**SECTION 1: PRODUCT AND COMPANY IDENTIFICATION**

**Product identifier**
- Chemical Name: Mixture
- Trade name: NAXAN® BFL
- CAS No.: Mixture

**Relevant identified uses of the substance or mixture and uses advised against**
- Identified use(s): Surfactant
- Uses advised against: None

**Details of the supplier of the safety data sheet**
- Company Identification: Nease Co. LLC
  - 10740 Paddys Run Road
  - Harrison, OH 45030
- Telephone: (513) 738-1255
- Telephone (Product Information): (888) 762-7373
- Fax: (513) 587-2828
- E-Mail (competent person): techservice@neaseco.com

**Emergency telephone number**
- Emergency Phone No.: (513) 738-1255
- CHEMTREC 24 hr. (800) 424-9300

**SECTION 2: HAZARDS IDENTIFICATION**

**Classification of the substance or mixture**
- OSHA HCS (29 CFR 1910.1200): Eye Dam. 1; Skin Irrit. 2

**Label elements**
- Hazard Symbol

**Signal word(s)**
- DANGER

**Hazard statement(s)**
- Causes serious eye damage.
- Causes skin irritation.

**Precautionary statement(s)**
- Wear protective gloves/protective clothing/eye protection/face protection.
- Wash hands and exposed skin after use.
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

**Other hazards**
- Harmful to aquatic life. Not classified as PBT or vPvB.

**Additional Information**
- None
SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Composition/information on ingredients</th>
<th>%W/W</th>
<th>CAS No.</th>
<th>Hazard statement(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alkylated naphthalene sulfonate, sodium salt</td>
<td>35 - 45%</td>
<td>Trade Secret</td>
<td>Causes eye irritation.</td>
</tr>
<tr>
<td>Benzenesulfonic acid, C10-16-alkyl derivs., sodium salt</td>
<td>10 - 15%</td>
<td>68081-81-2</td>
<td>Harmful if swallowed. Causes skin irritation. Causes serious eye damage. Toxic to aquatic life. Harmful to aquatic life with long lasting effects.</td>
</tr>
<tr>
<td>Proprietary surfactant</td>
<td>&lt;1</td>
<td>Trade Secret</td>
<td>Causes skin irritation. Causes serious eye irritation. Toxic to aquatic life with long lasting effects.</td>
</tr>
<tr>
<td>Water</td>
<td>45 - 55%</td>
<td>7732-18-5</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

Additional Information – Substances in the product which may present a health or environmental hazard, or which have been assigned occupational exposure limits, are detailed below.
- Ethylene Oxide (CAS No. 75-21-8) - May accumulate in the head space of drums.

SECTION 4: FIRST AID MEASURES

Description of first aid measures

Inhalation
Remove to fresh air and keep at rest in a position comfortable for breathing. If breathing is laboured, administer oxygen. If breathing has stopped, apply artificial respiration.

Skin Contact
Wash affected skin with plenty of water. Continue to wash the affected area for at least 15 minutes. If skin irritation occurs: Get medical advice/attention.

Eye Contact
Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

Ingestion
Drink two glasses of water. Call a physician. If swallowed, and the victim is conscious and alert, induce vomiting immediately, as directed by medical personnel.

Most important symptoms and effects, both acute and delayed
None

Indication of any immediate medical attention and special treatment needed
None

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing media
-Suitable Extinguishing Media
Extinguish with waterspray, dry chemical, sand or carbon dioxide or foam.

-Unsuitable Extinguishing Media
None anticipated.

Special hazards arising from the substance or mixture
None anticipated.

Advice for fire-fighters
Fire fighters should wear complete protective clothing including self-contained breathing apparatus.
SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
Put on protective equipment before entering danger area.

Environmental precautions
Do not allow to enter drains, sewers or watercourses.

Methods and material for containment and cleaning up
Cover spills with inert absorbent material. Sweep spilled substances into containers. Transfer to a container for disposal.

Reference to other sections
None

Additional Information
None

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling
Do not get in eyes. Wash hands and exposed skin after use. This product may contain trace levels of Ethylene oxide (CAS No. 75-21-8), which may accumulate in the head space of containers. Establish monitoring systems for exposure assessment to comply with OSHA standard 29 CFR 1910.1047.

Conditions for safe storage, including any incompatibilities
- Storage Temperature
  Prevent from freezing. This product should be stored at a temperature greater than: 20°C (68°F). The product will precipitated at 10°C (50°F).
- Incompatible materials
  Keep away from oxidising agents. Keep container tightly closed and dry.

