

# CHLORIDE HP TEST KIT



## DESCRIPTION

The Chloride HP Test Kit contains everything needed to measure the chloride level in boiler water from high-pressure boiler systems (over 60 bar) as well as makeup water. The easy drop count titration method provides accurate results. This method utilizes mercuric nitrate chemistry, which is more sensitive than silver nitrate chemistry and can detect low levels of chloride. After neutralization of the measured sample, mercuric nitrate is delivered consistently from a dropper bottle until a permanent color change signals the endpoint of the titration. The number of drops of mercuric nitrate required to reach the endpoint is multiplied by a factor to determine the ppm of chloride.

## APPLICATION AND USE

For high-pressure boiler systems, Drew Marine recommends testing boiler water chloride levels once a day per boiler. The maximum accepted level of chloride in the boiler water is 16 ppm. This test can also be used to detect low levels of chloride in makeup water. **THIS TEST IS NOT RECOMMENDED FOR USE ON TREATED COOLING WATER.**

Before testing sample must be cooled to 25° C (77° F) by collecting through a sample cooler for safety and to prevent flashing which concentrates the sample.

See reverse side for test procedure.



Chloride HP Test Kit  
(Range 1-16 ppm Chloride) PCN 0372011

## TEST KIT CONTENTS

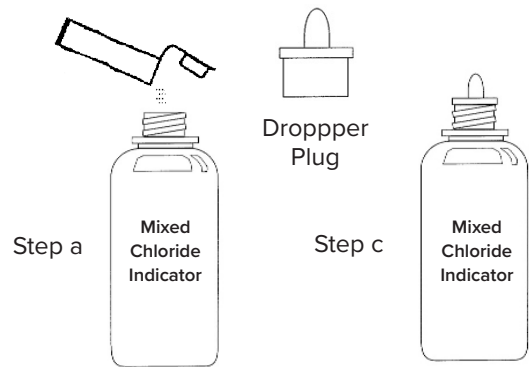
- 2 each 2 oz. (60 ml) Mercuric Nitrate, 0.0203N
- 1 each 1 oz. (30 ml) Nitric Acid N/5
- 1 each 1 oz. (30 ml) Mixed Chloride Indicator Solution
- 1 each plastic vial Mixed Chloride Indicator Powder
- 1 each glass flask for sample
- 1 each plastic dropper plug for Mixed Chloride Indicator
- 1 each white plastic bottle cap for Mixed Chloride Indicator



Contact your Drew Marine representative for more information

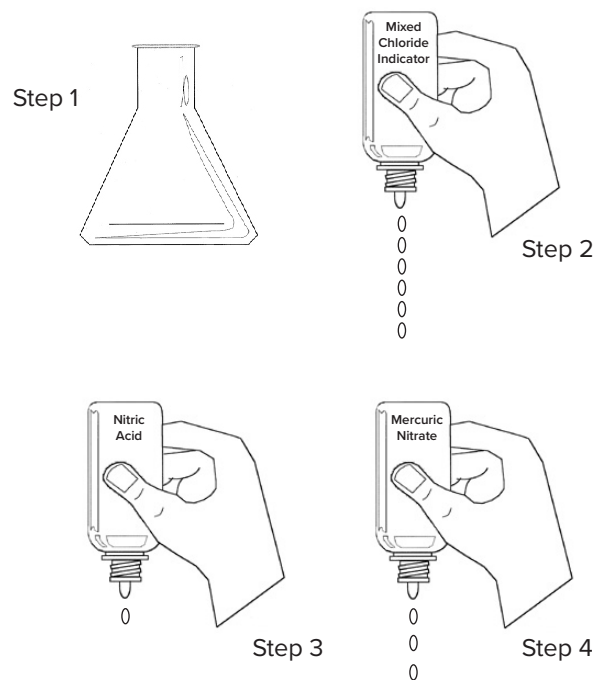
## PREPARE THE MIXED CHLORIDE INDICATOR AS FOLLOWS:

- Pour the powder contents of the small plastic vial into the liquid contents of the 1 oz. plastic bottle, labeled 'Mixed Chloride Indicator.'
- Mix contents of the Mixed Chloride Indicator bottle for 5 seconds.
- Insert the plastic dropper plug into the mouth of the plastic bottle and screw the white cap onto the bottle. Proceed with test.



## PROCEDURE

- Prepare the sample flask by rinsing the glass flask and fill to the mark (24-ml) with water to be tested.
- Adjust the color of the sample by adding 6 drops of Mixed Chloride Indicator and swirl to mix. The resulting color will be red.
- Adjust pH by adding nitric acid dropwise, swirling between drops until sample is yellow. Add 1 more drop.
- Counting the drops, hold the glass flask in a vertical position and add mercuric nitrate dropwise with swirling until the color turns to a permanent purple.
- Calculate the chloride concentration. Number of drops of mercuric nitrate  $\times 1 = \text{ppm chloride}$



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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