SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product identifier
Chemical Name
Alkylated naphthalene sulfonate, sodium salt
Trade name
NAXAN®Plus AAP
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)
technservice@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
May form combustible dust concentrations in air.

Label elements
Hazard Symbol

Signal word(s)
Hazard statement(s)
Causes eye irritation.
May form combustible dust concentrations in air

Precautionary statement(s)
Wash hands thoroughly after handling.
Keep work areas free of dust accumulation. Enclosed material handling equipment (conveyors, ventilation, precipitators, etc.) must be designed and maintained so as not to be a source of ignition.
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.
For professional users only.

Other hazards
Harmful to aquatic life. Harmful to aquatic life with long lasting effects.

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>&gt;90%</td>
<td>Trade Secret</td>
<td>Causes eye irritation. May form combustible dust concentrations in air</td>
</tr>
<tr>
<td>Proprietary surfactant</td>
<td>&lt;3%</td>
<td>Trade Secret</td>
<td>Causes serious eye irritation. Causes skin irritation. Toxic to aquatic life. Toxic to aquatic life with long lasting effects.</td>
</tr>
<tr>
<td>Sodium Sulfate</td>
<td>&lt;2%</td>
<td>7757-82-6</td>
<td>Not classified</td>
</tr>
<tr>
<td>Water</td>
<td>&lt;5%</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 eye irritation persists: Get medical advice/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: Remove all ignition sources. Avoid breathing dust. Put on protective equipment before entering danger area.

Environmental precautions: None anticipated.
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 tightly closed. Ground/bond container and receiving equipment.
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.

Conditions for safe storage, including any incompatibilities
-Storage Temperature
Store at room temperature.

-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. 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><strong>Appearance</strong></td>
<td>Powder/solid</td>
</tr>
<tr>
<td><strong>Colour</strong></td>
<td>Tan</td>
</tr>
<tr>
<td><strong>Odour</strong></td>
<td>Slight Hydrocarbon</td>
</tr>
<tr>
<td><strong>Odour Threshold (ppm)</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>pH (Value)</strong></td>
<td>7.5 - 10.5 (5% aqueous solution)</td>
</tr>
<tr>
<td><strong>Melting Point (°C) / Freezing Point (°C)</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Boiling point/boiling range (°C):</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Flash Point (°C)</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Evaporation rate (butyl Acetate=1)</strong></td>
<td>&lt;1</td>
</tr>
<tr>
<td><strong>Flammability (solid, gas)</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Explosive limit ranges</strong></td>
<td>May form combustible dust concentrations in air</td>
</tr>
<tr>
<td><strong>Vapour Pressure (Pascal)</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Vapour Density (Air=1)</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Density (g/ml)</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Solubility (Water)</strong></td>
<td>Soluble</td>
</tr>
<tr>
<td><strong>Solubility (Other)</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Partition Coefficient (n-Octanol/water)</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Auto Ignition Temperature (°C)</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Decomposition Temperature (°C)</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Kinematic Viscosity (cSt) @ 40°C</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Explosive properties</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Oxidising properties</strong></td>
<td>Not oxidising</td>
</tr>
<tr>
<td><strong>Other information</strong></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                    Strong 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 (CAS No. Trade secret)

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

<table>
<thead>
<tr>
<th>NTP</th>
<th>IARC</th>
<th>ACGIH</th>
<th>OSHA</th>
<th>NIOSH</th>
</tr>
</thead>
</table>

Mutagenicity                                No information available
Toxicity for reproduction                    No information available

Proprietary surfactant (CAS No. Trade secret) - By analogy with similar materials:

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Acute toxicity</strong></td>
<td>Oral: LD50 &gt; 2000 mg/kg-bw</td>
</tr>
<tr>
<td><strong>Dermal toxicity</strong></td>
<td>LD50 &gt; 2000 mg/kg-bw (rabbit)</td>
</tr>
</tbody>
</table>
Irritation/Corrosivity
Causes serious eye irritation. Causes skin irritation.

Sensitization
No information available

Repeated dose toxicity
No information available

Carcinogenicity
No information available

<table>
<thead>
<tr>
<th></th>
<th>NTP</th>
<th>IARC</th>
<th>ACGIH</th>
<th>OSHA</th>
<th>NIOSH</th>
</tr>
</thead>
</table>

Mutagenicity
No information available

Toxicity for reproduction
No information available

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

Short term
No information available

Long Term
No information available

Persistence and degradability
Biodegradable

Bioaccumulative potential
No information available.

Mobility in soil
No information available

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

Other adverse effects
None known.

Proprietary Surfactant (CAS No. Trade Secret) - By analogy with similar materials:

Short term
LC50 (96 hour) = 1 - 10 mg/l (Fish)
EC50 (48 hour) = 1 - 10 mg/l (Daphnia magna)
EC50 (72 hour) = 10 - 100 mg/l (Algae)

Long Term
No information available

Persistence and degradability
Readily biodegradable.

Bioaccumulative potential
Not available.

Mobility in soil
Not available.

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></td>
<td></td>
<td>Not classified as dangerous for transport</td>
</tr>
</tbody>
</table>

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 MARPOL 73/78 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 (DSL/NDSL)
- Listed NDSL: Alkylated naphthalene sulfonate, sodium salt
- Listed DSL: Sodium sulfate & 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>None</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
</tbody>
</table>

SARA 311/312 - Hazard Categories:
- [ ] Fire
- [ ] Sudden Release
- [x] 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: September 16, 2014

Additional Information:

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