SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product identifier
Chemical Name: Benzene sulfonic acid, C10-16 alkyl derivs
Trade name: NAXSOFT® 98S
CAS No.: 68584-22-5

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

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 SWALLOWED: rinse mouth. Do NOT induce vomiting. Seek medical treatment. 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>Benzenesulfonic acid, C10-16-alkyl derivs</td>
<td>&gt;96%</td>
<td>68584-22-5*</td>
<td>Causes severe skin burns and eye damage.</td>
</tr>
<tr>
<td>Sulfuric Acid</td>
<td>&lt;2%</td>
<td>7664-93-9</td>
<td>Causes severe skin burns and eye damage.</td>
</tr>
</tbody>
</table>

*Predominately includes Dodecyl benzene sulfonic acid (CAS# 27176-87-0)

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.
- Benzene, C10-16 alkyl derives (68648-87-3) <2%

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 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: 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.

Ingestion: If ingested, rinse mouth. Do not induce vomiting. Seek medical treatment.

Most important symptoms and effects, both acute and delayed: Causes severe skin burns and eye damage.

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.
- Unsuitable Extinguishing Media: None anticipated.

Special hazards arising from the substance or mixture: Combustion or thermal decomposition will evolve toxic vapours.

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: 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. Cautiously neutralize remainder. Then wash away with plenty of 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  Do not get in eyes, on skin, or on clothing. Wear protective gloves / protective clothing / eye protection / face protection.

Conditions for safe storage, including any incompatibilities
- Storage Temperature  Store at room temperature.
- 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>
<th>Note:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>OSHA (PEL)</td>
<td>ACGIH (TLV)</td>
<td>OSHA (PEL)</td>
</tr>
<tr>
<td>Sulfuric acid</td>
<td>7664-93-9</td>
<td>1 mg/m³</td>
<td>0.2 mg/m³ (T)</td>
<td>----</td>
</tr>
</tbody>
</table>

Recommended monitoring method  NIOSH 5043

Exposure controls

Appropriate engineering controls  Provide adequate ventilation to ensure that the occupational exposure limit is not exceeded.

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, Butyl rubber, 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  Brown.
Odour  Mild Acidic.
Odour Threshold (ppm)  Not available.
\( \text{pH (Value)} \)  <2
Melting Point (°C) / Freezing Point (°C)  Not available.
Boiling point/boiling range (°C):  260 (>500°F)
Flash Point (°C)  >93 (200 °F)
Evaporation rate (butyl acetate=1) <1
Flammability (solid, gas) Not applicable.
Explosive limit ranges Not available.
Vapour Pressure (Pascal) Not available.
Vapour Density (Air=1) >1
Density (g/ml) 1.06
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 Avoid contact with heat and ignition sources.
Incompatible materials Reacts with -Alkalis. Heat is generated when mixed with water.
Hazardous Decomposition Product(s) Oxides of Sulphur and Hydrogen sulfide

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes: Inhalation, Skin Contact, Eye Contact

Substances in preparations / mixtures

Benzenesulfonic acid, C10-16-alkyl derivs (CAS No. 68584-22-5)

Acute toxicity (By analogy with similar materials) Oral: LD50 > 5 g/kg-bw
Dermal: LD50 >5 g/kg-bw
Inhalation: LC50 >1.9 mg/l (4 hr exposure)

Irritation/Corrosivity Corrosive (Skin and Eyes)
Sensitization It is not a skin sensitizer.

Repeated dose toxicity (By analogy with similar materials) NOAEL: = 500 mg/kg bw/day (29 days, oral, rat)
NOAEL = 49.5 mg/m3 (6 hours per day, 5 days/week for a total of 28 days, rat).

Carcinogenicity It is unlikely to present a carcinogenic hazard to man.

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

Mutagenicity (By analogy with similar materials) There is no evidence of mutagenic potential.
Toxicity for reproduction (By analogy with similar materials) Not to be expected.

Sulfuric acid (CAS No. 7664-93-9)

Acute toxicity Oral: LD50 = 2140 mg/kg-bw (rat)
Dermal: No data
Inhalation: LC50 = 0.37-0.42 mg/l (rat)

Irritation/Corrosivity Corrosive (Skin and Eyes)
Sensitization Skin sensitization has been reported in humans.
Repeated dose toxicity No data.
Carcinogenicity NOAEL (rat): ≥ 240 mg/kg (Fischer 344)
### SECTION 12: ECOLOGICAL INFORMATION

**Benzenesulfonic acid, C10-16-alkyl derivs (CAS No. 68584-22-5) - (By analogy with similar materials)**

**Short term**
- **LL50 (96 hour)**: >10000 mg/L (*Cyprinodon variegatus*)
- **EC50 (48 hour)**: >1000 mg/l (*Daphnia magna*, mobility)
- **EC50 (96 hour)**: >1000 mg/l (*Pseudokirchnerella subcapitata*)

**Long Term**
- Scientifically unjustified

**Persistence and degradability**
- Readily biodegradable.

**Bioaccumulative potential**
- The product has low potential for bioaccumulation.

**Mobility in soil**
- The substance has high mobility in soil.

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

**Sulfuric acid (CAS No. 7664-93-9)**

**Short term**
- **LC50 (96 hour)**: 42.0 mg/l (96 hour) (*Gambusia affinis*)
- **EC50 (24 hour)**: 29.0 mg/l (*Daphnia magna*)
- **EC50 (48 hour)**: 29 mg/l (*Pandalus montagui*)

**Long Term**
- Scientifically unjustified

**Persistence and degradability**
- Not readily biodegradable.

**Bioaccumulative potential**
- The substance has no potential for bioaccumulation.

**Mobility in soil**
- The substance has high 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>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>2586</td>
<td>Alkyl sulfonic acids, liquid with not more than 5 percent free sulfuric acid (Benzenesulfonic acid, C10-16 alkyl derivs.), RQ</td>
<td>Alkyl sulphonic acids, liquid with not more than 5 percent free sulphuric acid (Benzenesulphonic acid, C10-16 alkyl derivs.)</td>
<td>Alkyl sulphonic acids, liquid with not more than 5 percent free sulphuric acid (Benzenesulphonic acid, C10-16 alkyl derivs.)</td>
</tr>
<tr>
<td>2586</td>
<td>2586</td>
<td>2586</td>
<td>2586</td>
</tr>
</tbody>
</table>

**Transport hazard class(es)**
- 8

**Packing group**
- III

**Hazard label(s)**
- Corrosive

**Environmental hazards**
- No.

**Special precautions for user**
- None assigned

**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:** Not applicable
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>Dodecyl benzene sulfonic acid</td>
<td>27176-87-0</td>
<td>&gt;75</td>
<td>1,000</td>
</tr>
<tr>
<td>Sulfuric acid</td>
<td>7664-93-9</td>
<td>&lt; 2%</td>
<td>1,000</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>Sulfuric acid</td>
<td>7664-93-9</td>
<td>&lt; 2%</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>Sulfuric acid</td>
<td>7664-93-9</td>
<td>&lt; 2%</td>
</tr>
</tbody>
</table>

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: 1-16

Date of preparation: October 12, 2014

Additional Information:

HMIS (Hazardous Material Information System)

NFPA (National Fire Protection Association)

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