

# TURCOAT 4786

## ZINC PHOSPHATE COATING

### **Purpose**

Turcoat 4786 is a chemical concentrate that is specifically formulated to provide smooth, dense microcrystalline zinc phosphate coatings on steel. Turcoat 4786 coatings provide increased protection from corrosion as well as improved paint adhesion.

Because of the compact coating, paint consumption is vastly reduced, and improved luster is obtained.

### **Applicable government specifications**

Turcoat 4786 conforms to the following specification requirements:

MIL-P-16232B, Type Z

TT-C-490, Type I

### **Description**

Turcoat 4786 is an amber liquid concentrate of mildly acidic metal phosphates that contains the necessary crystal refining toners required to produce optimum corrosion protection and appearance of the surface finish.

### **Advantages**

Turcoat 4786 offers the following product features:

1. Provides microcrystalline zinc phosphate coatings that are extremely fine and compact.
2. Improves paint adhesion due to refined crystal matrix of coating.
3. Reduces cost of paint because the extremely fine-grained phosphate coating allows greater coverage.
4. Increases corrosion protection, because of improved paint bond.
5. Improves appearance of paint finish because of smoother microcrystalline surface.

- 6. Saves in operational cost because compactness of microcrystalline coating tends to restrict formation of excessively heavy coatings.
- 7. Simplifies process control because of built-in toners.

## How to use Turcoat 4786

**Pre-cleaning** - Prior to Turcoating, parts must be free of all grease, rust, soil and loose scale. Cleaned parts must be water-break-free after rinsing with clean cold water.

### Turcoating with 4786

The Turcoat 4786 bath is made up by adding 4% volume of the Turcoat 4786M to the water bath, adjusting the composition of the bath to within the control limits; and maintaining the concentration within the below limits by the continuous addition of Turcoat 4786RR.

	<b>Conc.</b>	<b>Total points</b>	<b>Free Acid</b>	<b>Ratio</b>	<b>Temp.</b>	<b>Time</b>
Spray	2 - 3%	16 - 20	1.0 - 2.0	8 - 10	70°C	1 min.
Dip	3 - 4%	17 - 23	1.5 - 2.5	8 - 11	80°C	5 min.

This bath should be tested and adjusted to within the above operational limits, and noted on a Turcoat Daily Log Sheet. Maintain the solution level by addition of water, and the concentration of the bath by the addition of Turcoat 4786RR.

**Rinse** - 55°C or lower, dump and refill daily.

**Final Inhibitive Rinse** - Turcoat Hibi Seal is used at 1 - 2 liters per 1000 liters of hot water (60 - 70°C) to provide post-rust inhibition. Maintain the pH of the Hibi Seal at pH 3.0 - 4.0 by addition of small amounts of phosphoric acid. Drain tank, and recharge daily.

If a chromate type inhibitive rinse is required because of government specifications, use Turcoat Hibi Rinse at 0,6 to 1,2 kg per 1000 liters of hot water (60 - 70°C) and adjust the pH of the solution to pH 3.0 - 4.0 by the addition of small amounts of phosphoric acid. Drain tank and recharge daily.

### Acceleration of Turcoat 4786 baths

The Turcoat 4786 bath should be accelerated with Turcoat Accelerator to enhance heavier, more corrosion resistant coatings. Dissolving 1 to 3 kgs in 100 liters of water, and slowly running this solution into the Turcoat 4786 bath during production use use Turcoat Accelerator.

## Equipment

Tank: Heavy gauge (3/8") mild steel, stainless preferable

Pump: Stainless steel

Heating: Stainless steel steam coils, internal gas tubes or gas burners

Drying: Hot chamber, warm air blast

**Caution:**

Contains acidic constituents. Avoid contact with skin, eyes and clothing.

Refer to product label for additional precautionary and handling information.

**NOTICE:**

*The above information and recommendations concerning this product are based upon our laboratory tests and field use experience with this or similar products. However, since conditions of actual use are beyond our control, any recommendations or suggestions are made without warranty, express or implied. Manufacturer's and sellers sole obligation shall be to replace that portion of the product shown to be defective. Neither shall be liable for any loss, damage, or injury, direct or consequential, arising out of the use of this product.*

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