SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product identifier
Chemical Name: Mixture
Trade name: Naxonac 817LF
CAS No.: 12645-31-7

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) Skin Corr. 1B; Eye Dam. 1; Met. Corr. 1

Label elements
Hazard Symbol

Signal Word(s)

Danger

Hazard Statement(s)
Causes severe skin burns and eye damage.
May be corrosive to metals.

Precautionary Statement(s)
Do not breathe dust/fume/gas/mist/vapors/spray.
Wear protective gloves/protective clothing/eye protection/face protection.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If irritation (redness, rash, blistering) develops, get medical attention.
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.

Other hazards
Not classified as PBT or vPvB.

Additional Information
None
SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous ingredient(s)</th>
<th>%W/W</th>
<th>CAS No.</th>
<th>Hazard statement(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-ethylhexyl ester phosphoric acid</td>
<td>&gt;80%</td>
<td>12645-31-7</td>
<td>Causes skin burns.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Causes serious eye damage.</td>
</tr>
<tr>
<td>Orthophosphoric acid</td>
<td>&lt;5%</td>
<td>7664-38-2</td>
<td>May be corrosive to metals.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Causes severe skin burns and eye damage</td>
</tr>
<tr>
<td>2-ethylhexanol</td>
<td>&lt;10%</td>
<td>104-76-7</td>
<td></td>
</tr>
<tr>
<td>Proprietary surfactant</td>
<td>&lt;15%</td>
<td>Trade Secret</td>
<td>Causes eye irritation</td>
</tr>
</tbody>
</table>

Additional Information - None

SECTION 4: FIRST AID MEASURES

Description of first aid measures

Inhalation
Remove victim to fresh air and keep at rest in a position comfortable for breathing. If breathing is labored, administer oxygen. If symptoms occur obtain medical attention.

Skin Contact
Wash affected skin with plenty of water. Remove contaminated clothing immediately. If irritation (redness, rash, blistering) develops, get medical attention.

Eye Contact
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.

Ingestion

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. Water spray should be used to cool containers.

-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. Avoid inhalation of vapours.

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

Contain spillages with sand, earth or any suitable adsorbent material. Transfer to a container for disposal or recovery. Do not use metal containers for spilled liquid. Wash the spillage area with water. 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 closed when not in use. Empty containers may contain residues. Do not use metal containers for storage as the phosphoric acid will react with the metal to liberate flammable hydrogen gas. Do not get in eyes, on skin, or on clothing.

Conditions for safe storage, including any incompatibilities
- Storage Temperature
  This product should be stored at a temperature greater than: 20°C (68°F).
- Incompatible materials
  Attacks many materials and clothing. 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>Orthophosphoric acid</td>
<td>7664-38-2</td>
<td>1 mg/m³</td>
<td>1 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 mg/m³ (STEL)</td>
<td>3 mg/m³</td>
</tr>
</tbody>
</table>

Recommended monitoring method
NIOSH 7908 (Non-Volatile Acids)

Exposure controls
Local exhaust 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). Chemical protection suit. Wear safety or chemical resistant shoes or boots. Check with protective equipment manufacturer's data.

Respiratory protection
No personal respiratory protective equipment normally required.

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
Appearance: Liquid
Colour: Clear / Yellow
Odour: Mild
Odour Threshold (ppm): Not available.

pH (Value): <3
Melting Point (°C) / Freezing Point (°C): Not available.
Boiling point/boiling range (°C): Not available.
Flash Point (°C): >100 (212 °F)
Evaporation rate: <1
Flammability (solid, gas): Not applicable.
Explosive limit ranges: Not available.
Vapour Pressure (Pascal): Not available.
Vapour Density (Air=1): Not available.
Density (g/ml): Not available.
Solubility (Water): Dispersible.
Solubility (Other): Not available.
Partition Coefficient (n-Octanol/water): Not available.
Auto Ignition Temperature (°C): Not available.
Decomposition Temperature (°C): Not available.
Kinematic Viscosity (cSt) @ 40°C: Not available.
Explosive properties: Not explosive.
Oxidising properties: Not oxidising.

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, reducing agents, and strong bases.
Hazardous Decomposition Product(s): Carbon monoxide, Carbon dioxide, phosphorous compounds.

SECTION 11: TOXICOLOGICAL INFORMATION
Exposure routes: Inhalation, Skin Contact, Eye Contact

Substances in preparations / mixtures
2-ethylhexyl ester phosphoric acid (CAS No. 12645-31-7)
Acute toxicity: Oral: LD50 = 2500 mg/kg-bw (rat)
Irritation/Corrosivity: Corrosive (Skin and Eyes)
Sensitization: Not available.
Repeated dose toxicity: NOAEL (42-54 days) <250 mg/kg (rat)
Carcinogenicity: No information available

<table>
<thead>
<tr>
<th>NTP No.</th>
<th>IARC No.</th>
<th>ACGIH No.</th>
<th>OSHA No.</th>
<th>NIOSH No.</th>
</tr>
</thead>
</table>

Mutagenicity: There is no evidence of mutagenic potential.
Toxicity for reproduction
Orthophosphoric acid (CAS No. 7664-38-2)
Acute toxicity: Oral: LD50 = 2600 mg/kg-bw
Inhalation: LC50 (1 hour) = 3846 mg/m³ (rabbit; mice; guinea pigs)
Irritation/Corrosivity: Corrosive (Skin and Eyes)
Sensitization: Not available.
Repeated dose toxicity: NOAEL (42-54 days) <250 mg/kg (rat)
Carcinogenicity
No information available

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

Mutagenicity
There is no evidence of mutagenic potential.

Toxicity for reproduction
NOAEL = 500 mg/kg (rat)

SECTION 12: ECOLOGICAL INFORMATION

Toxicity - Substances in preparations / mixtures
Not available.

- Short term – 2-ethylhexyl ester phosphoric acid
  - LC50: (96hr, Dario rerio) – 260 mg/L

- Long Term
  - No data.

Persistence and degradability
Not available.

Bioaccumulative potential
No data.

Mobility in soil
No data.

Results of PBT and vPvB assessment
Not available.

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>3265</td>
<td>3265</td>
<td>3265</td>
</tr>
<tr>
<td>Proper Shipping Name</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Packing group</td>
<td>III</td>
<td>III</td>
</tr>
<tr>
<td>Hazard label(s)</td>
<td>Corrosive</td>
<td>Corrosive</td>
</tr>
<tr>
<td>Environmental hazards</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Special precautions for user</td>
<td>None known.</td>
<td>None known.</td>
</tr>
</tbody>
</table>

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not established.

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 (DSL) - Listed

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>Orthophosphoric acid</td>
<td>&lt;5%</td>
<td>7664-38-2</td>
<td>5000</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: 1-16.

Date of preparation: December 9, 2015

Additional Information:

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