



UNITED

LABORATORIES

BATCH #
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United 817 ESA Descaler for Steam Boilers is a blend of corrosion inhibitors, penetrants and United's own Earth Smart® Acid for descaling metal surfaces in steam boiler applications. It removes rust, lime, hard water deposits, grease and oxidation from surfaces that could be harmed by strong acids such as muriatic, hydrochloric or sulfuric.

United 817 ESA Descaler for Steam Boilers can be left in the system for long periods of time (up to 24 hours) to achieve maximum descaling with complete safety from corrosion and pitting. Built-in indicator dye notes when the descaling process is complete or when product is exhausted for ease of use without the need to test pH levels.

United 817 ESA Descaler for Steam Boilers features Earth Smart® Acid Technology:

- That dissolves calcium carbonate, lime and scale two to three times faster than phosphoric acid products.
- That is much milder to steel, aluminum and skin than traditional acids used in similar products.
- That is phosphate-free and contains no VOCs.

DIRECTIONS FOR USE:

1. Make sure boiler is in an off-line condition and no heat source is applied.
2. Use a fire hose, garden hose or pressure washer to flush out as much loose material as possible.
3. Close all valves leading to the steam manifold. Close bottom blowdown and lower hand-holes and fill boiler with the hottest water available.
4. Add 10 gallons of **United 817 ESA Descaler for Steam Boilers** for each 100 gallons (10 liters for each 100 liters) of boiler capacity. One top hand hole or other vent must be left open.
5. Fire the boiler periodically to maintain the temperature of the descaling solution at 100-120°F (38-49°C).
6. Check the descaling solution color at 15-30 minute intervals. Red color indicates pH less than 3.0; absence of color indicates pH above 3.0. If the pink color fades (pH rises above 3.0) the **United 817 ESA Descaler for Steam Boilers** is exhausted and more should be added. Once the pH has stayed below 3.0 (color remains pink) for at least two hours, the descaling process is complete.
7. Drain off the chemical solution and use the fire hose, garden hose or pressure washer again to flush out all residual material.
8. Carefully close all hand-holes and man-holes using new gaskets.
9. Begin refilling the boiler with the blowdown open. Once the blowdown runs clear, close the blowdown valve and fill the boiler to its normal operating level.

United 817

ESA Descaler for Steam Boilers

Featuring Earth Smart® Acid Technology

KEEP OUT OF REACH OF CHILDREN.

CAUTION

SEE SIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS.

PRECAUCION AL USARIO: Si usted no puede leer Ingles, pregunte a alguien que le traduzca esta etiqueta para usted antes de uso.

Manufactured and Sold Exclusively By:
UNITED LABORATORIES, INC.
320 37th Avenue • St. Charles, IL 60174
1-800-323-2594 • www.unitedlabsinc.com

DIRECTIONS FOR USE: (Cont'd)

10. Add the appropriate initial dose of the recommended United Laboratories' boiler treatment product and return the boiler to service.

IF FOAMING IS A PROBLEM: Use United 53 Industrial Defoamer per label instructions.

FOR BOILERS IN FOOD PLANTS: A thorough flush with potable water is required when cleaning is completed, prior to preparation to return boilers to service.

CAUTION:

This product is corrosive to the eyes. It can cause skin irritation. Harmful if swallowed. Do not mix with other chemicals or cleaner as toxic fumes may be formed.

EMERGENCY AND FIRST AID PROCEDURES:

EYES: Flush with cool water for at least 15 minutes. Hold eyelids apart to ensure thorough rinsing of the entire surface of the eye and lids with water. Call a physician or poison center.

SKIN: Wash with soap and water and remove contaminated clothing. If irritation persists, call a physician or poison center.

INHALATION: Remove to fresh air. Apply CPR, if needed. Call a physician or poison center immediately.

IF SWALLOWED: DO NOT INDUCE VOMITING. Call a physician or poison center immediately. Drink large amounts of water. If vomiting occurs give fluids. Never give anything by mouth to an unconscious person.

DO NOT USE THIS PRODUCT on galvanized, magnesium, zinc or similar surfaces. Always pre-test unknown surfaces for compatibility before using. An MSDS for this product is available through United's website, www.unitedlabsinc.com, providing 24 hour access. Please read the MSDS carefully and follow all directions when using or handling this product. Never reuse empty containers. Incompatible materials may adversely react.

HMS® III CODE 0=MINIMAL 1=SLIGHT 2=MODERATE 3=SERIOUS 4=SEVERE PERSONAL PROTECTION INDEX Gloves and Goggles	HEALTH	1
	FLAMMABILITY	0
	PHYSICAL HAZARD	0
	PERSONAL PROTECTION	n&p

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