

PHOSPHATE TECHNOLOGY

Phosphates are among the few recognized substances that can be safely added to potable water to solve a variety of water-related problems.

Among many other benefits, the use of phosphate has proven to be an effective method for controlling corrosion, discolored water and calcium scale build-up in plumbing systems. Unhealthy levels of lead and copper in water can also be reduced in order to comply with the Lead and Copper Rule.

Phosphate-treated potable water supplies will help control problems in every type of plumbing system including galvanized, copper, iron, cement, asbestos and plastic.

Over 200 formulated phosphate-based products are now certified with the NSF for use in potable water treatment. In general, phosphate technology can be grouped into the following categories:

- **ORTHOPHOSPHATES**
- **ZINC ORTHOPHOSPHATES**
- **ZINC POLYPHOSPHATES**
- **ORTHO POLYPHOSPHATE BLENDS**
- **LINEAR CHAIN POLYPHOSPHATES**
- **SILICATE PHOSPHATE BLENDS**

ORTHOPHOSPHATES and many **ZINC ORTHOPHOSPHATES** are primarily used in low hardness waters where corrosion control and reduction in lead and copper solubility are the primary focus of treatment. Ortho-phosphates have no sequestering abilities.

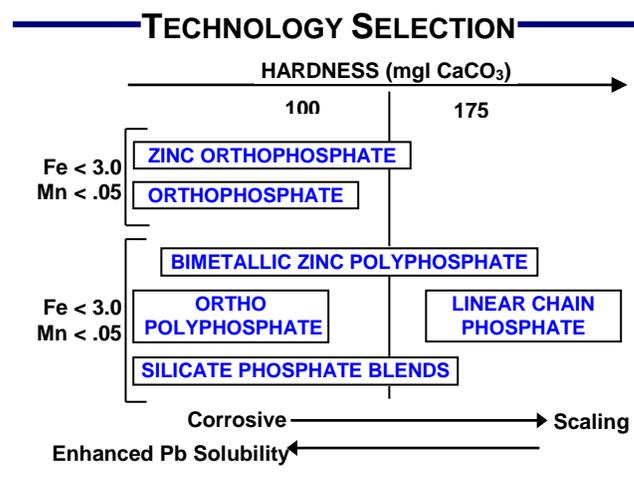
ZINC POLYPHOSPHATES offer a combination of corrosion inhibition and sequestration. They find application in systems where corrosion control is an issue, but elevated levels of iron and manganese in the finished water produce color and staining problems.

ORTHO POLYPHOSPHATE BLENDS can be formulated for use over a broad range of water qualities. Ortho polyphosphate blends can be used for both corrosion inhibition and sequestration.

LINEAR CHAIN POLYPHOSPHATES are used almost exclusively in hard water supplies for sequestering

scale and discolored water. The amount of polyphosphate contained, as well as the type of phosphate, is formulated according to the quality of the water.

SILICATE PHOSPHATE BLENDS were developed to enhance the sequestering action of basic silicates. They function essentially as straight silicates for lead and copper control.



Each of these technologies has been used in the United States for many decades. Many water municipalities use phosphates to treat their own distribution systems.

Before initiating a water treatment program, consult with a licensed Water Treatment Operator who is experienced with phosphate and silicate treatment in potable water supplies. Water quality factors and plumbing characteristics must be thoroughly analyzed in order to design the best water treatment program.

The properly chosen phosphate technology will help control corrosion, discolored water and calcium scale in all types of plumbing systems. Lead and copper residuals can also be reduced. The costs of a water treatment program are easily offset by the savings. A water treatment program allows a plumbing system to last longer and operate more efficiently.