SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Chemical Name: Mixture
Trade name: NAXONAC® 184
CAS No.: 39464-69-2

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
Address: 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


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>Polyoxyethylene monooleyl ether phosphate</td>
<td>80-90%</td>
<td>39464-69-2</td>
<td>Causes skin irritation. 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. Causes severe skin burns and eye damage</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.


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>3 mg/m³</td>
</tr>
</tbody>
</table>

Recommended monitoring method
NIOSH 7908 (Non-Volatile Acids)

Exposure controls

Appropriate engineering 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

<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>Clear / Yellow</td>
</tr>
<tr>
<td>Odour</td>
<td>Mild</td>
</tr>
<tr>
<td>Odour Threshold (ppm)</td>
<td>Not available.</td>
</tr>
<tr>
<td>pH (Value)</td>
<td>&lt; 3</td>
</tr>
<tr>
<td>Melting Point (°C) / Freezing Point (°C)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Boiling point/bubbling range (°C)</td>
<td>Not available.</td>
</tr>
</tbody>
</table>
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) ≈1.03 @ 20°C
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.
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, 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
Polyoxyethylene monooleyl ether phosphate (CAS No. 39464-69-2) (By analogy with similar materials)

| Acute toxicity | Oral: LD50 > 2000 mg/kg-bw |
| Irritation/Corrosivity | Causes serious eye damage. Causes skin irritation. |
| Sensitization | No information available |
| Repeated dose toxicity | No information available |
| 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 No information available
Toxicity for reproduction No information available

Orthophosphoric acid (CAS No. 7664-38-2)

| Acute toxicity | Oral: LD50 = 2600 mg/kg-bw |
| 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

Polyoxyethylene monooleyl ether phosphate (CAS No. 39464-69-2) (By analogy with similar materials)

<table>
<thead>
<tr>
<th>Persistence and degradability</th>
<th>Readily biodegradable.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bioaccumulative potential</td>
<td>No data.</td>
</tr>
<tr>
<td>Mobility in soil</td>
<td>No data.</td>
</tr>
<tr>
<td>Results of PBT and vPvB assessment</td>
<td>Not available.</td>
</tr>
<tr>
<td>Other adverse effects</td>
<td>None known.</td>
</tr>
</tbody>
</table>

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>UN number</th>
<th>Land transport (U.S. DOT)</th>
<th>Sea transport (IMDG)</th>
<th>Air transport (ICAO/IATA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3264</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport hazard class(es)</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Packing group</td>
<td>III</td>
<td>III</td>
<td>III</td>
</tr>
<tr>
<td>Hazard label(s)</td>
<td>Corrosive</td>
<td>Corrosive</td>
<td>Corrosive</td>
</tr>
<tr>
<td>Environmental hazards</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Special precautions for user</td>
<td>None known.</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
- 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 26, 2014

Additional Information:

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