1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier
Product Name: United 416 Extra Strength Cooling Tower Concentrate

Other means of identification
SDS #: UNITED-416
UN/ID No.: UN3266

Recommended use of the chemical and restrictions on use
Recommended Use: Extra strength cooling tower concentrate.
Uses Advised Against: For industrial and institutional use only.

Details of the supplier of the safety data sheet
Supplier Address: United Laboratories, Inc.
320 37th Avenue
St. Charles, IL 60174
www.unitedlabsinc.com
www.unitedlabsinc.ca

Emergency Telephone Number
Company Phone Number: 800-323-2594 (to reorder)
Emergency Telephone (24 hr): INFOTRAC 1-800-535-5053 (North America)
1-352-323-3500 (International)

2. HAZARDS IDENTIFICATION

Appearance: Brown liquid
Physical State: Liquid
Odor: Sharp, acrid odor

Classification
Skin corrosion/irritation: Category 1 Sub-category C
Serious eye damage/eye irritation: Category 1

Hazards Not Otherwise Classified (HNOC)
May be harmful if swallowed.

Signal Word
Danger

Hazard Statements
Causes severe skin burns and eye damage.
Precautionary Statements - Prevention
Do not breathe dust/fume/gas/mist/vapors/spray. Wash face, hands and any exposed skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary Statements - Response
Immediately call a poison center or doctor/physician. 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. If on skin (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician. If swallowed: Rinse mouth. Do not induce vomiting.

Precautionary Statements - Storage
Store locked up.

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium hydroxide</td>
<td>1310-58-3</td>
<td>1-10</td>
</tr>
<tr>
<td>HEDP</td>
<td>2809-21-4</td>
<td>1-10</td>
</tr>
</tbody>
</table>

**If Chemical Name/CAS No is “proprietary” and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.**

4. FIRST-AID MEASURES

First Aid Measures

General Advice
Immediately call a poison center or doctor/physician.

Eye Contact
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.

Skin Contact
Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.

Inhalation
Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician.

Ingestion
Rinse mouth. Do not induce vomiting.

Most important symptoms and effects

Symptoms
May be harmful if swallowed. Causes severe skin burns and eye damage.

Indication of any immediate medical attention and special treatment needed

Notes to Physician
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Water. Foam. Carbon dioxide (CO2). Dry chemical.

Unsuitable Extinguishing Media
No information available.
Specific Hazards Arising from the Chemical
None known.

Hazardous Combustion Products When strongly heated, as in a fire, this product may produce carbon monoxide, carbon dioxide, nitrogen oxides and oxides of phosphorous.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Use personal protective equipment as required.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Clean-Up Spills should be collected to prevent contamination of waterways. Dike spill and recover quickly into suitable containers. Flush residual with large amounts of water.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling Handle in accordance with good industrial hygiene and safety practice. Do not breathe dust/fume/gas/mist/vapors/spray. Wash face, hands, and any exposed skin thoroughly after handling. Wear protective gloves/protective clothing and eye/face protection.

Conditions for safe storage, including any incompatibilities

Storage Conditions Store locked up. Keep this product in a properly labeled, tightly closed container. Do not allow this product to freeze, as the container may split or rupture.

Incompatible Materials Acids. Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium hydroxide</td>
<td>Ceiling: 2 mg/m³ (vacated) Ceiling: 2 mg/m³</td>
<td>Ceiling: 2 mg/m³</td>
<td></td>
</tr>
<tr>
<td>1310-58-3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caustic Soda</td>
<td>Ceiling: 2 mg/m³</td>
<td>TWA: 2 mg/m³ (vacated) Ceiling: 2 mg/m³</td>
<td>IDLH: 10 mg/m³ Ceiling: 2 mg/m³</td>
</tr>
<tr>
<td>1310-73-2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Appropriate engineering controls

Engineering Controls Mechanical ventilation not normally required and local exhaust is generally adequate to maintain airborne concentrations below OSHA PELs.

Individual protection measures, such as personal protective equipment

<table>
<thead>
<tr>
<th>Protection Type</th>
<th>Protection Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye/Face Protection</td>
<td>Safety goggles are recommended.</td>
</tr>
<tr>
<td>Skin and Body Protection</td>
<td>Chemical resistant gloves are recommended. Long sleeve shirt and long pants.</td>
</tr>
<tr>
<td>Respiratory Protection</td>
<td>Use with adequate ventilation and avoid breathing vapors.</td>
</tr>
</tbody>
</table>
General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks • Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Liquid</td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>Brown liquid</td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>Brown</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>11.5-13</td>
<td></td>
</tr>
<tr>
<td>Melting Point/Freezing Point</td>
<td>No information available.</td>
<td></td>
</tr>
<tr>
<td>Boiling Point/Boiling Range</td>
<td>100 °C / 212 °F</td>
<td></td>
</tr>
<tr>
<td>Flash Point</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>~1</td>
<td></td>
</tr>
<tr>
<td>Flammability (Solid, Gas)</td>
<td>Liquid-Not applicable</td>
<td></td>
</tr>
<tr>
<td>Upper Flammability Limits</td>
<td>No information available.</td>
<td></td>
</tr>
<tr>
<td>Lower Flammability Limit</td>
<td>No information available.</td>
<td></td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>No information available.</td>
<td></td>
</tr>
<tr>
<td>Vapor Density</td>
<td>No information available.</td>
<td></td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.16</td>
<td>(Water = 1)</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>Completely soluble</td>
<td></td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>No information available.</td>
<td></td>
</tr>
<tr>
<td>Partition Coefficient</td>
<td>No information available.</td>
<td></td>
</tr>
<tr>
<td>Auto-ignition Temperature</td>
<td>No information available.</td>
<td></td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>No information available.</td>
<td></td>
</tr>
<tr>
<td>Kinematic Viscosity</td>
<td>No information available.</td>
<td></td>
</tr>
<tr>
<td>Dynamic Viscosity</td>
<td>No information available.</td>
<td></td>
</tr>
<tr>
<td>Explosive Properties</td>
<td>No information available.</td>
<td></td>
</tr>
<tr>
<td>Oxidizing Properties</td>
<td>No information available.</td>
<td></td>
</tr>
<tr>
<td>VOC Content</td>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Reactivity
Not reactive under normal conditions.

