Micromet treatment effectively controls corrosion by forming a thin protective film on all the metal surfaces of the system. This protective film has to be constantly rebuilt to provide continuing protection. However, the protective film does not build up upon itself and thus, it does not interfere with heat transfer or water flow through the piping system. Generally an initial charge of 1 pound of Micromet for each 100 gallons of water per day is recommended to control corrosion. In cases where corrosion is very severe or where old rust deposits are heavy, it is recommended that an initial charge of 2 pounds of Micromet per 100 gallons of water used per day be added to the Feeder at the start.

Since Micromet treatment may loosen some of the old rust deposits that have accumulated in the system, periodic slugs of discolored water may be noticed after Micromet treatment is started. It is recommended that any loosened accumulations periodically be flushed out of the hot water storage tank until the flushings are clear. Corrosion is generally more severe in the hot water part of the system than in the cold water. To assure sufficient treatment for control of corrosion in the heater tank, the Micromet Feeder should be installed on the inlet line to the hot water storage tank. Where corrosion is so severe that the cold water lines are affected as well as the hot water lines it is best to install two Micromet Feeders. One Feeder should be installed before the pressure tank or after the water meter to introduce 5 parts per million treatment to all the water. The second Feeder is needed in order to introduce an extra 10 parts per million to the inlet line of the hot water storage tank.

Copper corrosion, which is indicated by green or blue staining of plumbing fixtures, usually occurs in soft, acid waters. It is not possible to tell from an analysis of the water whether the Micromet will effectively control copper corrosion in a particular system. It is effective in about 50% of the cases, at least to the extent of preventing green or blue staining, and the greatest improvement is achieved where a compound like soda ash is also used in order to raise the water’s pH.

### General Facts About MICROMET Treatment

#### Solution Rate Controls The Feed

Micromet has a controlled dissolving rate which makes the treatment virtually automatic and may be used with a minimum of supervision. When in contact with an average water having a temperature of 50 to 70°F., it dissolves at a rate of approximately 25% of its weight per month. To obtain a fairly uniform rate of feed, it is only necessary to place the Micromet in a simple pot-type Micromet Feeder installed on the water line. An initial charge of 1 pound of Micromet per 200 gallons per day introduces an average of 5 parts per million of treatment and one pound per 100 gallons per day provides 10 parts per million of treatment. The only attention required is a few minutes once a month to replenish the Micromet that has dissolved. This addition of a small amount of Micromet to the Feeder once each month is necessary to maintain the proper amount of treatment.

#### Hot Water Dissolves MICROMET Rapidly

The temperature of the water in contact with Micromet should be below 100°F., or the Micromet will dissolve much more rapidly than the normal rate of 25% per month. For instance, at 140°F., the rate of solution will be about 10% per day. Therefore, care should be taken not to place the Feeder on a hot water line, nor at any point where it is near heat or where the hot water may back up into the Feeder.

#### Proper Flow Through a MICROMET Feeder

The flow rate through a Micromet bed should be between 1 quart to 3 gallons per minute. At lower flow rates there may be some solidifying or caking trouble experienced in the Feeder because when a bed of Micromet does not get enough water flow through it the Micromet keeps dissolving and diffuses down to the bottom of the Feeder. If this solution of Micromet is not washed away within a few days, it concentrates and tends to solidify. The Micromet bed and inlet line will gradually plug up solid when little or no flow is put through the Feeder.

To prevent plugging in any Micromet Feeder, make sure that a good flow of water is obtained at least once a day through the Feeder. The Micromet will not solidify if the proper flow is maintained through the Feeder. Flow should be adjusted by the customer so the Micromet bed rises when there is a good flow being used.

When no water is to be used for a week or more, the Feeder should be drained. When the system is being returned to service the Micromet bed should be loosened.

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*Micromet is a trademark registered with the U.S. Patent Office for a slowly soluble hexametaphosphate product.*
WHEN NOT TO USE MICROMET

1. If the water contains more than 5.0 parts per million of iron, Micromet treatment will not be completely effective and the iron should be removed from the water.

2. Micromet treatment may not work successfully when iron bacteria are present in the water. Iron bacteria are not harmful to humans or animals drinking the water but they do feed on the iron and have the ability to oxidize and precipitate it even when Micromet treatment is present. One can get a rough idea of whether or not iron bacteria are present by looking on the inside of the commode flush tank. If the inside of the tank has a thick red slimy coating, this generally means iron bacteria are present. Periodic additions of hypochlorite (laundry bleach) to the Micromet Feeder will help, providing the iron bacteria growths are not too heavy, but where there are very many iron bacteria in the water the addition of hypochlorite to the Micromet Feeder will not be completely satisfactory. If the inside of the commode flush tank does not have a slimy coating but is just stained with iron, Micromet treatment should be satisfactory, when the iron content is not over 5.0 ppm.

3. If the water is discolored with precipitated iron as it comes from the well, the iron should be removed by a filter.

4. Micromet is not recommended for preventing “Red Water” where iron is present in a city supply because the iron is usually oxidized and precipitated before it reaches the Micromet Feeder. When iron or rusty sediment is present in municipal water, a filter or softener should be used.

5. Micromet treatment should not be used to correct staining problems where large amounts of water and high flow rates are used such as in lawn sprinkling.

6. If tea, coffee and other beverages turn black when brewed or mixed with iron bearing waters, this is due to a reaction between the tannin in the beverage and the iron in the water. Micromet will not stop this reaction. The best way to correct this problem is to install filtering or softening equipment to remove the iron. To make good tea or coffee when iron removal equipment is not installed, it may be helpful to boil the water for about 5 minutes, let it stand to allow the sediment to settle to the bottom and then use the clear top portion.

7. While Micromet treated water will not harm boilers or closed water systems, this treatment will not provide much protection where the water is held in the system for a long time. Other chemical treatment, such as, Closed System Treatment or Boiler Water Treatment is recommended.

8. While Micromet may be introduced before any water softener which will remove hardness as well as iron by ion exchange, Micromet should not be fed before iron removal units which oxidize the iron and remove it by filtration.

9. Although Micromet treatment is effective in preventing lime scale formation at all temperatures up to the boiling point it is not recommended for use in large volume coil heaters where the water splits into two or more coil sections, in tankless heater coils or furnace coils which are in continuous contact with high temperature. For these types of heaters it is best to remove the hardness from the water with a water softener.