SUBSTANCE
Trade Name: LABSA
Commodity Code: HSN 2904-10-90/ 3402-11-90
Application: Intermediary for the production of detergent

COMPOSITION / INFORMATION ON INGREDIENTS
Chemical Nature: Substance
Chemical Name: Linear Alkyl Benzene Sulfonic Acid
Chemical formula: C₆H₄(SO₃H)(CS₂)_{10}CS₃
CAS No: 42615-29-2
EINECS No: 248-289-4
EC No: Not classified

HAZARDOUS IMPURITIES
Name: Sulfuric Acid
Concentration: 4-7% max
CAS No: 7664-93-9
EC No: 016-020-00-8
Symbol: C-Corrosive
R Phrases: R 35
R 35: Causes severe burns

HAZARDS IDENTIFICATION
Adverse human health effects:
This product is a corrosive substance. Contact with eyes may cause ocular lesions. Contact with skin may cause burns. It is seriously irritating to the mucous if swallowed. The product is harmful if ingested.

Environmental effects:
This product is not classified as dangerous to environment. The user is advised to use anyway good work practise and to avoid contamination of environment.

Other Effects:
The product is a strong acid which reacts exothermically with bases. Dilution with water produced heat.

FIRST AID MEASURES
Ingestion:
This product may cause severe irritation of the mouth and esophagus. If accidentally ingested, administer water. Do not induce vomiting. Call physician immediately.

Inhalation:
The product is not volatile. If under particular conditions, such as in the case of fire, fumes or aerosols are inhaled, remove the patient to a well-ventilated location and call a physician.

Eye Contact:
Flush eyes immediately with running water for a long time. Seek medical assistance immediately. The product may cause burns. Remove the contaminated clothing and wash with plenty of water and call a physician immediately.

Skin Contact:
The product may cause burns. Remove the contaminated clothing and wash with plenty of water and call a physician immediately.

Annotations to physician:
This product is a high foaming anionic surfactant. If Gastric lavage is necessary then use a silicone antifoam (dimethicone)
FIRE FIGHTING MEASURES

**General Information:**
This product poses little risk of ignition. If it happens to be involved in a fire, keep the tank cooled by means of water spray in order to avoid the decomposition of the product.

**Suitable extinguishing media:**
Water spray, foam, carbon dioxide

**Not suitable extinguishing media:**
None in particular

**Specific hazards:**
Combustion produces carbon dioxide, carbon monoxide and oxides of sulphur. When heated to decomposition, toxic fumes of SO₂ and SO₃ are emitted.

**Special equipment:**
For large fires wear self-contained breathing apparatus.

ACCIDENTAL SPILL MEASURES

**Personal precaution:**
Avoid direct contact with the product. Wear rubber gloves and rubber boots, face shield and keep close by a gas mask provided with filter for acid vapours.

**Environmental Precautions:**
Surround the spill with earth or sand. Collect the spilled material in suitable containers, if necessary absorb the spill onto inert materials. Dispose of material according to requirements of local law. In case of leaking into sewer inform local authorities.

**Methods for cleaning up:**
Neutralize the residue of the product with NaOH or with caustic lime. Wash the contaminated area with plenty of water. If excessive foam is produced use a silicone based antifoam to bring it down.

HANDLING & STORAGE

Avoid contact with product. While handling the product wear a protective apron, rubber or PVC gloves and a face shield. Handle the product in well ventilated areas. Neutralize with base under controlled conditions. Do not heat above 50 degrees C. Compatible materials: stainless steel, mild steel plastic material. Incompatible with galvanized steel, aluminium, copper alloys.

EXPOSURE CONTROLS / PERSONAL PROTECTION

**Precautionary measures:**
Installation of an eyewash fountain is recommended. Do not eat or drink onto work place, when handling the product use approved protective clothing, rubber or PVC gloves and a face shield.

