SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product identifier
Chemical Name: Mixture
Trade Name: NAXAN® DIA
CAS No.: Mixture

Relevant identified uses of the substance or mixture and uses advised against
Identified Use(s): Demulsifier / Emulsion breaker
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):

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.
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: Toxic to aquatic life. Very toxic to aquatic life with long lasting effects.
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>Diisopropynaphthalenesulfonic acid</td>
<td>45 - 55%</td>
<td>28757-00-8</td>
<td>Causes severe skin burns and eye damage. Harmful to aquatic life.</td>
</tr>
<tr>
<td>Sulfuric acid</td>
<td>2 - 5%</td>
<td>7664-93-9</td>
<td>Causes severe skin burns and eye damage.</td>
</tr>
<tr>
<td>Diisopropynaphthalene</td>
<td>45 - 50%</td>
<td>38640-62-9</td>
<td>May be fatal if swallowed and enters airways. Toxic to aquatic life. Very toxic to aquatic life with long lasting effects.</td>
</tr>
<tr>
<td>Water</td>
<td>1 - 4%</td>
<td>7732-18-5</td>
<td>None</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
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 preferably with foam, dry chemical or waterspray.
- Unsuitable Extinguishing Media
  Beware dangerous reaction with water if containers ruptured.

Special hazards arising from the substance or mixture
Susceptible to exothermic reaction with water, alcohols and alkalis.

Advice for fire-fighters
Fire fighters should wear complete protective clothing including self-contained breathing apparatus. Water spray should be used to cool containers.

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. Carefully collect remainder.

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 oxidizing agents. Keep container tightly closed and dry. Susceptible to exothermic reaction with water, alcohols and alkalis.

Specific end use(s)
Demulsifier / Emulsion breaker

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></td>
<td></td>
<td>OSHA (PEL)</td>
<td>ACGIH (TLV)</td>
</tr>
<tr>
<td>Sulfuric acid</td>
<td>7664-93-9</td>
<td>1 mg/m³</td>
<td>0.2 mg/m³ (1)</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, 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. None anticipated.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance
Liquid
Color.
Brown
Odor
Slight hydrocarbon
Odor Threshold (ppm)
Not available.
P (Value)
<2
Melting Point (°C) / Freezing Point (°C)
Not available.
Boiling point/boiling range (°C)
Not available.
Flash Point (°C)
>121 (250 °F)
Evaporation Rate (butyl acetate=1): <1
Flammability (solid, gas) Not applicable.
Explosive Limit Ranges Not available.
Vapor pressure (Pascal) Not available.
Vapor Density (Air=1) >1
Density (g/ml) 1.16
Solubility (Water) Soluble
Solubility (Other) Not available.
Partition Coefficient (n-Octanol/water) Not available.
Auto Ignition Point (°C) Not available.
Decomposition Temperature (°C) Not available.
Kinematic Viscosity (cSt) @ 40°C Not available.
Explosive properties Not explosive.
Oxidizing properties Not oxidizing.
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. Generates heat of solution when dissolved in water and alcohols.
Hazardous decomposition product(s) Carbon monoxide, Carbon dioxide, Sulfur oxides, Acrid smoke

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes: Inhalation, Skin Contact, Eye Contact
Substances in preparations / mixtures Diisopropylnaphthalenesulfonic acid (CAS No. 28757-00-8) - By analogy with similar materials:

Acute toxicity Oral: LD50 = 1400 - 6000 mg/kg-bw
Irritation/Corrosivity Corrosive (Skin and Eyes)
Sensitization It is not a skin sensitizer.
Repeated dose toxicity NOAEL: > 1835 mg/kg bw/day (28 days, oral, 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 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)

<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)

Diisopropynaphthalene (CAS No. 38640-62-9)

Acute toxicity

Oral: LD50 = 4130 mg/kg-bw (rat)
Dermal: LD50 > 450 mg/kg-bw (rat)
Inhalation: LC50 = 5.64 mg/l (rat)

Irritation/Corrosivity

Not irritating to eyes and skin.

Sensitization

Will not occur

Repeated dose toxicity

NOAEL (rat): = 170 mg/kg bw/day (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

There is no evidence of mutagenic potential.

Toxicity for reproduction

Not to be expected. LOAEC: maternal toxicity: 250 mg/kg (rat); NOEL: embryotoxicity, fetotoxicity and teratogenicity: 625 mg/kg (rat)

SECTION 12: ECOLOGICAL INFORMATION

Diisopropynaphthalenesulfonic acid (CAS No. 28757-00-8) - (By analogy with similar materials)

Short term

LC50 (96 hour): 5300 mg/l (Leuciscus idus)
EC50 (48 hour): 34 mg/l (Daphnia magna, mobility)
EC50 (96 hour): 74.4 mg/l (Scenedesmus subspicatus)

Long Term

Not available

Persistence and degradability

Readily biodegradable.

Bioaccumulative potential

Not available.

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 (Gambusia affinis)
EC50( 24 hour): 29.0 mg/l (Daphnia magna)
EC50(48 hour): 29 mg/l (Pandalus montagui)

Long Term

Not available

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.

Diisopropynaphthalene (CAS No. 38640-62-9)

Short term

LC50 (96 hour): >0.5 mg/l (96 hour) (Leuciscus idus) - No toxic effects occur within the range of solubility.
EL50 (48 hour): 1.7 mg/l (Daphnia magna)

Long Term

NOEC (72 hour): 0.15 mg/l (Scenedesmus subspicatus)

Persistence and degradability

Not readily biodegradable.

Bioaccumulative potential

The product has low potential for bioaccumulation.

Mobility in soil

The substance is predicted to have low 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>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>2586</td>
<td>2586</td>
</tr>
<tr>
<td>Proper Shipping Name</td>
<td>Aryl sulfonic acids, liquid with less than 5 percent free sulfuric acid</td>
<td>Aryl sulphonico acids, liquid with less than 5 percent free sulfuric acid</td>
</tr>
<tr>
<td></td>
<td>(Diisopropynaphthalenesulfonic acid)</td>
<td>(Diisopropynaphthalenesulfonic acid)</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 (NDSL/DSL)
- NDSL: Diisopropynaphthalenesulfonic acid
- DSL: Sulfuric acid; Diisopropynaphthalene

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>Sulfuric acid</td>
<td>7664-93-9</td>
<td>&gt;65%</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></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: October 2, 2014
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