



## MATERIAL SAFETY DATA SHEET

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800-323-2594

### 1. PRODUCT AND COMPANY IDENTIFICATION

FOR MEDICAL AND TRANSPORTATION EMERGENCIES  
24 Hour INFOTRAC (US and CANADA): **800-535-5053**

**PRODUCT NAME**  
UNITED 410 BOILER TREATMENT

**USE/DESCRIPTION**  
Boiler Treatment for Steam Boilers Requiring Alkalinity Booster

**REVISION DATE**  
July 18, 2011

### HMIS III HEALTH (0 = Maximum Safety) 2

Always follow Label Directions and Cautions.

\* Chronic 2 Moderate  
4 Severe 1 Slight  
3 Serious 0 Minimal

See Hazards Identification Section of this MSDS for more detailed information.

### PHYSICAL HAZARD (0 = Maximum Safety) 0

Susceptible to Release of Energy.

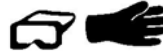
4 May detonate-vacate area if materials are exposed to fire.	2 Violent chemical change possible-use hose stream from distance
3 Strong shock of heat may detonate-use monitors from behind explosion resistant barriers.	1 Unstable if heated-use precaution.
	0 Normally stable.

### FLAMMABILITY (0 = Maximum Safety) 0

Susceptibility of Material to Burning.

4 Extremely flammable.	1 Must be preheated to burn.
3 Ignites at normal temperature.	0 Will not burn.
2 Ignites when moderately heated.	

**PERSONAL PROTECTION: n & p**



### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients	CAS#	%Range	ACGIH (TLV-TWA)	OSHA (PEL-TWA)	LD50 (Species/Route)	LC50 (Species)
Potassium hydroxide	1310-58-3	20-40	C: 2mg/m3	C: 2 mg/m3	365 mg/kg (rat/oral)	NE

### 3. HAZARDS IDENTIFICATION

**Eyes:** Corrosive - causes irritation or chemical burns. May result in damage to the eyes including blindness.

**Skin:** Corrosive - causes irritation or chemical burns. May result in destructive damage to tissues contacted. A latent period may exist between exposure and sense of irritation.

**Inhalation:** Vapors may cause irritation to the upper respiratory tract.

**Ingestion:** POISON. CORROSIVE. Can cause irritation or chemical burns to tissues of the mouth, throat, esophagus and stomach. Nausea, upset stomach.

### 4. FIRST AID MEASURES

**Eyes:** Immediately flush with large amounts of water for at least 15 minutes holding lids apart to ensure flushing of the entire surface. Get medical attention immediately.

**Skin:** Immediately flood with large amounts of water for 15 minutes. If irritation persists, call a physician.

**Inhalation:** Get to fresh air and apply CPR if needed. Call a physician.

**Ingestion:** DO NOT INDUCE VOMITING. Never give anything by mouth to an unconscious person. Give water or milk immediately. Get medical attention immediately.

### 5. FIRE FIGHTING MEASURES

**Flash Point (TCC):** None

**Explosive Limits:** Lower (LEL): NA Upper (UEL): NA

**Flame Projection (Aerosol):** NA

**Hazardous Products of Combustion:** When strongly heated, as in a fire, this product may produce oxides of carbon and phosphorus.

**Fire and Explosion Hazards:** This product reacts violently with strong acids and with some organic compounds.

**Extinguishing Media:** Water spray, Foam, Carbon dioxide.

**Fire Fighting Instructions:** Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus. Use water to cool containers.

### 6. ACCIDENTAL RELEASE MEASURES

**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

Keep containers tightly closed when not in use. Store in cool, dry, well-ventilated area away from heat or open flames. Do not get into eyes, on skin, and on clothing.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Eyes:** Safety goggles are recommended. If a splash factor exists; use safety goggles with a Face Shield.

**Skin:** Chemical resistant gloves recommended.

**Respiratory:** Normally not required. If TLV is exceeded, use a NIOSH/MSHA approved self-contained breathing apparatus respirator.

**Engineering Controls:** Ventilation normally not required and local exhaust normally not required.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Boiling Point:** 212°F/100°C **Specific Gravity:** 1.16 (H<sub>2</sub>O=1) **Vapor Pressure:** N/A **Melting Point:** ND

**Vapor Density:** ND **Evaporation Rate:** ~ 1 **Solubility in Water:** Completely miscible **pH:** 12.5 – 13.5

**Appearance and Odor:** Dark brown liquid with slight vanilla-like odor.

## 10. STABILITY AND REACTIVITY

**Hazardous Polymerization:** Will not occur.

**Hazardous Decomposition:** When heated strongly, as in a fire, may release carbon dioxide, carbon monoxide and oxides of phosphorous.

**Chemical Stability:** Stable.

**Incompatibility:** Will react vigorously with strong acids. Will react with active metals (aluminum, zinc, magnesium) liberating hydrogen gas.

## 11. TOXICOLOGICAL INFORMATION

**Carcinogenicity (NTP/IARC/OSHA):** None

**California Proposition 65:** Does this product contain chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm? None

## 12. ECOLOGICAL INFORMATION

ND

## 13. DISPOSAL CONSIDERATIONS

Consult your local, state, provincial and federal regulations for proper disposal guidelines. Disposal regulations may be different for each state and/or locality.

## 14. TRANSPORT INFORMATION

**DOT:** Available upon request

**TDG:** Available upon request

**UN:** Available upon request

## 15. REGULATORY INFORMATION

**VOC (Volatile Organic Compounds):** None

**TSCA (Toxic Substances Control Act):** Listed

**SARA Title III Section 302 EHS:** ND

**SARA Title III Section 311/312:** ND

**SARA Title III Section 313 Toxic Chemicals:** None

**WHMIS Classification:**

This product has been classified in accordance with the hazard criteria of the CPR (Controlled Products Regulations/ WHMIS) and the MSDS contains all the information required by the CPR.

## 16. OTHER INFORMATION

Read and follow all label directions and precautions before using this product. These products are intended for industrial and institutional use only. NOT FOR HOUSEHOLD USE OR RESALE. KEEP OUT OF REACH OF CHILDREN.

**UNITED 410 BOILER TREATMENT FOR STEAM BOILERS  
REQUIRING ALKALINITY BOOSTER**

**PREPARED BY:** Sandy Kopacz