SECTION 1  IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE
COMPANY/UNDERTAKING

Trade name  ALFONIC® 1412-7 Ethoxylate
Synonyms  Ethoxylated Alcohol, Laureth-7
Use  Detergent, Industrial & Institutional cleaning, Industrial use
Company  Sasol Chemicals (USA) LLC
(an affiliate of Sasol Chemicals North America LLC)
Address  12120 Wickchester Lane   Houston TX 77079
Telephone  CHEMTREC North America Transportation Emergency (24-hr) (800) 424-9300
CHEMTREC World Wide (703) 527-3887
Other Emergencies (24-hr) (337) 494-5142
SDS and Product Information (8:00am-4:30pm CST) (281) 588-3491
Health and Safety Information (7:30am-4:00pm CST) (281) 588-3492
E-mail address  SasolElectronicSDS@us.sasol.com

SECTION 2  HAZARDS IDENTIFICATION

OSHA/GHS Hazards  Serious eye damage  Category 1
Acute aquatic toxicity  Category 1
Chronic aquatic toxicity  Category 3

LABEL ELEMENTS

Hazard symbols

Signal word  Danger

Hazard statements  H318  Causes serious eye damage.
H400  Very toxic to aquatic life.
H412  Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention  P280  Wear eye protection/ face protection.
            P273  Avoid release to the environment.

Response  P305 + P351 + P338  IF IN EYES: Rinse cautiously with water for several minutes.
ALFONIC® 1412-7 Ethoxylate

Remove contact lenses, if present and easy to do. Continue rinsing. 
P310   Immediately call a POISON CENTER/doctor. 
P391   Collect spillage. 

Disposal P501 Dispose of contents/ container to an approved waste disposal plant. 

Additional advice 
This product may contain residual levels of alcohols which, even under normal handling conditions, may smell and irritate the eyes, nose, and throats of some individuals. 

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Weight percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohols, C10-16, ethoxylated</td>
<td>68002-97-1</td>
<td>100</td>
</tr>
</tbody>
</table>

See Section 8 for Exposure Guidelines and Section 15 for Regulatory Classifications. 

SECTION 4 FIRST AID MEASURES

**Eye contact** 
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. 

**Skin contact** 
Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. When symptoms persist or in all cases of doubt seek medical advice. Wash contaminated clothing before re-use. 

**Inhalation** 
Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Call a physician immediately. 

**Ingestion** 
If swallowed, call a poison control centre or doctor immediately. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. 

SECTION 5 FIREFIGHTING MEASURES

**FLAMMABLE PROPERTIES**
**Fire/explosion** 
NFPA Class IIIB combustible liquid. 

**Suitable extinguishing media** 
Water spray, Foam, Dry chemical, Carbon dioxide (CO2) 

**Protective equipment and precautions for firefighters** 
Wear self-contained breathing apparatus for firefighting if necessary. 

**Further information** 
Keep containers and surroundings cool with water spray. Do not use a solid water stream as it may scatter and spread fire. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. 

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SECTION 6 ACCIDENTAL RELEASE MEASURES

Methods and materials for containment and cleaning up
Evacuate personnel to safe areas. Remove all sources of ignition. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Do not flush into surface water or sanitary sewer system.

SECTION 7 HANDLING AND STORAGE

Safe handling advice
Take precautionary measures against static discharges.

Storage/Transport pressure
Ambient

Load/Unload temperature
32 - 49 °C
90 - 120 °F

Storage and handling materials
Suitable: Carbon steel coated with baked phenolic. Any moisture may cause rusting of carbon steel. If product is moisture free, uncoated carbon steel tanks.

Further information on storage conditions
Mix thoroughly before use. When stored in the liquid form, ethoxylates should be padded with a dry inert gas, such as nitrogen, to prevent oxygen or air from entering the tank. Prolonged storage in the presence of air or oxygen may cause product degradation. Oxidation is not expected when stored under a nitrogen atmosphere. Inert gas blanket and breathing system needed to maintain color stability. Use dry inert gas having at least -40°C (-40°F) dew point.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING MEASURES
Ensure adequate ventilation, especially in confined areas. Trace amounts of ethylene oxide may be present in the product and could accumulate in vapor spaces of storage or transport vessels.

PERSONAL PROTECTIVE EQUIPMENT

Eyes
Wear as appropriate: Goggles, Face-shield

Skin
Full protective clothing, chemical boots, and chemical gloves. High standards of skin care and personal hygiene should be exercised at all times.

Inhalation
Use respirator when performing operations involving potential exposure to vapour of the product. Use NIOSH approved respiratory protection.

EXPOSURE GUIDELINES
There are no exposure limits established for this product. Trace amounts of ethylene oxide may be present in this product. The ethylene oxide in this product is not expected to result in
significant exposures or present a health hazard.

### SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appearance</strong></td>
<td>liquid;</td>
</tr>
<tr>
<td><strong>Colour</strong></td>
<td>Clear to slightly hazy</td>
</tr>
<tr>
<td><strong>Form</strong></td>
<td>liquid</td>
</tr>
<tr>
<td><strong>Odour</strong></td>
<td>sweet pungent</td>
</tr>
<tr>
<td><strong>Odour Threshold</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Flash point</strong></td>
<td>166 °C, 330 °F; PM;</td>
</tr>
<tr>
<td><strong>Flammability</strong></td>
<td>Upper explosion limit: approximately 0.9 % (V)</td>
</tr>
<tr>
<td></td>
<td>Lower explosion limit: approximately 0.1 % (V)</td>
</tr>
<tr>
<td><strong>Boiling point/boiling range</strong></td>
<td>&gt; 148 °C, 298 °F;</td>
</tr>
<tr>
<td><strong>Melting point/range</strong></td>
<td>19 - 25 °C, 66 - 77 °F;</td>
</tr>
<tr>
<td><strong>Auto-ignition temperature</strong></td>
<td>349 °C, 660 °F;</td>
</tr>
<tr>
<td><strong>Decomposition temperature</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Flammability (solid, gas)</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Vapour pressure</strong></td>
<td>0.16 hPa @ 93 °C, 200 °F;</td>
</tr>
<tr>
<td><strong>Vapour density</strong></td>
<td>17 - 18</td>
</tr>
<tr>
<td><strong>Density</strong></td>
<td>0.970 g/cm3 @ 39 °C, 102 °F; AADT-006;</td>
</tr>
<tr>
<td><strong>Specific gravity</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Water solubility</strong></td>
<td>completely miscible</td>
</tr>
<tr>
<td><strong>Viscosity</strong></td>
<td>35 cSt @ 38 °C, 104 °F;</td>
</tr>
<tr>
<td><strong>pH</strong></td>
<td>6 - 8</td>
</tr>
</tbody>
</table>
Evaporation rate  No data available
Partition coefficient: n-octanol/water  No data available

SECTION 10  STABILITY AND REACTIVITY

Reactivity  Stable at normal ambient temperature and pressure.
Chemical stability  No decomposition if stored and applied as directed.
Conditions to avoid  Reacts slowly with air or oxygen. Storage under heated conditions in the presence of air or oxygen increases reaction rate. For example, after storing at 95°F/35°C for 30 days in the presence of air, there is measureable oxidation of the ethoxylate. Lower temperatures will allow for longer storage time and higher temperatures will shorten the storage time if stored under an air or oxygen atmosphere.
Hazardous decomposition products  When storing this product in air or oxygen, decomposition may occur, generating vapors which could be irritating. Ensure adequate ventilation, especially in confined areas. Oxidation is not expected when stored under a nitrogen atmosphere.
Materials to avoid  Can react with strong oxidizers, inorganic acids, and halogens.
Hazardous polymerisation  None.

SECTION 11  TOXICOLOGICAL INFORMATION

Additional Remarks  Information given is based on data on this product.
Acute dermal toxicity  LD50 Rabbit: 3,870 mg/kg  Test substance: ALFONIC® 1412-7 Ethoxylate
Acute inhalation toxicity  LC50 value expected to exceed the saturated vapor concentration in air.
Acute oral toxicity  LD50 Rat: 2,750 mg/kg  Test substance: ALFONIC® 1412-7 Ethoxylate
Skin corrosion/irritation  Primary irritation (Rabbit): 24 hours; 4.4 (Max. score is 8.0.)  Test substance: ALFONIC® 1412-7 Ethoxylate
Serious eye damage/eye irritation  Primary irritation (Rabbit): 50.8 (Max. score is 110.)  Test substance: ALFONIC® 1412-7 Ethoxylate  Causes serious eye damage.
Respiratory or skin sensitisation: No data available

Germ cell mutagenicity:
- Genotoxicity in vitro: No data available
- Genotoxicity in vivo: No data available
- Assessment Mutagenicity: No data available

Reproductive toxicity:
- Reproductive toxicity: No data available
- Assessment Reproductive toxicity: No data available
- Teratogenicity: No data available
- Assessment teratogenicity: No data available

STOT - single exposure: No data available

STOT - repeated exposure: No data available

Aspiration toxicity: No data available

Carcinogenicity:
- Assessment carcinogenicity:
  No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

SECTION 12  ECOLOGICAL INFORMATION

Aquatic toxicity: Very toxic to aquatic life. Harmful to aquatic life with long lasting effects.

