



# PRODUCT INFORMATION

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## MARTRON FW-150

Corrosion Resistant Topcoat

### Section 1: PRODUCT DESCRIPTION and FEATURES

**Martron FW-150** is a specially formulated blend of organic polymers and nanoparticles which when applied to trivalent passivated zinc plate significantly increases the corrosion resistance of the electrodeposited coating.

**Martron FW-150** can be applied via immersion spin, immersion drain, or spray technics and provides a clear, heat-resistant corrosion protection after thermal treatment at 120°C (250°F).

- PRODUCES A CLEAN, THIN, HARD AND ADHERING COATING
- COMPLETELY WATER SOLUBLE
- CAN BE APPLIED VIA DIP SPIN OR DIP DRAIN METHODS

### Section 2: SAFETY PRECAUTIONS

Always read and understand the Safety Data Sheet (SDS) for any chemical product prior to using the product to ensure familiarity with the methods of safe handling and health hazards associated with **Martron FW-150**.

### Section 3: MAKE UP and MAINTENANCE OF MARTRON FW-150

#### Equipment:

Tanks and any ancillary equipment should be constructed of high-density polypropylene or Koroseal lined steel or stainless-steel tanks. Small parts can be processed via dip-spin with recovery of the spun off material. Filtration is encouraged through 50-micron filters or larger. Solutions of **Martron FW-150** are stable between the pH of 8-10. The drag in of acidic material will cause flocculation of the solution. Filtration will assure that particles will not be imbedded in any crevice or threaded surfaces. In-line barrel application is discouraged so as not to seal barrel holes. However, removal can be easily done by immersion in hot alkaline solution, particularly before the sealer is cured at elevated temperatures. Ensure adequate ventilation is provided.

#### Solution Make Up:

	Optimum	Range
<b>Martron FW-150</b>	20% (vol)	10-50% (vol)

#### Make Up Procedures:

- Fill the tank with appropriate amount of water based on **Martron FW-150** operating concentration
- With continuous mixing, add the required amount of **Martron FW-150**
- Fill tank to final operating volume with clean water
- Stir to mix uniformly

**Operating Conditions:**

	Optimum	Range
pH	9.0	8.0-10.0
Temperature	-	Ambient
Dip Time	Complete wet out of part surface	-
Drying Temperature	195°F (90°C)	140-250°F (60-120°C)
Drying Time	10 minutes	5-15 minutes

**Typical Cycle:**

**Martron FW-150** is applied via immersion, dip spin, or dip drain methods. Usually the application of one coat will substantially enhance the corrosion resistance of plated parts.

**Operating Notes:**

**Martron FW-150** coatings should be dried at temperatures of 140°F - 250°F, with higher temperatures corresponding to shorter drying times. This will produce coatings that will substantially increase the corrosion resistance of conventionally plated and chromated substrates.

**Process Control:**

Solution maintenance is a function of drag out and soil contamination and varies by application.

**pH:**

The pH of the operating solutions of **Martron FW-150** should be performed throughout the work-day. Adjustments can be made with dilute solutions (max 10% concentration) of Sodium or Potassium Hydroxide.

**Concentration:**

Concentration is critical to achieve the desired topcoat corrosion protection. Ideally it is monitored weekly, preferably daily. See **Analytical Method** for a recommended procedure.

**Metallic Impurities:**

Care should be taken to not drag in trivalent passivate or zinc plating solution. Both zinc and chromium will adversely affect the performance of the **Martron FW-150** system. Metallic impurities should not exceed 300 ppm. If the metallic impurities exceed this amount, the **Martron FW-150** should be decanted and additions should be made to re-establish the desired concentration.

**Analytical Method:****Determination of the Solids Content of MARTRON FW-150 Seal Solutions**

**Note: Always perform double weight determination for accurate results.**

**Equipment Required:**

- Analytical balance capable of 0.001 grs sensitivity
- Lab oven capable of drying samples at 250°F
- 43 mm aluminum weighing dishes
- Lab glass desiccator with porcelain plate

**Reagents Required:**

- None required

**Procedure:**

- Tare the analytical balance to zero.
- Weigh the aluminum weighing dish and record the weight (W0).
- Tare the analytical balance to zero and add 10 to 15 grs of **Martron FW-150** seal solution to the weighing dish. Immediately record the weight (W1).

Note: The values of the weight must be determined with accuracy

- Place the aluminum weighing dish with the **Martron FW-150** directly into the oven at 250 °F for 90 - 120 minutes (or until completely dry. For reference, include a blank sample of water).
- After 90- 120 minutes, transfer the aluminum weighing dish with dried **Martron FW-150** to the desiccator, and let it cool down to ambient temperature.
- Weigh and record the weight of the aluminum weighing dish with the dried sample (W2).
- Calculation:

$$(\% \text{ vol}) \text{ Martron FW-150} = \frac{W_2 - W_0}{W_1} * 705$$

**Section 4: WASTE TREATMENT**

Consult appropriate Federal, State, and local regulatory agencies to ascertain proper disposal procedures. Do not discharge into waterways or sewer systems. Disposal will depend on the nature of waste material.

**Section 5: STORAGE**

Avoid freezing **Martron FW-150**. Store the **Martron FW-150** in an appropriate area with compatible materials. All chemicals should be stored in compliance with all applicable federal, state or local requirements.

**Section 6: NON-WARRANTY and DISCLAIMER**

The data contained in this bulletin is believed by **Martron Inc.** to be true, accurate and complete. Since the final methods of use of this product are in the hands of the customer, and beyond **Martron Inc.'s** control, **Martron Inc.** cannot guarantee that the customer will obtain any specific result. Accordingly, **Martron Inc.** does not assume any responsibility for the use of this product by the customer, the results obtained, nor the infringement of any patents of third parties.