performed in compliance with all government regulations. Do not dispose of via sinks or into immediate environment.
Disposal of packaging:	Since empty contaminated containers contain product residue, follow all hazards warnings and precautions even after container emptied.


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14. TRANSPORT INFORMATION

Land transport: ADR/RID:	Class/Packaging group: 9/III Hazard ID No. : 90 UN No. : 3082 Proper Shipping name: Environmentally hazardous substance, liquid, n.o.s (Benzene, C10-13A) Class/Packaging group: 9/III Hazard ID No. : 90 UN No. : 3082 Proper Shipping name: Environmentally hazardous substance, liquid, n.o.s (Benzene, C10-13Alkyl derivatives)
Maritime transport:	Marine Pollutant : Yes UN No. : 3082 Class/Packaging group : 9/III Proper shipping name : Environmentally hazardous substance, liquid, n.o.s (Benzene, C10-13-Alkyl derivatives)
Air transport:	UN No. : 3082 Class/Packaging group : 9/III Proper shipping name : Environmentally hazardous substance, liquid, n.o.s (Benzene, C10-13-Alkyl derivatives)

15. REGULATORY INFORMATION

Hazardous label(s): Safety phrases:	Very toxic to aquatic organisms S57 - Use appropriate containment to avoid environmental contamination. S61 - Avoid release to the environment. Refer to special instructions/Safety data sheet.
Risk phrases:	R50 - Very toxic to aquatic organisms

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16. OTHER INFORMATION

None

The contents and format of this MSDS are in accordance with EEC Commission Directive 2001/58/EC