PRODUCT INFORMATION

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DATE: JULY 2020

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REF. # MFC-001551

MARTRON ALTV90

Trivalent Chromate for Aluminum and Aluminum Alloys

Section 1: DESCRIPTION

Martron ALTV90 is a new environmentally friendly all trivalent chromate providing a clear blue to slight yellow iridescent coating on Aluminum with excellent tolerance and controllability.

- Meets or exceeds MIL-DTL-81706 and MIL 5541 for bare corrosion (336 h in NSS per ASTM B-177, respectively, DIN 50021 SS)
- Low contact resistance, < 0.8 m Ohm/cm2
- Heat resistant up to 100 C with minimal loss in corrosion resistance
- RoHS / REACH compliant with no hexavalent chrome
- Single component with simple analysis
- Provides paint adhesion and corrosion protection
- Coating is applied via immersion and/or spray

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 ALTV90***

Section 3: MAKE UP and MAINTENANCE OF MARTRON ALTV90

Equipment
Tanks and any ancillary equipment should be constructed of polypropylene, PVC, 316 stainless steel or lined steel. Ensure adequate ventilation is provided.

Solution Make Up

	Optimum	Range
Martron ALTV90	25% (vol)	10-50% (vol)

Make Up Procedures

- Fill tank to ¾ of its working volume with warm water (80°F)
- With continuous stirring add the required amount of **Martron ALTV90**
- Add balance of water to fill tank
- Stir to mix uniformly and adjust pH accordingly
- Heat chromate solution to operating temperature

Operating Conditions

	Optimum	Range
Temperature	100°F	95 - 110°F
Immersion time	30 sec	30 sec – 3 min
pH	2.0	1.5 – 3.5

Typical Cycle

- Soak clean in etch or non-etch cleaner
- Overflowing water rinse
- Deoxidize/de-smut in either chrome or non-chrome deoxidizer
- Overflowing water rinse
- Apply conversion coating **Martron ALTV90**
- Overflowing water rinse
- Rinse in hot running water (not to exceed 160°F)
- Subsequent post treatments may be applied at this time

Process Control
Solution maintenance is a function of drag out and soil contamination and varies by application. Solution concentration is determined by wet chemical analysis.

Analytical Method

Equipment Required

- 25.0 ml pipet
- 250 ml Erlenmeyer flask
- Hot plate
- Glass beads or boiling stones
- pH Meter
- 25 ml buret with stand

Reagents Required

- 10% Sodium Hydroxide Solution
- 35% Hydrogen Peroxide
- Conc. Hydrochloric Acid, Reagent Grade
- 10% Potassium Iodide solution
- 0.1 N Sodium Thiosulfate solution
- 1% Starch Indicator solution

Procedure

- Pipet a 25.0 ml sample into a 250 ml Erlenmeyer flask.
- Add 100 ml of deionized water.
- Using a pH meter, adjust pH to 11.0 with 10% Sodium Hydroxide solution.
- Add 2.0 ml of 35% Hydrogen Peroxide.
- Boil for approximately 20 minutes. Solution will be bright yellow.
- Cool and dilute to 100 ml with deionized water.
- Add 10 - 15 ml of concentrated Hydrochloric Acid.
- Add 10 ml of 10% Potassium Iodide solution.
- Titrate the brown solution to a straw color with 0.1 N Sodium Thiosulfate solution.
- Add 1 ml of 1% Starch Indicator solution and continue titrating from a blue color to a greenish endpoint.
- Record ml of 0.1 N Sodium Thiosulfate solution used.
- Calculation:

(% vol) **Martron ALTV90** = ml of 0.1 N $Na_2S_2O_3$ x 1.50

pH
A pH meter should be used rather than papers to control pH.

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 ALTV90.** Store **Martron ALTV90** 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 our control, we 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.