PRODUCT AND COMPANY IDENTIFICATION

Product Name: KELA
Product Description: Fatty Alcohol Ethoxylate
CAS No.: 68002-97-1
Product Formulation: Not Available.
Common Names: -Dodecyl poly(oxyethylene) ether; Ethoxylated lauryl alcohol; Lauromacrogol; Lauryl alcohol ethoxylated; Lauryl poly(oxyethylene) ether; Lauryl polyethylene glycol ether; Oxyethylenated dodecyl alcohol; Poly(ethylene oxide) dodecyl ether; Poly(oxyethylene) monolauryl ether; Polyethoxylated dodecanol; Polyethylene glycol dodecyl ether; Polyethylene glycol lauryl ether; Polyoxyethylene dodecanol; Polyoxyethylene lauric alcohol
Chemical Family: Nonionic Surfactants
Manufacturer: Kimiagaran Emrooz Chemical Ind.
Tel: 021-22878464
Fax: 021-22878344
Home Page: www.kimyagaran.com

2. COMPOSITION

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Wt.%</th>
<th>CAS No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lauryl-Myristryl alcohol Ethoxylate</td>
<td>Min. 99.9</td>
<td>112-53-8</td>
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3. HAZARDS IDENTIFICATION

Emergency Overview: Mild primary irritant.
Potential Health Effects:
Eye: Accidental exposure to the eyes may produce a mild but transient irritation.
Skin: Mild, primary skin irritation may occur with prolonged or repeated contact.
Heated product may cause thermal burns if contacted.
Inhalation: No harmful effects expected at ambient temperature. May elicit pulmonary irritation if mist or vapors are formed.
Ingestion: May cause gastrointestinal irritation.
If product is heated, vaporization can occur. Eye, skin, and upper respiratory irritation can occur.

4. FIRST AID MEASURES

Swallowed: Seek physician attention immediately. Vomit can not be induced without medical orientation. In case of vomit, keep head lower than hips to prevent product aspiration.
Eye: Flush eyes with plenty of water for at least 15 minutes, with eyelids held open. Call a physician if irritation persists.

Skin: Remove contaminated clothing and flush skin with plenty of water for at least 15 minutes. Call a physician if irritation persists.

Inhaled: Remove victim from exposure to fresh air. Give oxygen if necessary and call a physician if discomfort persists.

5. FIRE-FIGHTING MEASURES
Extinguishing Media:
Small fires: CO₂, dry chemical or water fog.
Large fires: Foam
Stable under normal conditions of use and storage. Keep far away from heat and ignition sources. Avoid contact with strong oxidizing agents and compound with high affinity for hydroxyl groups. May emit irritating ashes when involved in a fire. Cool containers with flooding quantities of water until well after fire is out.

6. ACCIDENTAL RELEASE MEASURES
Personal Precautions: Wear protective clothing. Wear an appropriate respirator if mist or vapor is generated.
Environmental Precautions: Dike flow of spilled material using soil or sandbags to minimize contamination of drains, surface and ground waters.
Procedures for Spill/Leak Clean-up: Ventilate area and eliminate all ignition sources. Contain spill. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers for disposal.

7. HANDLING AND STORAGE
Handling: Handle in accordance with good hygiene and safety procedures. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Since empty containers contain product residue, follow all hazard warnings and precautions even after container is emptied. Keep away from sources of ignition.
Storage: Keep away from heat, sparks or open flames. Keep away from possible contact with incompatible substances. Store in a cool dry place. Suitable for storing in most common vessels including stainless steel, zinc-type, spray-on linings, flaked polyester lining.
8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Protective Clothing: Safety glasses, goggles, or face shield recommended to protect eyes from mists or splashing.
Respiratory Protection: If vapors or mists are generated.
Other Protective Measures: Employees must practice good personal hygiene, washing exposed areas of skin several times daily and laundering contaminated clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Fatty Alcohol($C_{12-14}$) - 2EO
Appearance at 25˚C: Colorless liquid
Viscosity at 25˚C, cP: 20˚C
Density at 25˚C, g/ml: 0.85-0.90
pH (5% in water): 5-7
HLB, calculated: 6-6.4
Water Solubility: Sparingly Soluble

Fatty Alcohol($C_{12-14}$) - 3EO
Appearance at 25˚C: Colorless liquid
Viscosity at 25˚C, cP: 30
Density at 25˚C, g/ml: 0.85-0.95
pH (5% in water): 5-7
HLB, calculated: 8-8.2
Water Solubility: Sparingly Soluble

Fatty Alcohol($C_{12-14}$) - 7EO
Appearance at 25˚C: Colorless liquid
Viscosity at 25˚C, cP: 51
Density at 25˚C, g/ml: 0.96-0.100
pH (5% in water): 5-7
HLB, calculated: 12.4
Water Solubility: Soluble

Fatty Alcohol($C_{12-14}$) - 10EO
Appearance at 25˚C: White paste
Viscosity at 25˚C, cP: 27
Density at 25˚C, g/ml: 0.99
pH (5% in water): 5-7
HLB, calculated: 13.9
Water Solubility: Soluble
Fatty Alcohol(C\textsubscript{12-C\textsubscript{14}}) - 20EO  
Appearance at 25°C: White Solid  
Viscosity at 25°C, cP: 62.25  
Density at 25°C, g/ml: 1.024  
\textit{pH} (5% in water): 5-7  
HLB, calculated: 16.4  
Water Solubility: Soluble

Fatty Alcohol(C\textsubscript{12-C\textsubscript{14}}) - 40EO  
Appearance at 25°C: White Solid  
Viscosity at 25°C, cP: 89  
Density at 25°C, g/ml: 1.038  
\textit{pH} (5% in water): 5-7  
HLB, calculated: 18  
Water Solubility: Soluble

10. STABILITY AND REACTIVITY  
General: This product is stable in normal condition  
\textbf{Hazardous Decomposition Products}: Combustion produces carbon monoxide, carbon dioxide along with thick smoke.

11. TOXICOLOGICAL INFORMATION  
No information available at this time.

12. ECOLOGICAL INFORMATION  
No information available.

13. DISPOSAL CONSIDERATIONS  
\textbf{DISPOSAL IS TO BE PERFORMED IN COMPLIANCE WITH LOCAL REGULATIONS}. Do not dispose of via sinks, drains or into the immediate environment.
14. TRANSPORT INFORMATION
Proper Shipping Name Environmentally hazardous substance, liquid.
UN No.: 3082

15. OTHER INFORMATION
This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.