Toxicity to fish: No data available

Toxicity to aquatic invertebrates:
- LC50 (Daphnia (water flea)) 48 hours: 0.6 mg/l
- Test substance: ALFONIC® 1412-7 Ethoxylate

Toxicity to algae:
- EC10 (Scenedesmus) 72 hours: > 0.1 - 1 mg/l
- Category approach
SAFETY DATA SHEET

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Chronic toxicity to fish  No data available
Chronic toxicity to aquatic invertebrates  No data available
Biodegradation  Product will biodegrade rapidly in the environment especially under waste treatment plant conditions.
OECD 302 Modified Semi-continuous activated sludge (SCAS) 100 %
Test substance: NOVEL® 1412-7 Ethoxylate
Bioaccumulative potential  No data available
Mobility in soil  No data available
Other adverse effects  No data available

SECTION 13  DISPOSAL CONSIDERATIONS

Waste Code  Any unused product or empty containers may be disposed of as non-hazardous in accordance with state and federal requirements. Re-evaluation of the product may be required by the user at the time of disposal, since the product uses, transformations, mixtures, contamination, and spillage may change the classification. If the resulting material is determined to be hazardous, please dispose in accordance with state and federal (40 CFR 262) hazardous waste regulations.
Disposal methods  Dispose of only in accordance with local, state, and federal regulations.
Empty containers.  Empty containers retain product residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Empty drums should be completely drained, triple-rinsed, properly bunged and promptly returned to a drum reconditioner, or properly disposed.

SECTION 14  TRANSPORT INFORMATION

DOT  UN 3082, Environmentally hazardous substance, liquid, n.o.s.(Alcohol C12-16 poly (1-6) ethoxylate), 9, III , Marine pollutant
This product is regulated as a hazardous material according to the Department of Transportation only in bulk quantities (greater than 119 gallons per package).
IATA  UN 3082, Environmentally hazardous substance, liquid, n.o.s.(Alcohol C12-16 poly (1-6) ethoxylate), 9, III
IMDG UN 3082, Environmentally hazardous substance, liquid, n.o.s., (Alcohol C12-16 poly (1-6 ethoxylate), 9, III, Marine pollutant
This product is regulated as a Marine Pollutant when shipped by water in all quantities according to the IMDG Code.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Remarks No data available

SECTION 15 REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

TSCA Inventory Listing

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohols, C10-16, ethoxylated</td>
<td>68002-97-1</td>
</tr>
</tbody>
</table>

SARA 302 Status

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Weight percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SARA 311/312 Classification

"Immediate (acute) health hazard"

SARA 313 Chemical

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Weight percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

US. EPA CERCLA Hazardous Substances (40 CFR 302)

<table>
<thead>
<tr>
<th>Components</th>
<th>Reportable Quantity</th>
<th>Weight percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>none</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

INTERNATIONAL REGULATIONS

WHMIS Classification

<table>
<thead>
<tr>
<th>Serious eye damage</th>
<th>Category 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute aquatic toxicity</td>
<td>Category 1</td>
</tr>
<tr>
<td>Chronic aquatic toxicity</td>
<td>Category 3</td>
</tr>
</tbody>
</table>
SAFETY DATA SHEET

ALFONIC® 1412-7 Ethoxylate

European Union

This surfactant complies with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.

Classification according to Regulation (EU) 1272/2008.

- Serious eye damage, Category 1
- Acute aquatic toxicity, Category 1
- Chronic aquatic toxicity, Category 3

Australia. Inventory of Chemical Substances (AICS) Listed

Japan. Inventory of Existing and New Chemical Substances (ENCS) Listed

Japan. ISHL - Inventory of Chemical Substances Listed

Canada. Domestic Substances List (DSL) Inventory Listed

Canada. Non-Domestic Substance Listing (NDSL) Not listed

Philippines. Inventory of Chemicals / Chemical Substances (PICCS) Listed

Korea. Existing Chemicals Inventory (KECI) Listed

China. Inventory of Existing Chemical Substances (IECSC) Listed

Mexico Not listed

New Zealand. Inventory of Chemical Substances Listed

Switzerland Listed

Taiwan. National Existing Chemical Inventory (NECI) Listed

Please note: The names and CAS numbers which are used for this product in the stated inventories may deviate from the information which is listed in Section 3.

STATE REGULATIONS

California Prop. 65

Components

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene Oxide</td>
<td>75-21-8</td>
</tr>
</tbody>
</table>

Sasol Chemicals (USA) LLC’s ethoxylates may contain detectable quantities of ethylene oxide which is a chemical on the California Proposition 65 list. The level is typically below 1.0 ppm, although it may vary. The manufacturing process is controlled to reduce the residual ethylene oxide content.
### SECTION 16 OTHER INFORMATION

#### HAZARD RATINGS

<table>
<thead>
<tr>
<th></th>
<th>Health</th>
<th>Flammability</th>
<th>Physical Hazard/ Instability</th>
</tr>
</thead>
<tbody>
<tr>
<td>HMIS®</td>
<td>3</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>NFPA</td>
<td>3</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

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