Specific end use(s)
Used in formulation of institutional and industrial cleaners

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Occupational exposure limits

<table>
<thead>
<tr>
<th>SUBSTANCE</th>
<th>CAS No.</th>
<th>LTEL (8 hr TWA ppm)</th>
<th>STEL (ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>PEL (OSHA)</td>
<td>TLV (ACGIH)</td>
</tr>
<tr>
<td>Ethylene Oxide*</td>
<td>75-21-8</td>
<td>1 ppm</td>
<td>1 ppm</td>
</tr>
</tbody>
</table>

* May accumulate in the headspace of drums. OSHA Action Level = 0.5 ppm as an 8-hour time-weighted average. Refer to OSHA 29 CFR 1910.1047.

Recommended monitoring method
NIOSH 1614

Exposure controls
Not normally required.

Personal protection equipment

Eye/face protection
Wear protective eyewear (goggles, face shield, or safety glasses).

Skin protection (Hand protection/ Other)
The following to be used as necessary: Gloves (Neoprene or Natural rubber).
Respiratory protection

No personal respiratory protective equipment normally required. Avoid generation of mist. An approved dust mask should be worn if dust/mist is generated during handling.

Thermal hazards

Use gloves with insulation for thermal protection, when needed.

Environmental Exposure Controls

None.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>Amber to Brown</td>
</tr>
<tr>
<td>Odour</td>
<td>Hydrocarbon</td>
</tr>
<tr>
<td>Odour Threshold (ppm)</td>
<td>Not available</td>
</tr>
<tr>
<td>pH (Value)</td>
<td>7.5 - 10.5</td>
</tr>
<tr>
<td>Melting Point/Freezing Point (°C)</td>
<td>Not available</td>
</tr>
<tr>
<td>Boiling point/bubbling range (°C)</td>
<td>100 (212 °F)</td>
</tr>
<tr>
<td>Flash Point (°C)</td>
<td>121 (250 °F)</td>
</tr>
<tr>
<td>Evaporation rate (butyl acetate=1)</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Explosive limit ranges</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapour Pressure (Pascal)</td>
<td>Approximately that of Water</td>
</tr>
<tr>
<td>Vapour Density (Air=1)</td>
<td>Not available</td>
</tr>
<tr>
<td>Density (g/ml)</td>
<td>Not available</td>
</tr>
<tr>
<td>Solubility (Water)</td>
<td>Soluble</td>
</tr>
<tr>
<td>Solubility (Other)</td>
<td>Not available</td>
</tr>
<tr>
<td>Partition Coefficient (n-Octanol/water)</td>
<td>Not available</td>
</tr>
<tr>
<td>Auto Ignition Temperature (°C)</td>
<td>Not available</td>
</tr>
<tr>
<td>Decomposition Temperature (°C)</td>
<td>Not available</td>
</tr>
<tr>
<td>Kinematic Viscosity (cSt) @ 40°C</td>
<td>Not available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not available</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>Not oxidising</td>
</tr>
</tbody>
</table>

Other information

Not available.

SECTION 10: STABILITY AND REACTIVITY

Reactivity

Stable under normal conditions.

Chemical stability

Stable.

Possibility of hazardous reactions

None anticipated.

Conditions to avoid

Incompatible materials.

Incompatible materials

Reacts with oxidizers.

Hazardous Decomposition Product(s)

Carbon monoxide, Carbon dioxide, Sulphur oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes: Inhalation, Skin Contact, Eye Contact

Substances in preparations / mixtures

Alkylated naphthalene sulfonate, sodium salt (Trade secret) - By analogy with similar materials:

Acute toxicity

Oral: LD50 > 2000 mg/kg-bw

Irritation/Corrosivity

Causes eye irritation.

Sensitization

No information available

Repeated dose toxicity

No information available

Carcinogenicity

No information available
### Mutagenicity
No information available

### Toxicity for reproduction
No information available

### Benzenesulfonic acid, C10-16-alkyl derivs., sodium salt (CAS No.68081-81-2) - By analogy with similar materials:

#### Acute toxicity
Oral: LD50 = 1080 mg/kg-bw  
Dermal: LD50 >2000 mg/kg

#### Irritation/Corrosivity
Causes serious eye damage. Causes skin irritation.

#### Sensitization
None.

#### Repeated dose toxicity
NOAEL = 125 mg/kg bw/day (28 days, Oral gavage)  
LOAEL = 250 mg/kg bw/day (28 days, Oral gavage)

### Carcinogenicity
No evidence of carcinogenicity.

### Mutagenicity
There is no evidence of mutagenic potential.

### Toxicity for reproduction
None

This product may contain trace levels of Ethylene oxide (CAS No. 75-21-8), which may accumulate in the head space of containers. Establish monitoring systems for exposure assessment to comply with OSHA standard 29 CFR 1910.1047. Ethylene oxide is a known human carcinogen by NTP and a suspected human carcinogen by ACGIH®.

