
	<b>Material Safety Data Sheet (MSDS)</b> <i>According to the Directives 91/155/CEE-2001/58/CE-ISO 11014-1</i> GR.J/ Y.F	Page: 1 of 7 Revision Number: 1
	Product Name:  <b>LAB</b> <b>(linear alkyl benzene)</b>	

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/ UNDERTAKING



**Identification of the substance or preparation:** Linear alkyl benzene  
**CAS Number:** 67774-74-7  
**Synonyms:** Linear Alkyl Benzene / LAB  
  
**Manufacturer subcontractor:** None  
  
**Association/Organization:** None  
**Use of the substance/Preparation:** An intermediate that used as surfactant in producing of detergents

### 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:**

CO<sub>2</sub> , water spray or AFFF foam

**Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases:**  
**Special protective equipment for fire fighting :**

Toxic fumes of carbon oxides produced on combustion.

**Other information:**

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

<b>Handling:</b>	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
<b>Storage:</b>	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.
<b>Other information:</b>	Detergent intermediate.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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



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## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>General information:</b>	<b>Detergent intermediate</b>
<b>Appearance (at 20°C):</b>	<b>Oily liquid</b>
<b>Colour:</b>	<b>Colourless</b>
<b>Odour:</b>	<b>Odourless</b>
<b>PH (at 20°C):</b>	<b>Not instant</b>
<b>Boiling point/range (°C):</b>	<b>275°C – 314°C</b>
<b>Flash point (°C):</b>	<b>120°C -140°C</b>
<b>Flammability:</b>	<b>Flammable.</b>
<b>Auto-ignition temperature:</b>	<b>Not available</b>
<b>Explosive properties:</b>	<b>None</b>
<b>Oxidising properties:</b>	<b>Not available</b>
<b>Vapour pressure (at 20°C):</b>	<b>0.01 mmHg</b>
<b>Density (at 20°C):</b>	<b>Specific Gravity: 0.86</b>
<b>Solubility (at 20°C):</b>	<b>water solubility: Insoluble</b>
	<b>Solubility in fats: Soluble</b>
<b>Viscosity (40°C):</b>	<b>5 – 10 cps at 20°C</b>
<b>Evaporation rate:</b>	<b>Not available</b>
<b>Other information:</b>	

## 10. STABILITY AND REACTIVITY

<b>Stability:</b>	<b>Chemically stable but strong oxidizers can affect it</b>
<b>Conditions to avoid:</b>	<b>Not available</b>
<b>Material to avoid:</b>	<b>Not available</b>
<b>Hazardous decomposition products:</b>	<b>Carbon oxides as toxic fumes (on combustion)</b>

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## 11. TOXICOLOGICAL INFORMATION



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

## 12. ECOLOGICAL INFORMATION

<b>Ecotoxicity:</b>	It is dangerous for environment also high toxic for aquatic organisms.
<b>Bioaccumulative potential:</b>	Lepomis macrochirus: BCF = 35 (measured)
<b>Mobility:</b>	Moderate volatilization from water medium
<b>Persistence and degradability:</b>	Aerobic biodegradation: LAB biodegrades readily ; OECD 301 F: biodegradation of 64% after 28 days ; OECD 301 B: biodegradation of 67% (measured by CO <sub>2</sub> 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 ; Trickle filter and activated sludge plants: Average % removals > 69% to >98%
<b>Other adverse effects:</b>	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

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

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#### 14. TRANSPORT INFORMATION

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

#### 15. REGULATORY INFORMATION

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

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