# SILICA AMPOULE TEST KIT



#### **DESCRIPTION**

The Silica Ampoule Test Kit provides a safe, easy, and accurate method for determining silica levels. The uniquely designed self filling ampoule has a tapered, prescored tip and contains premeasured, vacuum-sealed liquid reagent. When the ampoule tip is immersed in a water sample and is snapped off, the correct volume of sample is automatically drawn into the ampoule, and a small inert gas bubble forms. The sample and reagent are mixed by tilting the ampoule so the bubble travels from end to end. The resulting color can be quantified by comparing the color of the ampoule with colored standards.

# **APPLICATION & USE**

The Silica Ampoule Test Kit is used for testing silica in high-pressure boiler water. It is not a required test for medium-to low-pressure boiler systems. In addition, it is used for determining the silica content in potable water treated with CIL™ corrosion inhibitor. It is also used in conjunction with the Silica Dilution Kit (PCN 1AA2805) for determining the silica content in cooling water treated with DREWGARD® CWT diesel engine cooling water treatment.

Before testing boiler water, the 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.

# TEST KIT CONTENTS AND ORDER INFORMATION

#### Silica Ampoule Test Kit (PCN 0376013) contains:

- 30 ampoules
- 2 x Neutralizer Solution
- 2 x Activator Solution
- 1 cylindrical comparator 0-1 ppm
- 1 flat comparator 1-14 ppm
- 1 sample cup
- 1 set of instructions

#### Silica Ampoule Refill (PCN 0376021) contains:

30 ampoules

### Silica Neutralizer Solution (PCN 0376047)

6 x 7 ml

#### Silica Activator Solution (PCN 0376039)

• 6 x 14 ml



Silica Ampoule Test Kit (Range 0-1 and 1-14 ppm Silica) PCN 0376013

# **PROCEDURE**

- 1. Fill the sample cup to the 15-ml mark with sample (Step 1).
- 2. Add 10 drops of A-9001 Activator Solution (Step 2). Cap the sample cup and shake it to mix the contents well. Wait 4 minutes.
- 3. Add 5 drops of A-9000 Neutralizer Solution (Step 2). Cap the sample cup and shake it to mix the contents well. Wait 1 minute.
- 4. Place the silica ampoule's tapered tip into one of the four depressions in the bottom of the sample cup. Snap the tip by squeezing the ampoule toward the side of the cup. The sample will fill the ampoule and begin to mix with reagent (Step 3).
- 5. Remove the silica ampoule from the cup. Mix the contents of the ampoule by inverting it several times allowing the bubble to travel from end to end each time.
- 6. Wipe all liquid from the exterior of the ampoule and wait 2 minutes for full color development.



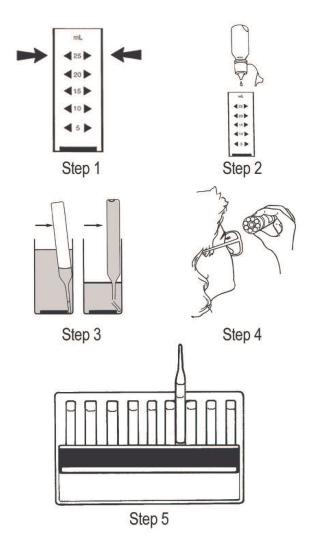


- 7. After 2 minutes, use the comparator to determine the level of silica in the sample.
  - a. When using the lower range comparator (0-1.0 ppm), place the silica ampoule, flat end downward, into the

center tube of the comparator. Direct the comparator toward a source of bright white light while viewing from the bottom. Hold the comparator in a nearly horizontal position and rotate it until the color standard below the silica ampoule shows the closest match (Step 4).

b. When using the high range comparator (1-14 ppm), be sure it is illuminated by a white light directly above the comparator. The filled silica ampoule should be placed between the color standards for viewing. It is important that the silica ampoule be compared by placing it on both sides of the standard tube before concluding that it is darker, lighter or equal to the standard (Step 5).

**NOTE:** Approximately 30 tests can be performed with  $1 \times 14$  ml bottle of Activator Solution and  $1 \times 7$  ml bottle of Neutralizer solution.





400 Captain Neville Drive Waterbury CT, 06705 USA 1-973-526-5700 Drew-Marine.com

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