SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product identifier
- Chemical Name: Mixture
- Trade name: NAXAN® PLUS 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.
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical attention.
- IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical attention.

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</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 eye irritation. Causes skin 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 irritation (redness, rash, blistering) develops, get medical attention.

Eye Contact
Immediately flush eyes for at least 15 minutes. Hold eye open and rinse slowly and gently with water. Continue rinsing. Get immediate medical attention.

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. Water spray should be used to cool containers.
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
Sweep spilled substances into containers. Flush the contaminated area with large amounts of water. Collect spillage and transfer to a container for disposal. If possible prevent water running into sewers.

Reference to other sections
None

Additional Information
None

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling
Keep container in a well-ventilated place. Keep container closed. Empty container may contain product residues. Ground/bond container and receiving equipment. Follow precautions for safe handling after container is empty. 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
  Not specified.
- Incompatible materials
  Keep away from oxidising agents. Keep container tightly closed and dry.

Specific end use(s)
Surfactant

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Occupational exposure limits

<table>
<thead>
<tr>
<th></th>
<th>PEL (OSHA)</th>
<th>TLV (ACGIH)</th>
<th>PEL (OSHA)</th>
<th>TLV (ACGIH)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene Oxide*</td>
<td>75-21-8</td>
<td>1 ppm</td>
<td>1 ppm</td>
<td>5 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

Appropriate engineering controls
Not normally required.

Personal protection equipment

Eye/face protection
The following to be used as necessary: Goggles giving complete protection to eyes. Full face shield.

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
Do not allow to enter drains, sewers or watercourses.

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>Slight Hydrocarbon</td>
</tr>
<tr>
<td>Odour Threshold (ppm)</td>
<td>Not available.</td>
</tr>
<tr>
<td>pH (Value)</td>
<td>7.5 - 10.5 (5% aqueous solution)</td>
</tr>
<tr>
<td>Melting Point / Freezing Point</td>
<td>Not available.</td>
</tr>
<tr>
<td>Boiling point/burning range</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not available.</td>
</tr>
<tr>
<td>Evaporation rate (butyl acetate=1)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Explosive limit ranges</td>
<td>Not available.</td>
</tr>
<tr>
<td>Vapour Pressure (Pascal)</td>
<td>Not available.</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)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Auto Ignition Temperature</td>
<td>Not available.</td>
</tr>
<tr>
<td>Decomposition Temperature</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 and acids.

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:

<table>
<thead>
<tr>
<th>Toxicity</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity</td>
<td>Oral: LD50 &gt; 2000 mg/kg-bw</td>
</tr>
<tr>
<td>Irritation/Corrosivity</td>
<td>Causes eye irritation.</td>
</tr>
<tr>
<td>Sensitization</td>
<td>No information available</td>
</tr>
<tr>
<td>Repeated dose toxicity</td>
<td>No information available</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>No information available</td>
</tr>
</tbody>
</table>
Mutagenicity
Toxicity for reproduction

No information available
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
Not to be expected. NOAEL for parental and developmental toxicity = 3000 ppm

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)
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.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods
Incinerate under approved controlled conditions, 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

UN number
Proper Shipping Name
Transport hazard class(es)
Packing group
Hazard label(s)
Environmental hazards
Special precautions for user

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; 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  [x] 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: 9
Date of preparation: February 24, 2015

Additional Information:

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