**Personal Protective equipment:**
Wear safety goggles or face shield and approved protective clothing.

**Threshold limit value:**
Not established.

**Requirements for periodic health check-up:**
Specific measures are not foreseen.
**PHYSICAL & CHEMICAL PROPERTIES**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance @ 20°C</td>
<td>Brown viscous liquid</td>
</tr>
<tr>
<td>Odour</td>
<td>Odour of Sulphur</td>
</tr>
<tr>
<td>Nominal Active matter concentration</td>
<td>~ 90 % m/m</td>
</tr>
<tr>
<td>Average molecular mass</td>
<td>~ 326</td>
</tr>
<tr>
<td>Solubility @ 20°C</td>
<td></td>
</tr>
<tr>
<td>- water</td>
<td>Soluble</td>
</tr>
<tr>
<td>- ethanol</td>
<td>Soluble</td>
</tr>
<tr>
<td>- acetone</td>
<td>Not compatible</td>
</tr>
<tr>
<td>- aliphatic hydrocarbons</td>
<td>Insoluble</td>
</tr>
<tr>
<td>Mass density @ 20°C</td>
<td>~ 1.070 g/cm3</td>
</tr>
<tr>
<td>Viscosity @ 20°C</td>
<td>~ 1500 – 2000 mPa.s</td>
</tr>
<tr>
<td>Melting range</td>
<td>~ 10°C</td>
</tr>
<tr>
<td>Boiling point</td>
<td>~ 315°C</td>
</tr>
<tr>
<td>Vapour Pressure @ 20°C</td>
<td>below 0.15(0.001 mm Hg)</td>
</tr>
<tr>
<td>Vapour density (air=1)</td>
<td>Not applicable to this product</td>
</tr>
<tr>
<td>Flash point (PMcc)</td>
<td>&gt; 200 degrees C</td>
</tr>
<tr>
<td>Auto ignition temperature</td>
<td>Not applicable to this product</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>&gt; 100 degrees C</td>
</tr>
<tr>
<td>pH</td>
<td>~ 2</td>
</tr>
<tr>
<td>Explosion properties</td>
<td>Not pertinent to this product</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>Not pertinent to this product</td>
</tr>
</tbody>
</table>

**STABILITY & REACTIVITY**

- **Hazardous decomposition products:**
  - In case of overheating sulphur oxides can be emitted

- **Conditions to avoid:**
  - Do not heat above 80 – 90 degrees C

- **Materials to avoid:**
  - Neutralization with bases under controlled conditions

- **Intended use & transformation:**
  - The product maybe neutralized under controlled conditions with the appropriate base to produce the corresponding salt

**TOXICOLOGY INFORMATION**

- **Possible routes of penetration:** Ingestion & contact
- **Ingestion:** Corrosive substance, harmful for ingestion.
- **Oral acute LD50:** > 500 – 2000 mg/Kg.
- **Eye contact:** Severe eye irritant (rabbit). It may cause irreversible damage to the eyes.
- **Skin contact:** Contact may cause ulcerations.
- **Sensitization:** Not sensitizing
- **Inhalation:** Inhalation is possible only as an aerosol. Strong irritant to respiratory passages.
ECOLOGICAL INFORMATION

Environmental distribution: Water is likely to be the main transport medium for the chemical to estimate its possible environmental distribution.

Primary biodegradability: >90% (OCED screening test (sodium salt)) The surfactant fulfils the requisite minimum requirements of primary biodegradability.

Abiotic degradability: Not available

Ecotoxicity: 2.49 mg/O₂ mg

Chemical oxygen demand (COD): Not available

Low P o/w: Not applicable, surface active substance

BCF: Insufficient available information.

DISPOSABLE CONSIDERATIONS

Dispose of product in authorized places / methods in observance with current laws. It may be treated in a biological waste water treatment plant.

TRANSPORT INFORMATION

Un Classification number: 2586
Un name of delivering Product: Linear Alkyl Benzene Sulphonate (HLAS/LABS)

BY SEA (IMO/IMDG):
Class: 8 Page 8105 packing Group III Label: of class B - model H
MARPOL Annex II: Cat.C - Alkylbenzenesulphonic acid
MARPOL Annex III: --------- EmS: F-A, S-B MFAG: Table no.007

BY ROAD (ADR): Class 8, 34 degrees C
Identification number on the plate: 80/2586
Packing group III label 8

BY RAIL (RID): Class 8; 34 degrees C
Identification number on the plate: 80/2586
Packing group III Label 8

BY AIR (ICAO/IATA) Class 8

REGULATORY INFORMATION

Classification and Labelling

PROVISIONAL

Symbols of hazard

Risk phrases:
R22 – Harmful if swallowed
R34 – Causes burns

SAFETY ADVICES:
S26 – In case of contact with eyes, rinse immediately with plenty of water and seek medical help.
S28 – after contact with skin, wash immediately with plenty of water.
S36/37/39 – Wear suitable protective clothing, gloves and eye/face protection.