
 <p>National Petrochemical Company(NPC)</p>	<h2 style="color: blue;">Material Safety Data Sheet (MSDS)</h2> <p>According to the Directives 91/155/CEE-2001/58/CE-ISO 11014-1 GR./Y.F</p>	Page: 1 of 7 Revision Number: 1
	Product Name:  <h3 style="text-align: center;">LAB (linear alkyl benzene)</h3>	 <p style="text-align: center;"> <span style="background-color: yellow;">Reactivity</span>  <span style="background-color: red;">Flammability</span>  <span style="background-color: blue;">Health</span> </p>

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



<b>Identification of the substance or preparation:</b> <b>Country of origin:</b> <b>CAS Number:</b> <b>Synonyms:</b> <b>Company/undertaking identification</b>  <b>Manufacturer subcontractor:</b> <b>Emergency phone number:</b> <b>Contact email:</b> <b>Fax:</b> <b>Association/Organization:</b> <b>Use of the substance/Preparation:</b>	<b>Linear alkyl benzene</b> <b>Iran (Islamic Republic of Iran)</b> <b>67774-74-7</b> <b>Linear Alkyl Benzene / LAB</b> <b>National Petrochemical Company</b> <b>Iran Petrochemical Commercial Company (IPCC)</b> <b>None</b> <b>00982188881735</b> <b>msds@petrochem-ir.net</b> <b>00982188839511</b> <b>None</b> <b>An intermediate that used as surfactant in producing of detergents</b>
--	--

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

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

### 3. IDENTIFICATION OF HAZARDS

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

 <p>National Petrochemical Company(NPC)</p>	<b>Material Safety Data Sheet (MSDS)</b> According to the Directives 91/155/CEE-2001/58/CE-ISO 11014-1 GR.J/ Y.F	Page: 2 of 7 Revision Number: 1
	Product Name: <p style="text-align: center;"><b>LAB (linear alkyl benzene)</b></p>	 <p style="text-align: center;"> <b>Reactivity</b>  <b>Flammability</b>  <b>Health</b> </p>

#### 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:**

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

 <p>National Petrochemical Company(NPC)</p>	<b>Material Safety Data Sheet (MSDS)</b> According to the Directives 91/155/CEE-2001/58/CE-ISO 11014-1 GR./Y.F	Page: 3 of 7 Revision Number: 1
	Product Name: <p style="text-align: center;"><b>LAB</b> <b>(linear alkyl benzene)</b></p>	 <b>Reactivity</b> <b>Flammability</b> <b>Health</b>



## 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)



 <p>National Petrochemical Company(NPC)</p>	<p align="center"><b>Material Safety Data Sheet (MSDS)</b></p> <p align="center">According to the Directives 91/155/CEE-2001/58/CE-ISO 11014-1 GR.J/ Y.F</p>	<p>Page: 4 of 7</p>
	<p>Product Name:</p> <p align="center"><b>LAB (linear alkyl benzene)</b></p>	<p>Revision Number: 1</p>
		 <p align="center"> <b>Reactivity</b>  <b>Flammability</b>  <b>Health</b> </p>

## 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>

 <p>National Petrochemical Company(NPC)</p>	<b>Material Safety Data Sheet (MSDS)</b> According to the Directives 91/155/CEE-2001/58/CE-ISO 11014-1 GR.J/ Y.F	Page: 5 of 7 Revision Number: 1
	Product Name: <p style="text-align: center;"><b>LAB (linear alkyl benzene)</b></p>	 <p style="text-align: center;"> <b>Reactivity</b>  <b>Flammability</b>  <b>Health</b> </p>

## 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.



 <p>National Petrochemical Company(NPC)</p>	<b>Material Safety Data Sheet (MSDS)</b> According to the Directives 91/155/CEE-2001/58/CE-ISO 11014-1 GR.J/ Y.F	Page: 6 of 7 Revision Number: 1
	Product Name:  <p style="text-align: center;"><b>LAB</b> <b>(linear alkyl benzene)</b></p>	 <p style="text-align: center;"> <b>Reactivity</b>  <b>Flammability</b>  <b>Health</b> </p>

#### 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

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

## 16. OTHER INFORMATION

None

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

### *Disclaimer of liability:*

*The information in this MSDS was obtained from different sources, which National Petrochemical Company (NPC) and Iran Petrochemical Commercial Company (IPCC) believe, are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, National Petrochemical Company (NPC) and Iran Petrochemical Commercial Company (IPCC) do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.*