



HUBBARD-HALL INC • P.O. BOX 790 • WATERBURY, CT 06725 • 203-756-5521

PRODUCT BULLETIN

AQUACLEEN (TM) ✓ B1

ZFG 9660
08/25/88

AQUACLEEN (TM) IS A MILDLY ALKALINE, NON-CHELATED, NON-SILICATED, SOLVENT FREE, LIQUID CLEANER WHICH MAY BE USED AS AN ALTERNATIVE TO CHLORINATED SOLVENT DEGREASERS TO SOAK CLEAN A VARIETY OF MACHINING AND FORMING LUBRICANTS FROM: STEELS, STAINLESS STEEL, BRASS, COPPER, BRONZES, ALUMINUM ALLOYS AND ZINC DIE CASTINGS.

NOTE: WHEN CLEANING ZINC DIE CASTINGS DO NOT EXCEED 150 F.

AQUACLEEN IS NON-CORROSIVE, NON-IRRITATING AND BIODEGRADABLE. IT HAS A COMBINATION OF HIGH DETERGENCY WITH LOW ALKALINITY FOR SAFE, RAPID CLEANING AT LOW TEMPERATURES. IN ADDITION, THE INHIBITED FORMULATION OF AQUACLEEN PROVIDES LIMITED CORROSION PROTECTION ON FERROUS METALS, BRASS AND COPPER ALLOYS.

AQUACLEEN MAY FIND WIDE APPLICATION IN WASHING HIGHLY FINISHED SURFACES SUCH AS BEARING PARTS AND OTHER HIGHLY FINISHED STEEL SURFACES SUCH AS STRIP STAINLESS STEEL. AQUACLEEN HAS HIGH FREE RINSING PROPERTIES. THIS FEATURE IS ESPECIALLY IMPORTANT IF PARTS AFTER WASHING ARE TO ENTER HEAT-TREATING FURNACES. ORDINARY POWER WASHERS LEAVE UNDESIRABLE ALKALINE RESIDUES WHICH FOUL THE FURNACE IN TIME.

OPERATING CONDITIONS

SOAK CLEANING OR AGE-DIP OPERATIONS

CONCENTRATION: FULL STRENGTH
TEMPERATURES: 80-170 F
TIME: AS REQUIRED

AGITATION OF WORK OR SOLUTION IS BENEFICIAL

VENTILATION: OPTIONAL (ONLY WATER VAPOR IS GIVEN OFF)
EQUIPMENT: TANKS AND HEATING COILS MAY BE FABRICATED FROM MILD STEEL.

CONTROLS FOR DETERMINING THE CONCENTRATION OF AQUACLEEN

TEST KIT PROCEDURE

A SLIGHT MODIFICATION IN THE CONVENTIONAL HUBBARD-HALL TEST KIT OPERATION PROCEDURE WILL BE NECESSARY FOR DETERMINING CONCENTRATION (% VOL). INSTEAD OF USING THE 1 ML DROPPER, IT WILL BE NECESSARY TO USE A 2 ML SAMPLE.

1. FILL TEST BOTTLE 1/4 FULL WITH WATER.
2. ADD 2 MLS AQUACLEEN SOLUTION TO THE BOTTLE.



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3. ADD 3 DROPS M.O. INDICATOR.
4. ADD DROPWISE N-94 SOLUTION UNTIL SOLUTION TURNS FROM YELLOW TO PINK-ORANGE.
5. RECORD NUMBER DROPS N-94 SOLUTION USED.

% (VOL) AQUACLEEN = 4.55 X NUMBER DROPS N-94 SOLUTION USED.

TITRATION PROCEDURE

1. PIPETTE A 25 ML SAMPLE INTO A 250 ML ERLLENMEYER FLASK AND DILUTE WITH 75 ML WATER.
2. ADD 7 DROPS METHYL ORANGE INDICATOR AND MIX.
3. TITRATE WITH 0.5N HCL UNTIL A COLOR CHANGE OF YELLOW TO PINK OCCURS.
4. RECORD MLS OF 0.5N HCL USED.

CALCULATIONS:

CONCENTRATION (% VOL) = 5.32 X MLS 0.5N HCL USED.

CAUTION

AQUACLEEN IS AN ALKALINE PRODUCT AND SHOULD BE HANDLED ACCORDINGLY. AVOID SKIN, EYE AND ORAL CONTACT. WEAR PROTECTIVE CLOTHING, GLOVES AND GOGGLES WHEN HANDLING THE PRODUCT. FLUSH EXPOSED AREAS IMMEDIATELY WITH CLEAN, COLD WATER. CONTACT A DOCTOR IMMEDIATELY IN CASE OF INJURY.

WASTE DISPOSAL

DISCHARGE THE SPENT AQUACLEEN SOLUTION TO A DISPOSAL SYSTEM. THE PH OF AQUACLEEN IS 9.5. IN ORDER TO BE COMPLETELY INFORMED ON THE LATEST DISPOSAL REGULATIONS FOR YOUR AREA, PLEASE CONTACT THE LOCAL AUTHORITIES.

WARRANTY

THE QUALITY OF THIS PRODUCT IS GUARANTEED ON SHIPMENT FROM OUR PLANT. IF THE USE RECOMMENDATIONS ARE FOLLOWED, DESIRED RESULTS WILL BE OBTAINED. SINCE THE USE OF OUR PRODUCTS IS BEYOND OUR CONTROL, NO GUARANTEE EXPRESSED OR IMPLIED IS MADE AS TO THE EFFECTS OF SUCH USE, OR THE RESULTS TO BE OBTAINED.