

# ACS-CLN-090

### DESCRIPTION

ACS-CLN-090 is a liquid, alkaline cleaner formulated with soaps, synthetic detergents, and dispersants. It is highly effective on new boilers and newly installed boiler tubes, chilled and hot water systems.

### APPLICATION

ACS-CLN-090 is specifically formulated to remove mill scale, dirt, oil, grease, and other organic contaminants. It can be safely used in boilers, heat exchangers, internal combustion engines, and closed water systems.

It is essential to thoroughly clean new water systems to prevent clogging of tubes and piping by dirt and debris. In addition, maximum effectiveness of water treatment chemicals used to prevent scale and corrosion is ensured.

### PHYSICAL PROPERTIES

Color & Form .....	Amber liquid
Specific Gravity .....	1.058
Density .....	8.8207 lbs./gal.
pH.....	13.71
Odor .....	Sweet Odor

### CLEANING PROCEDURES

#### FOR HEAT EXCHANGERS AND PIPING SYSTEMS:

1. Add ACS-CLN-090 at a rate of 1 gallon per 100 gallons of capacity while system is being filled.
2. Heat the cleaning solution to 120°F, if possible, and circulate at least 8 hours. If heat cannot be provided, double the dosage of ACS-CLN-090. Circulate cleaning solution for 24-48 hours.
3. After cleaning, drain the system, fill with fresh water, and thoroughly flush.

#### FOR BOILER BOIL-OUT:

1. Thoroughly inspect the boiler to ensure the removal of debris, tools, etc.

2. Replace the regular gauge glass with a temporary gauge glass that can be discarded after the boiling out.
3. Determine water capacity of the boiler and calculate requirements of ACS-CLN-090 at a rate of 1 to 3 gallons per 100 gallons.
4. ACS-CLN-090 may be poured into boiler vent or manhole after boiler is nearly filled to normal level, but proportionate feed is preferred.
5. Fire the boiler gradually. Close vent when steam appears. Build up pressure to about 50% of working pressure.
6. Continue boil-out for 24-48 hours.
7. During entire boil-out, blow down from all valves at least once every 8 hours. First blow down from the surface (or continuous blow) and progress to other blowdown points lower on the boiler. The total amount of water blown from all points each time should be 1/2 to 3/4 of gauge glass.
8. At the end of the boil-out, cool the boiler slowly, drain and flush with a high pressure hose. Inspect all parts for cleanliness and freedom from oil and grease. If initial condition was extremely bad and surfaces are not entirely clean, the boil-out process must be repeated.

NOTE: Further instructions are required for high pressure boilers with superheaters and economizers.

### HANDLING & PRECAUTIONS

Avoid contact with eyes, skin, and clothing. Flush affected eyes or skin with large quantities of water and obtain medical attention for eyes. Keep container closed when not in use. Refer to the Material Safety Data sheet for additional safe handling information.

### PACKAGING

ACS-CLN-090 liquid is available in:

- 4x1 gallon in box ..... net wt. 32 lbs.
- 5-gallon pails ..... net wt. 40 lbs.
- 30-gallon drums.....net wt 260 lbs.
- 55 gallon drums..... net wt. 495 lbs.