

# **CHEMEON TCP-HF<sup>®</sup>**

(formerly Metalast TCP-HF)

## **Application of CHEMEON TCP-HF on Non-Aluminum Substrates**

CHEMEON TCP-HF can be applied on non-aluminum substrates, providing a wide variety of benefits. CHEMEON TCP-HF prevents darkening on nickel and electroless nickel, while also providing an excellent adhesive base for topcoats. It can also be used as an anti-tarnish agent or when used in conjunction with other products, such as paints and powder coatings, it results in superior corrosion resistance.

### **Applications:**

#### **Zinc, Zinc Alloys, and Galvanic Coatings**

For optimal results on zinc-plated substrates, CHEMEON TCP-HF should be applied immediately after the plating takes place. After thorough rinsing, immerse the part in a 50% CHEMEON TCP-HF bath at an elevated temperature (120°F) for 5 minutes. Rinse again in a clean rinse and either bake or dry off with an air hose.

#### **Existing Zinc, Zinc Alloys, and Galvanic Coatings**

For parts that have previously been treated with a zinc based coating, the surface needs to be cleaned and activated before treatment with CHEMEON TCP-HF. The cleaner should be a mild alkaline cleaner designed for zinc applications. The temperature should be maintained near 120°F. Rinse twice for 1 minute each before activating the surface. The first rinse can be warm (100°F) and the second rinse at ambient temperature. To activate the surface, immerse the substrate in a 10% nitric acid bath for 3 minutes. Again, rinse twice with rinses at ambient temperatures. It is important that the rinse immediately prior to the CHEMEON TCP-HF bath be kept clean. Immerse the parts in CHEMEON TCP-HF for 3-5 minutes at 120°F and 25%-50% by volume. One or two brief rinses, 5-15 seconds, to remove excess CHEMEON TCP-HF are suggested. Dry in an oven or with an air hose.

#### **Magnesium, Magnesium Alloys, and Magnesium Die Castings**

Magnesium substrates should be cleaned prior to treatment with CHEMEON TCP-HF. The cleaner of choice should be Mg-specific and very alkaline with a pH above 12. The temperature of the cleaner should be maintained at the low end of its operating range. Immersion time will vary with the cleaner. Two to three tap water rinses prior to CHEMEON TCP-HF are recommended. The first rinse should have a pH of 8 or greater. The rinse immediately prior to CHEMEON TCP-HF bath should be very clean. The CHEMEON TCP-HF bath should be operated at 25%-50% by volume at ambient temperature (65°F-120°F) with a contact time of 3-5 minutes. One or two brief rinses, 5-15 seconds, to remove excess CHEMEON TCP-HF are suggested. Dry in an oven or with an air hose. Drip-drying is not recommended.



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### **Titanium**

Titanium should be cleaned with a mild cleaner such as CHEMEON Cleaner1000 or other titanium-specific chemistries. Rinse the surface to remove the surfactants and other cleaner constituents. Etch the surface with an acid/fluoride based etch followed by two rinses. Immerse in a 50% CHEMEON TCP-HF bath at an elevated temperature (100–F -120°F) for 5 minutes. Finally, rinse in one or two brief rinses then dry in an oven.