

# HYDRATE ALKALINITY TEST KIT



## DESCRIPTION

The HYDRATE ALKALINITY Test Kit contains everything needed to measure boiler water hydrate alkalinity. The presence of hydrate alkalinity in boiler water ensures that any calcium hardness in the presence of phosphate or magnesium hardness in the presence of silica will be in a form that is easily removed by blowdown.

The easy drop count titration method provides accurate results. After barium chloride is added to remove interference from phosphate and carbonate, the sample is then titrated to a phenolphthalein endpoint with sulfuric acid N/10. Results are expressed as ppm OH.

One kit provides approximately 200 tests when the OHalkalinity is 40-65 ppm.

## APPLICATION

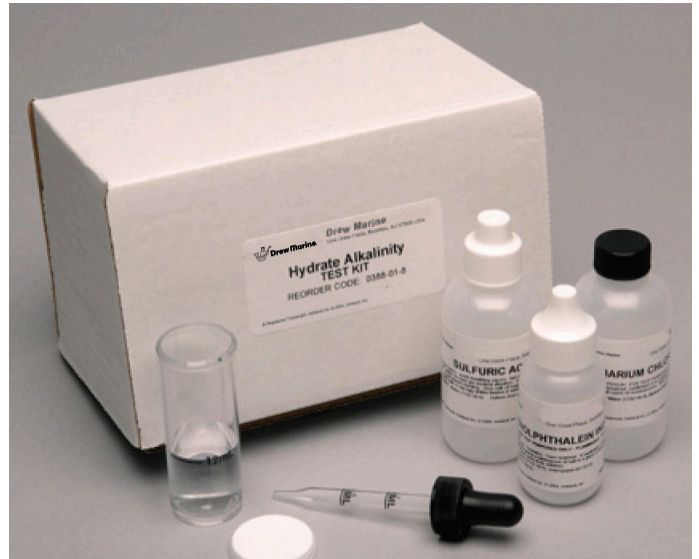
For low-pressure boiler systems, Drew Marine recommends testing boiler water hydrate alkalinity once a day per boiler.

Before testing, boiler water samples must be cooled to 25° C by collecting through a sample cooler for safety and to prevent flashing, which will concentrate the sample.

See reverse side for test procedure.

## TEST KIT CONTENTS

- 7 x 60 ml Barium Chloride
- 10% 3 x 60 ml Sulfuric Acid N/101 x 30
- ml Phenolphthalein
- 1 Plastic Titration Vial marked at 12-ml
- 1 Dropper Pippette marked at 0.5 and 1-ml



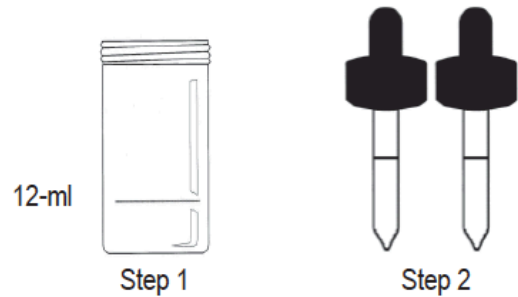
HYDRATE ALKALINITY TEST KIT (PCN 0388018)



Contact your Drew Marine representative for more information

## PROCEDURE

1. Rinse and fill the plastic titration vial to the line (12-ml) with cooled boiler water sample (Step 1).
2. Pipette 2 ml of barium chloride 10% into the vial and swirl to mix (Step 2).
3. Add 2 drops of Phenolphthalein indicator and swirl. **IF THE SAMPLE DOES NOT TURN PINK**, the hydrate alkalinity level is zero. Record zero and adjust treatment dosage to increase hydrate alkalinity. **IF THE SAMPLE TURNS PINK**, counting the drops, add sulfuric acid until the sample is colorless (disregard the eventual reappearance of a pink color). Swirl the vial between drops (Step 3).
4. Calculate the hydrate alkalinity as follows: Number of drops of sulfuric acid x 5 = ppm hydrate alkalinity as OH.
5. Record the hydrate alkalinity result and adjust treatment dosage as necessary.



Contact your Drew Marine representative for more information

Drew Marine maintains Safety Data Sheets on all of its products. These documents contain health and safety information for the development of appropriate product handling procedures to protect your employees. Safety Data Sheets should be read and understood by all of your supervisory personnel and employees before using Drew Marine products.



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