SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product identifier
Chemical Name
Phenolsulfonic acid
Trade name
Naxcat® P65D
CAS No.
1333-39-7

Relevant identified uses of the substance or mixture and uses advised against
Identified use(s)
Catalyst, Hydrotrope, Oilfield Additives
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. 1C; 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/vapours/spray.
Wear protective gloves/protective clothing/eye protection/face protection.
If SWALLOWED: rinse mouth. Do NOT induce vomiting.
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.
If ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.

Other hazards
Not classified as PBT or vPvB.

Additional Information
Contains residual phenol which is suspected of causing genetic defects to mammalian cells in vitro. However, given the corrosive / irritating nature of this product and the relatively low concentration of phenol present, this product is not considered to pose a mutagenic risk to humans.
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>Phenolsulfonic acid</td>
<td>60-70%</td>
<td>1333-39-7</td>
<td>May be corrosive to metals. Causes severe skin burns and eye damage.</td>
</tr>
<tr>
<td>Sulfuric acid</td>
<td>&lt;3%</td>
<td>7664-93-9</td>
<td>Causes severe skin burns and eye damage.</td>
</tr>
<tr>
<td>Water</td>
<td>25-40%</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.
- Phenol (CAS No. 108-95-2) <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.

Eye Contact
Immediately flush eyes for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.

Ingestion
Call a physician (or poison control centre immediately). Do not give anything by mouth to an unconscious person.

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.
- 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
None anticipated.

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. 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
Do not get in eyes, on skin, or on clothing.

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)
Catalyst, Hydrotrope, Oilfield Additives

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters
Occupational exposure limits

<table>
<thead>
<tr>
<th>SUBSTANCE</th>
<th>CAS No.</th>
<th>PEL (OSHA)</th>
<th>STEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric acid</td>
<td>7664-93-9</td>
<td>1 mg/m³</td>
<td>0.2 mg/m³ (T)</td>
</tr>
<tr>
<td>Phenol</td>
<td>108-95-2</td>
<td>5.0 ppm^</td>
<td>5.0^</td>
</tr>
</tbody>
</table>

LTEL: Long Term Exposure Limit; STEL: Short Term Exposure Limit

Recommended monitoring method
NIOSH 5043; NIOSH 2546

Exposure controls

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>Reddish/ Brown</td>
</tr>
<tr>
<td>Odour</td>
<td>Slight Phenolic Odour</td>
</tr>
<tr>
<td>Odour Threshold (ppm)</td>
<td>Not available.</td>
</tr>
<tr>
<td>pH (Value)</td>
<td>&lt;1.0</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>270 (518°F)</td>
</tr>
<tr>
<td>Flash Point (°C)</td>
<td>&gt;92 °C (&gt;198°F)</td>
</tr>
</tbody>
</table>

Revision: 16 May 2014
Evaporation rate: <1
Flammability (solid, gas): Not applicable.
Explosive limit ranges: Not available.
Vapour Pressure (Pascal): 0.357 @ 88°F (phenol)
Vapour Density (Air=1): >1
Density (g/ml): 1.35 @ 77°F
Solubility (Water): 100% at 77°F
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 strong alkalis. Avoid contact with bleach or other hypochlorites. May cause exothermic polymerization of furan resins. Generates heat of solution when dissolved in water and alcohols.
Hazardous Decomposition Product(s): Carbon monoxide, Carbon dioxide, Sulphur oxides, Acidic smoke

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes: Inhalation, Skin Contact, Eye Contact

Substances in preparations / mixtures
Phenolsulfonic acid (CAS No. 1333-39-7) (By analogy with similar materials)

Acute toxicity
Oral: LD50 ≥ 1104 mg/kg-bw
Dermal: LD50 > 2 g/kg-bw
Inhalation: LC50 > 100 mg= saturated (Vapor), 8 hour, rat

Irritation/Corrosivity: corrosive
Sensitization: It is not a skin sensitizer.
Repeated dose toxicity: NOAEL: > 500 mg/kg bw/day (28 days/week, oral, rat)
Carcinogenicity: It is unlikely to present a carcinogenic hazard to man. This is based on information currently 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. Residual phenol in this formulation is not expected to present a mutagenic risk given the corrosive / irritating nature of this product.

Toxicity for reproduction: No effects to the reproductive system.

Sulfuric acid (CAS No. 7664-93-9)
Acute toxicity
Oral: LD50= 2140 mg/kg-bw (rat)
Dermal: Not available.
Inhalation: LC50 = 0.37-0.42 mg/l (rat)
Irritation/Corrosivity
Corrosive (Skin and Eyes)

Sensitization
Skin sensitisation has been reported in humans.

Repeated dose toxicity
Not available.

Carcinogenicity
NOAEL (rat): > 240 mg/kg (Fischer 344)

<table>
<thead>
<tr>
<th>NTP</th>
<th>IARC</th>
<th>ACGIH</th>
<th>OSHA</th>
<th>NIOSH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listed</td>
<td>Group 1</td>
<td>Group 2A</td>
<td>No.</td>
<td>No.</td>
</tr>
</tbody>
</table>

Mutagenicity
There is no evidence of mutagenic potential.

Toxicity for reproduction
NOAEL: 20 mg/m³ (rabbit) (New Zealand White)
NOEL: 20 mg/m³ (rabbit) (New Zealand White)

SECTION 12: ECOLOGICAL INFORMATION

Phenolsulfonic acid (CAS No. 1333-39-7) (By analogy with similar materials)

Short term
LC50 (96 hour): >500 mg/L (Leuciscus idus melanotus)
EC50 (48 hour): >103 mg/l (Daphnia magna, mobility)
EC50 (96 hour): 70 mg/l (Pseudokirchnerella subcapitata)

Long Term
Not available

Persistence and degradability
According to OECD criteria the product is not readily biodegradable but inherently biodegradable.

Bioaccumulative potential
The substance has no potential for bioaccumulation.

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

Land transport (U.S. DOT)
UN number 2586
Proper Shipping Name ARYLSULFONIC ACIDS, LIQUID with not more than 5% free sulfuric acid
Transport hazard class(es) 8
Packing group III
Hazard label(s) Corrosive
Environmental hazards No
Special precautions for user None known.

Sea transport (IMDG)
UN number 2586
Proper Shipping Name ARYLSULFONIC ACIDS, LIQUID with not more than 5% free sulfuric acid
Transport hazard class(es) 8
Packing group III
Hazard label(s) Corrosive
Environmental hazards No
Special precautions for user None known.

Air transport (ICAO/IATA)
UN number 2586
Proper Shipping Name ARYLSULPHONIC ACIDS, LIQUID with not more than 5% free sulphuric acid
Transport hazard class(es) 8
Packing group III
Hazard label(s) Corrosive
Environmental hazards No
Special precautions for user None known.

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>None</td>
<td>----</td>
<td>----</td>
<td>----</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>Phenol</td>
<td>108-95-2</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; 3%</td>
</tr>
</tbody>
</table>

SECTION 16: OTHER INFORMATION

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

Date of preparation: May 16, 2014

Additional Information:

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