SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product identifier
Chemical Name
Trade name
CAS No.

Mixture
NAXAN® AAL
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 Irrit. 2b

Label elements
Hazard Symbol

WARNING

Signal word(s)

Hazard statement(s)
Causes eye irritation.

Precautionary statement(s)
Wash hands thoroughly after handling.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Other hazards
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>45-55%</td>
<td>Trade Secret</td>
<td>Causes eye irritation.</td>
</tr>
<tr>
<td>Proprietary surfactant</td>
<td>&lt;2%</td>
<td>Trade Secret</td>
<td>Causes skin irritation. Causes 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

Immediately flush eyes for at least 15 minutes. Hold eye open and rinse slowly and gently with water. Continue rinsing. If irritation develops and persists, get 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.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Put on protective equipment before entering danger area.

Environmental precautions

Prevent entry into drains.
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. 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
  Keep container tightly closed. Prevent from freezing. This product should be stored at a temperature greater than: 31°C (88°F). The product will precipitated at 21°C (70°F).

- 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>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

Appropriate engineering 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
Prevent entry into drains.
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>Mild aromatic</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 (°C) / Freezing Point (°C)</td>
<td>Not available</td>
</tr>
<tr>
<td>Boiling point/boiling range (°C)</td>
<td>100 (212 °F)</td>
</tr>
<tr>
<td>Flash Point (°C)</td>
<td>&gt;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>1.15 - 1.25 @ 25 °C (78 °C)</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>
<tr>
<td>Other information</td>
<td>Not available</td>
</tr>
</tbody>
</table>

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:

<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>
<tr>
<td>Mutagenicity</td>
<td>No information available</td>
</tr>
<tr>
<td>Toxicity for reproduction</td>
<td>No information available</td>
</tr>
</tbody>
</table>

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)

<table>
<thead>
<tr>
<th></th>
<th>Short term</th>
<th>Long Term</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No information available</td>
<td>No information available</td>
</tr>
</tbody>
</table>

Proprietary Surfactant (CAS No. Trade Secret)

<table>
<thead>
<tr>
<th></th>
<th>Short term</th>
<th>Long Term</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>EC50 (48 hour) = 1.821 mg/L (Daphnia magna, QSAR)</td>
<td>EC50 (48 hour) = 20 mg/L (Pseudokirchnerella subcapitata)</td>
</tr>
<tr>
<td></td>
<td>No information available</td>
<td>No information available</td>
</tr>
</tbody>
</table>

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></th>
<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>Not classified as dangerous for transport.</td>
<td>Not classified as dangerous for transport.</td>
<td>Not classified as dangerous for transport.</td>
</tr>
<tr>
<td>Proper Shipping Name</td>
<td>Not classified as dangerous for transport.</td>
<td>Not classified as dangerous for transport.</td>
<td>Not classified as dangerous for transport.</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>Not classified as dangerous for transport.</td>
<td>Not classified as dangerous for transport.</td>
<td>Not classified as dangerous for transport.</td>
</tr>
<tr>
<td>Packing group</td>
<td>Not classified as dangerous for transport.</td>
<td>Not classified as dangerous for transport.</td>
<td>Not classified as dangerous for transport.</td>
</tr>
<tr>
<td>Hazard label(s)</td>
<td>Not classified as dangerous for transport.</td>
<td>Not classified as dangerous for transport.</td>
<td>Not classified as dangerous for transport.</td>
</tr>
<tr>
<td>Environmental hazards</td>
<td>Not classified as dangerous for transport.</td>
<td>Not classified as dangerous for transport.</td>
<td>Not classified as dangerous for transport.</td>
</tr>
<tr>
<td>Special precautions for user</td>
<td>Not classified as dangerous for transport.</td>
<td>Not classified as dangerous for transport.</td>
<td>Not classified as dangerous for transport.</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: Proprietary surfactants

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>None</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
</tbody>
</table>

SARA 311/312 - Hazard Categories:

- Fire
- Sudden Release
- Reactivity
- Immediate (acute) [x]
- 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: September 1, 2014

Additional Information:

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