SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product identifier
Chemical Name: o,p-Toluenesulfonic acid
Trade name: Naxcat® 330L
CAS No.: 88-20-0 & 104-15-4

Relevant identified uses of the substance or mixture and uses advised against
Identified use(s): Catalyst for polymers and coatings.
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: DANGER

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 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. Immediately call a POISON CENTER or doctor/physician.

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>o,p - Toluenesulfonic acid</td>
<td>60-70%</td>
<td>88-20-0 104-15-4</td>
<td>May be corrosive to metals. Causes severe skin burns and eye damage.</td>
</tr>
<tr>
<td>Sulfuric acid</td>
<td>&lt;1%</td>
<td>7664-93-9</td>
<td>Causes severe skin burns and eye damage.</td>
</tr>
<tr>
<td>Water</td>
<td>45-55%</td>
<td>7732-18-5</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

Additional Information - None

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. 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: 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: 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. 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 for paints and coatings.

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>PEL (OSHA)</td>
<td>TLV (ACGIH)</td>
<td>PEL (OSHA)</td>
</tr>
<tr>
<td>Sulfuric acid</td>
<td>7664-93-9</td>
<td>1 mg/m³</td>
<td>----</td>
<td>----</td>
</tr>
</tbody>
</table>

Recommended monitoring method
NIOSH 5043

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

- Appearance: Liquid
- Colour: Clear, Pale yellow
- Odour: Slight hydrocarbon Odour
- Odour Threshold (ppm): Not available.
- pH (Value): <1
- Melting Point (°C) / Freezing Point (°C): Not available
- Boiling point/boiling range (°C): Not available.
- Flash Point (°C): >93 (>200 °F) [Open cup]
- Evaporation rate: Not available.
- Flammability (solid, gas): Not applicable.
Explosive limit ranges Not applicable.
Vapour Pressure (Pascal) Not available.
Vapour Density (Air=1) >1
Density (g/ml) 1.2
Solubility (Water) Soluble
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.
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.

**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, Acrid smoke

### SECTION 11: TOXICOLOGICAL INFORMATION

**Exposure routes:** Inhalation, Skin Contact, Eye Contact

**Substances in preparations / mixtures**

**Toluene-4-sulfonic acid (CAS No. 104-15-4)**

**Acute toxicity** (By analogy with similar materials)
- Oral: LD50 > 1104 mg/kg-bw (rat)
- Dermal: LD50 >2 g/kg-bw (rabbit)
- Inhalation: LC50 > 100 mg= saturated (Vapor), 8 hour (rat)

**Irritation/Corrosivity**
- Corrosive (Skin and Eyes)

**Sensitization**
- It is not a skin sensitizer.

**Repeated dose toxicity**
- NOAEL: > 500 mg/kg bw/day (28 days/week, oral, rat)

**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>
</table>

**Mutagenicity**
- There is no evidence of mutagenic potential.

**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: No data
- 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**
- No data.

**Carcinogenicity**
- NOAEL (rat): > 240 mg/kg (Fischer 344)
Naxcat® 330L

<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**

**Toluene-4-sulfonic acid (CAS No. 104-15-4)**

Short term
- LC50 (96 hour): >500 mg/L (*Leuciscus idus melanotus*)
- EC50 (48 hour): >103 mg/l (*Daphnia magna*, mobility) - (By analogy with similar materials)
- EC50 (72 hour): 70 mg/l (*Pseudokirchnerella subcapitata*) - (By analogy with similar materials)

Long Term
Scientifically unjustified

**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

**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>ARYLSULFONIC ACIDS, LIQUID with not more than 5% free sulfuric acid</td>
<td>ARYLSULPHONIC ACIDS, LIQUID with not more than 5% free sulphuric acid</td>
<td>ARYLSULPHONIC ACIDS, LIQUID with not more than 5% free sulphuric acid</td>
</tr>
<tr>
<td>2586</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>2586</td>
<td>III</td>
<td>III</td>
<td>III</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>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>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>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: May 16, 2014

Additional Information:

HMIS (Hazardous Material Information System)

NFPA (National Fire Protection Association)

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