Chemical Stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
Under normal conditions of storage and use, hazardous polymerization will not occur.

Conditions to Avoid
Excessive heat and fire. Incompatible Materials.

Incompatible Materials
Acids. Strong oxidizing agents.

Hazardous Decomposition Products
Thermal decomposition produces oxides of phosphorus, nitrogen and carbon.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information
Eye Contact
Causes severe eye damage.

Skin Contact
Causes severe skin burns.

Inhalation
Do not inhale.

Ingestion
May be harmful if swallowed.

**Component Information**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aminotrimethylene Phosphonic Acid</td>
<td>2100 mg/kg (Rat)</td>
<td>&gt; 6310 mg/kg (Rabbit)</td>
<td>-</td>
</tr>
<tr>
<td>6419-19-8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potassium hydroxide</td>
<td>214 mg/kg (Rat)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1310-58-3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HEDP</td>
<td>2400 mg/kg (Rat)</td>
<td>&gt; 7940 mg/kg (Rabbit)</td>
<td>-</td>
</tr>
<tr>
<td>2809-21-4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sodium Lignosulfonate</td>
<td>&gt; 40 g/kg (Rat)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>8061-51-6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phosphorous acid</td>
<td>1500 mg/kg (Rat)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>13598-36-2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caustic Soda</td>
<td>-</td>
<td>1350 mg/kg (Rabbit)</td>
<td>-</td>
</tr>
<tr>
<td>1310-73-2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Information on physical, chemical and toxicological effects**

Symptoms
Please see section 4 of this SDS for symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Carcinogenicity
Based on the information provided, this product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

Numerical measures of toxicity
No information available.

**12. ECOLOGICAL INFORMATION**

Ecotoxicity
No information available.

Persistence/Degradability
No information available.

Bioaccumulation
No information available.

Mobility
No information available.

Other Adverse Effects
No information available.

**13. DISPOSAL CONSIDERATIONS**

Waste Treatment Methods

Disposal of Wastes
Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated Packaging
Disposal should be in accordance with applicable regional, national and local laws and regulations.

California Hazardous Waste Status

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>California Hazardous Waste Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium hydroxide</td>
<td>Toxic</td>
</tr>
<tr>
<td>1310-58-3</td>
<td>Corrosive</td>
</tr>
<tr>
<td>Caustic Soda</td>
<td>Toxic</td>
</tr>
<tr>
<td>1310-73-2</td>
<td>Corrosive</td>
</tr>
</tbody>
</table>

14. TRANSPORT INFORMATION

Note
Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT
UN/ID No: UN3266
Proper Shipping Name: Corrosive liquid, basic, inorganic, n.o.s. (Potassium hydroxide)
Hazard Class: 8
Packing Group: III

IATA
UN/ID No: UN3266
Proper Shipping Name: Corrosive liquid, basic, inorganic, n.o.s. (Potassium hydroxide)
Hazard Class: 8
Packing Group: III

IMDG
UN/ID No: UN3266
Proper Shipping Name: Corrosive liquid, basic, inorganic, n.o.s. (Potassium hydroxide)
Hazard Class: 8
Packing Group: III

15. REGULATORY INFORMATION

International Inventories

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>ENCS</th>
<th>IECSC</th>
<th>KECL</th>
<th>PICCS</th>
<th>AICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium hydroxide</td>
<td>Present</td>
<td>X</td>
<td>Present</td>
<td>Present</td>
<td>X</td>
<td>Present</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HEDP</td>
<td>Present</td>
<td>X</td>
<td>Present</td>
<td>Present</td>
<td>X</td>
<td>Present</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Legend:
- TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
- DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
- EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
- ENCS - Japan Existing and New Chemical Substances
- IECSC - China Inventory of Existing Chemical Substances
- KECL - Korean Existing and Evaluated Chemical Substances
- PICCS - Philippines Inventory of Chemicals and Chemical Substances
- AICS - Australian Inventory of Chemical Substances

US Federal Regulations

CERCLA

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Hazardous Substances RQs</th>
<th>CERCLA/SARA RQ</th>
<th>Reportable Quantity (RQ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caustic Soda</td>
<td>1000 lb</td>
<td></td>
<td>RQ 1000 lb final RQ</td>
</tr>
<tr>
<td>1310-73-2</td>
<td></td>
<td></td>
<td>RQ 454 kg final RQ</td>
</tr>
</tbody>
</table>
SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

CWA (Clean Water Act)

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CWA - Reportable Quantities</th>
<th>CWA - Toxic Pollutants</th>
<th>CWA - Priority Pollutants</th>
<th>CWA - Hazardous Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caustic Soda</td>
<td>1000 lb</td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

US State Regulations

California Proposition 65
This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium hydroxide</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>1310-58-3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phosphorous acid</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13598-36-2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caustic Soda</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>1310-73-2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

16. OTHER INFORMATION

NFPA
Health Hazards: No information available
Flammability: No information available
Instability: No information available
Special Hazards: No information available

HMIS
Health Hazards: 2
Flammability: 0
Physical Hazards: 0
Personal Protection: N+P

Issue Date: 18-Jan-2011
Revision Date: 25-Dec-2015
Revision Note: New format

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet