

## **T.C. 687**

### **Liquid Iron Phosphate**

#### **DESCRIPTION**

T.C. 687 is a specially formulated liquid iron phosphate material designed specifically for steam gun or tank application. T.C. 687 both cleans and conditions ferrous metals prior to subsequent operations by removing oils, shop soils, smuts, and similar soils while simultaneously developing a conversion coating that improves corrosion resistance and paint adhesion. T.C. 687 is also applicable on certain zinc and aluminum castings and will remove light oxides and other soils from aluminum. T.C. 687 is specifically designed for steam application. The advantages of tank application are evident. With steam, you get the benefits of an inexpensive energy source (in many instances you can tie into an existing steam line), impingement qualities of the steam, built in heat source, wetting out, and soil softening qualities of the steam, plus the obvious advantages of faster dry down.

The chemical cleaning action of the material, increased by the mechanical force of the pressure-applied steam, assures fast, thorough removal of oils, shop soils and light smuts. At the same time, T.C. 687 develops a conversion coating - minimum weight of 25 milligrams per square foot - that provides positive corrosion resistance and improves the adhesion of subsequently applied finishes. On certain zinc and aluminum castings, T.C. 687 will also develop a phosphate conversion coating. Moreover, it is recommended for cleaning as well as removing light oxides from aluminum.

Due to the chemical stability of T.C. 687, less sludge is formed in solutions. As a result, solutions have a longer working life and maintenance is kept to a minimum with simple solution control.

T.C. 687 is most conveniently applied through a steam gun. A minimum of 30 psi of steam is needed. Adding the material to water, solutions should be prepared and held in a suitable holding tank. Concentration at the nozzle should be between 1 ½% and 3% by volume in water. pH solution at the nozzle should be between 4.0 and 5.0. pH does not normally need to be adjusted. The solution is applied from the ground up on units being treated. After all surfaces have been covered once, they are given a second application. Next, surfaces are rinsed thoroughly - first with steam, then with clear water, then again with steam to assure quick drying.

T.C. 687 can also be used as an economical, three-stage liquid iron phosphate coating for tank immersion at temperatures as low as 100°F.

T.C. 687 is in liquid form for instant mixing and convenient metering through automatic solution control equipment.