

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name United 413 Boiler Alkalinity Adjunct

Other means of identification

SDS # UNITED-413

UN/ID No UN1814

Recommended use of the chemical and restrictions on use

Recommended Use Boiler Alkalinity Adjunct
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 Clear liquid

Physical State Liquid

Odor No odor

Classification

| | |
|---------------------------|------------|
| Skin corrosion/irritation | Category 1 |
| Acute toxicity | Category 4 |

Signal Word

Danger

Hazard Statements

Causes skin burns and eye burns. Can cause damage to the eyes including blindness.



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 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. Call a poison center immediately.

Precautionary Statements - Storage

Store according to local, state and national rules and regulations.

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant.

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name | CAS No | Weight-% |
|---------------------|-----------|----------|
| Potassium hydroxide | 1310-58-3 | 40-70 |

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

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|-----------------------|---|
| General Advice | Immediately call a poison center or doctor/physician. |
| Eye Contact | Immediately flush eyes with water. Flush eyes with water for minimum of 15 minutes, occasionally lifting and lowering upper lids. Get medical attention promptly. |
| Skin Contact | Immediately flush skin with plenty of water. Remove clothing. Get medical attention immediately. Wash contaminated clothing separately and clean shoes before reuse. |
| Inhalation | Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Rescuers should put on appropriate protective gear. Immediately call a poison center or doctor/physician. |
| Ingestion | Drink large quantities of water if accidentally ingested. Never give anything by mouth to an unconscious person. Do not induce vomiting. Get medical attention immediately. |

Most important symptoms and effects

| | |
|-----------------|--|
| Symptoms | 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 spray. Foam. Carbon dioxide (CO₂) and Dry chemical.

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical

This product reacts violently with strong acids and with some organic compounds.

Hazardous Combustion Products When strongly heated, as in a fire, this product may produce oxides of carbon and 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. Do not use water. Water spray to cool containers or protect personnel. Use with caution.

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. Avoid runoff into storm sewers and ditches which lead to waterways.

Methods for Clean-Up Small spills: Neutralize with diluted inorganic acid, then flush with water followed by liberal covering of sodium bicarbonate. 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. Do not handle until all safety precautions have been read and understood.

Conditions for safe storage, including any incompatibilities

Storage Conditions Store in cool, dry, well-ventilated area. Keep containers tightly closed when not in use. Keep away from heat, sparks, and flame. Store away from incompatible materials. Do not get into eyes, on skin, and on clothing.

Incompatible Materials Avoid contact with copper, organic materials, reactive metals such as aluminum and magnesium, and all acids and oxidizers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

| Chemical Name | ACGIH TLV-TWA | OSHA PEL-Ceiling | NIOSH IDLH |
|----------------------------------|---------------|--------------------------|------------|
| Potassium hydroxide 1310-58-3 | - | PEL: 2 mg/m ³ | - |

Appropriate engineering controls

Engineering Controls Provide adequate ventilation and local exhaust is generally adequate.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Chemical safety goggles are recommended. If a splash factor exists; use safety goggles with a face shield. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Skin and Body Protection Chemical resistant gloves are recommended. Impervious clothing and chemical resistant safety shoes.

Respiratory Protection Avoid breathing fumes from this product. IF TLV is exceeded, use a NIOSH/MSHA approved self-contained breathing apparatus respirator.

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

| | | | |
|-----------------------|--------------|-------------|---------|
| Physical State | Liquid | Odor | No odor |
| Appearance | Clear liquid | | |
| Color | Clear | | |

| <u>Property</u> | <u>Values</u> | <u>Remarks • Method</u> |
|------------------------------|--------------------|-------------------------|
| pH | 13-14 | |
| Melting Point/Freezing Point | Not determined | |
| Boiling Point/Boiling Range | 133 °C / 271 °F | |
| Flash Point | >200 | |
| Evaporation Rate | ~1 | |
| Flammability (Solid, Gas) | Not determined | |
| Upper Flammability Limits | Not determined | |
| Lower Flammability Limit | Not determined | |
| Vapor Pressure | 6.4@77°F/25°C | |
| Vapor Density | Not determined | |
| Specific Gravity | 1.45 | (Water = 1) |
| Water Solubility | Completely soluble | |
| Solubility in other solvents | Not determined | |
| Partition Coefficient | Not determined | |
| Auto-ignition Temperature | Not determined | |
| Decomposition Temperature | Not determined | |
| Kinematic Viscosity | Not determined | |
| Dynamic Viscosity | Not determined | |
| Explosive Properties | Not determined | |
| Oxidizing Properties | Not determined | |
| VOC Content | None | |

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.

Incompatible Materials
Avoid contact with copper, organic materials, reactive metals such as aluminum and magnesium, and all acids and oxidizers.

Hazardous Decomposition Products
Contact with some reactive metals can generate explosive hydrogen gas.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

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|---------------------|---|
| Eye Contact | Corrosive. Causes eye damage. Destructive to eye tissues on contact. Contact can cause possible blindness. |
| Skin Contact | Corrosive. Causes skin burns. Prolonged and repeated contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis (rash). |
| Inhalation | Do not inhale. Can cause burns and tissue damage to the upper respiratory tract. Prolonged exposure to large concentrations can cause possible loss of consciousness and/or severe lung damage. |
| Ingestion | Do not ingest. Corrosive and may cause severe and permanent damage to mouth, throat, and stomach. |

Component Information

| Chemical Name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|----------------------------------|-----------|-------------|-----------------|
| Potassium hydroxide 1310-58-3 | 214 | - | - |

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 local, regional and national laws and

regulations.

Contaminated Packaging

Disposal should be in accordance with applicable local, regional and national laws and regulations. See Section 8 of this SDS for more information.

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 | UN1814 |
| Proper Shipping Name | Potassium hydroxide, solution |
| Hazard Class | 8 |
| Packing Group | II |

IATA

| | |
|-----------------------------|-------------------------------|
| UN/ID No | UN1814 |
| Proper Shipping Name | Potassium hydroxide, solution |
| Hazard Class | 8 |
| Packing Group | II |

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
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**

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories. None.

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.

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

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|--------------------|---|---------------------------------------|--------------------------------------|--|
| <u>NFPA</u> | Health Hazards Not determined | Flammability Not determined | Instability Not determined | Special Hazards Not determined |
| <u>HMIS</u> | Health Hazards 3 | Flammability 0 | Physical Hazards 2 | Personal Protection n&p |

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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