## SECTION 12: ECOLOGICAL INFORMATION

### Toxicity - Substances in preparations / mixture

#### Alkylated naphthalene sulfonate, sodium salt (CAS No. Trade secret)

- **Short term**: No information available  
- **Long Term**: No information available

#### Benzenesulfonic acid, C10-16-alkyl derivs., sodium salt (CAS No.68081-81-2) - By analogy with similar materials:

- **Short term**:  
  - LC50 (96 hour) = 1.67 mg/l (*Lepomis macrochirus*)  
  - EC50 (96 hour) = 3.5 mg/l (*Hyalella azteca*)

- **Long Term**:  
  - NOEC (90 day) = 0.25 mg/l (*Tilapia mossambica*)  
  - LOEC (90 day) = 0.51 mg/l (*Tilapia mossambica*)  
  - LOEC (28 day) = 4 mg/l (*P. parthenogenica*)

#### Persistence and degradability
Readily biodegradable.

#### Bioaccumulative potential
The substance has a low potential for bioaccumulation.

#### Mobility in soil
The substance has moderate mobility in soil.

#### Results of PBT and vPvB assessment
Not classified as PBT or vPvB.

#### Other adverse effects
None known.

#### Proprietary Surfactant 1 (CAS No. Trade Secret)

- **Short term**:  
  - EC50 (48 hour) = 20 mg/L (*Pseudokirchnerella subcapitata*)

- **Long Term**: No information available

#### Persistence and degradability
This product is predicted to degrade in soil and water.

#### Bioaccumulative potential
The product has low potential for bioaccumulation.

#### Mobility in soil
The product is predicted to have low mobility in soil.

#### Results of PBT and vPvB assessment
Not classified as PBT or vPvB.

#### Other adverse effects
None known.
SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods
Disposal should be in accordance with local, state or national legislation. Consult an accredited waste disposal contractor or the local authority for advice.

Additional Information
None known.

SECTION 14: TRANSPORT INFORMATION

<table>
<thead>
<tr>
<th>Land transport (U.S. DOT)</th>
<th>Sea transport (IMDG)</th>
<th>Air transport (ICAO/IATA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN number</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proper Shipping Name</td>
<td>Not classified as dangerous for transport.</td>
<td></td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Packing group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hazard label(s)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental hazards</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Special precautions for user</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:

SECTION 15: REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture:

TSCA (Toxic Substance Control Act) - Inventory Status: All components listed or polymer exempt.

Canada Domestic Substance List (NDSL/DSL)
- Listed NDSL: Alkylated naphthalene sulfonate, sodium salt
- Listed DSL: Benzenesulfonic acid, C10-16-alkyl derivs., sodium salt
- Listed DSL: Proprietary surfactant

Designated Hazardous Substances and Reportable Quantities (40 CFR 302.4):

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No.</th>
<th>Typical %wt.</th>
<th>RQ (Pounds)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium dodecylbenzenesulfonate</td>
<td>25155-30-0</td>
<td>&lt;3 %</td>
<td>1000</td>
</tr>
</tbody>
</table>

SARA 311/312 - Hazard Categories:
- Fire
- Sudden Release
- Reactivity
- Immediate (acute)
- Chronic (delayed)

SARA 313 - Toxic Chemicals (40 CFR 372):

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No.</th>
<th>Typical %wt.</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>--------</td>
<td>--------------</td>
</tr>
</tbody>
</table>

SARA 302 - Extremely Hazardous Substances (40 CFR 355):

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No.</th>
<th>Typical %wt.</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>--------</td>
<td>--------------</td>
</tr>
</tbody>
</table>

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: 1-16.

Date of preparation: November 22, 2014
Information contained in this publication or as otherwise supplied to Users is believed to be accurate and is given in good faith, but it is for the Users to satisfy themselves of the suitability of the product for their own particular purpose. Nease Co. LLC gives no warranty as to the fitness of the product for any particular purpose and any implied warranty or condition (statutory or otherwise) is excluded except to the extent that exclusion is prevented by law. Nease Co. LLC accepts no liability for loss or damage (other than that arising from death or personal injury caused by defective product, if proved), resulting from reliance on this information. Freedom under Patents, Copyright and Designs cannot be assumed.