1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier
Product Name United 410 BOILER TREATMENT

Other means of identification
SDS # UNITED-410

Recommended use of the chemical and restrictions on use
Recommended Use For Steam Boilers Requiring Alkalinity Booster
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 Dark, brown liquid
Physical State Liquid
Odor Slight, vanilla-like odor

Classification

<table>
<thead>
<tr>
<th>Acute toxicity</th>
<th>Category 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Category 1</td>
</tr>
</tbody>
</table>

Signal Word
Danger

Hazard Statements
May be harmful if swallowed. May cause 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. Do not eat, drink or smoke when using this product.
Precautionary Statements – Response
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 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. Immediately call a poison center or doctor/physician.

Precautionary Statements - Storage
Store in accordance with local, state and federal rules and regulations.

Precautionary Statements - Disposal
Dispose of contents/container in accordance with local, state and federal rules and regulations.

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>20-40</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**
Flush eyes with water for 15 minutes. Lifting and lowering eyelids. Get medical attention immediately.

**Skin Contact**
Flood with large amounts of water for 15 minutes. If irritation persists, seek medical attention.

**Inhalation**
Remove to fresh air. Apply CPR if needed. If symptoms develop, seek medical attention.

**Ingestion**
Rinse mouth. Do not induce vomiting. Give water or milk immediately. Get medical attention.

Most important symptoms and effects

**Symptoms**
May cause severe skin burns and eye damage.

Notes to Physician
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media**
Water spray. Alcohol-resistant foam, dry chemical and carbon dioxide.

**Unsuitable Extinguishing Media**
Not determined.

**Specific Hazards Arising from the Chemical**
This product reacts violently with strong acids, carbon oxides and Sulphur oxides, and with some organic compounds.

**Hazardous Combustion Products**
When strongly heated, as in a fire, this product may produce carbon dioxide, carbon monoxide and oxides of phosphorous.
Protective equipment and precautions for firefighters
Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus. If possible, firefighters should control run-off water to prevent environmental contamination.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions
Use personal protective equipment as required. Gloves and dust mask.

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
Small spills: Less than 1 gallon may be flushed to the sanitary sewer with plenty of water. Large spills: Contain the spill for proper disposal. Neutralize remaining traces with dilute inorganic acid such as hydrochloric or phosphoric acid then flush with water followed by liberal covering of sodium bicarbonate.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling
Handle in accordance with good industrial hygiene and safety practice. Provide appropriate exhaust ventilation at places where dust is formed. Keep containers tightly closed when not in use. Do not get into eyes, on skin and on clothing.

Conditions for safe storage, including any incompatibilities

Storage Conditions
Store in a cool, well-ventilated area. Keep containers tightly closed. Store according to local, state and federal regulations.

Incompatible Materials
Strong oxidizing agents. Will react with active metals (aluminum, zinc, magnesium) liberating hydrogen gas.

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</td>
<td>TWA: 2 mg/m³</td>
<td>-</td>
</tr>
</tbody>
</table>

Appropriate engineering controls

Engineering Controls
Use appropriate engineering controls to minimize exposure to dust generated via routine use. Use adequate ventilation.

Individual protection measures, such as personal protective equipment

Eye/Face Protection
Safety goggles are recommended. If a splash factor exists: use safety goggles with a face shield.

Skin and Body Protection
Chemical resistant gloves are recommended. Wear protective clothing when handling this product to prevent prolonged skin contact.

Respiratory Protection
Normally not required. Avoid breathing dust or mist. Use NIOSH approved respiratory protection equipment when airborne exposure is excessive.
General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice. Facilities storing or using this material should be equipped with emergency eyewash and safety shower.

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>Dark, brown liquid</td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>Dark brown</td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>Slight, vanilla-like odor</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>12.5-13.5</td>
<td></td>
</tr>
<tr>
<td>Melting Point/Freezing Point</td>
<td>Not determined</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>~1.00</td>
<td></td>
</tr>
<tr>
<td>Flammability (Solid, Gas)</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Upper Flammability Limits</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Lower Flammability Limit</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Not determined</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 miscible</td>
<td></td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Partition Coefficient</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Auto-ignition Temperature</td>
<td>400°C for dust</td>
<td></td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Kinematic Viscosity</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Dynamic Viscosity</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Explosive Properties</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Oxidizing Properties</td>
<td>Not determined</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
Incompatible Materials. This product, in certain circumstances, for flammable dust clouds in air.

Incompatible Materials
Strong oxidizing agents. Will react with active metals (aluminum, zinc and magnesium) liberating hydrogen gas.

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

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure
Product Information
Eye Contact  May cause severe eye damage.
Skin Contact  May cause severe skin burns.
Inhalation  Do not inhale.
Ingestion  Do not ingest.

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  Not determined.

12. ECOLOGICAL INFORMATION

Ecotoxicity  Not determined.

Persistence/Degradability  Not determined.

Bioaccumulation  Not determined.

Mobility  Not determined.

Other Adverse Effects  Not determined.

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.

14. TRANSPORT INFORMATION

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

DOT  UN1814
UN/ID No.  Potassium hydroxide, solution
Proper Shipping Name  8
Hazard Class  II
Packing Group  Not classified.
IATA  Not classified.
IMDG
UN/ID No. UN1814
Proper Shipping Name Potassium hydroxide, solution
Hazard Class 8
Packing Group II

15. REGULATORY INFORMATION

International Inventories

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory. Listed
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List. Listed

US Federal Regulations

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355).

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.

SARA 302/304 Extremely Hazardous Substance/Emergency Release Notification
None.

SARA 311/312 Hazardous Categories
None.

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.

16. OTHER INFORMATION

NFPA
Health Hazards Not determined
Flammability Not determined
Instability Not determined
Special Hazards Not determined

HMIS
Health Hazards 2
Flammability 0
Physical Hazards 0
Personal Protection n & p

Issue Date: 06-Feb-2015
Revision Date: 03-Jun-2016
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 given 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