

# Luster-On Products

## Technical Data Sheet

### LUSTER-ON ALUMINESCENT Trivalent Chromate for Aluminum Alloys

#### I. GENERAL DESCRIPTION

Luster-On Aluminescent is a powdered product used to form a chromate conversion coating on aluminum surfaces without the use of hexavalent chromium. The process provides excellent corrosion protection at low cost and forms a base for paint, lacquer, or rubber bonding. The chromate can be applied by dip, spray, brush, swab, or roll coating, requires no electric current, cooling or exhaust. Luster-On Aluminescent yields clear, slightly iridescent films while forming a protective surface with lower electrical resistance than anodizing. Luster-On Aluminescent is suitable for both wrought and cast aluminum alloys and is designed for ease of operation with minimum control.

**READ MATERIAL SAFETY DATA SHEET BEFORE USING THIS PRODUCT**

#### II. TYPICAL CYCLE

1. Alkaline Cleaner - Luster-On 401
  - Concentration: 5-6 oz./gal.
  - Temperature: 140-160°F.
  - Time: 3-5 minutes.
2. Rinse.
3. Deoxidize and desmut - Luster-On 485
  - Concentration: 8 oz./gal.
  - Temperature: 70°F.
  - Time: 1-3 minutes.
4. Rinse.
5. Chromate - Luster-On Aluminescent
  - Concentration: 3 oz/gal
  - Temperature: 70 F.
  - Time: 3 minutes.
6. Rinse.
7. Warm water rinse (160°F max).
8. Dry.

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## **LUSTER-ON ALUMINESCENT**

### **III. PREPARATION FOR CHROMATING**

The quality of the conversion coating film formed from solutions of Luster-On Aluminescent is controlled directly by the pre-treatment. Proper cleaning and deoxidizing is essential. The wide variations in aluminum alloy composition as well as the appearance and function of the chromate film demand many alternate procedures for surface preparation. They may be grouped as follows:

1. Pre-clean: Parts that are heavily soiled with organic contamination should be pre-cleaned by aqueous degreasing or emulsion cleaning.
2. Alkaline Etch: Desirable for greatest chromate film adhesion. May be deleted on parts with close dimensional tolerances.
3. Deoxidize and/or Desmut: Required to remove metallic oxides and smutting from cleaners or etch solutions. Luster-On 485 is suitable for most wrought alloys. Castings require a nitric-fluoride mix. Contact the Luster-On Customer Service Lab for recommendations on specific alloys.

### **IV. SOLUTION MAKE-UP AND OPERATING CONDITIONS**

Luster-On Aluminescent solutions are prepared by dissolving the desired quantity of Luster-On Aluminescent in warm water with stirring. When completely dissolved, assure that the pH of the solution is in the required range.

The pH of the working solution is a function of the concentration of Luster-On Aluminescent and the level of dissolved aluminum in the bath. The pH of the solution should be in the range of 3.5 - 4.0. Luster-On Aluminescent Correcting Solution may be used to lower the pH to the desired range.

The preferable operating temperature is 70 - 80°F but higher temperatures may be used to change immersion times.

Immersion time may be varied between 1 and 5 minutes depending on the alloy being processed.

### **V. MAINTENANCE ADDITIONS**

The concentration should be periodically checked using the recommended control procedure. The pH should be routinely checked daily and maintained in the recommended range. Approximately 2.5 fluid ounces of Aluminescent Correcting Solution will lower the pH of 100 gallons of Luster-On Aluminescent solution 0.1 units.

### **VI. EQUIPMENT**

Tank – Steel lined with Koroseal, polypropylene, or polyethylene

### **VII. HELPFUL COMMENTS**

1. Thorough rinsing is essential both before and after Luster-On Aluminescent immersion. Drag-in of acid or alkali should be avoided.

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### VII. HELPFUL COMMENTS

2. In the absence of suitable analytical equipment, control may be accomplished by visual observation of the solution and comparison with a standard.
3. Drying films with hot air or centrifuge is acceptable provided surface temperatures do not exceed 160° F.

### VIII. PACKAGE

Luster-On Aluminescent is available in 100 lb. non-returnable containers.

Luster-On Aluminescent Correcting Solution is available in 5 gallon and 55 gallon containers.

### IX. STORAGE

Keep container closed when not in use. Store in a cool dry place out of direct sunlight.

### X. DISPOSAL

Luster-On Aluminescent solutions contain trivalent chromium. Dispose in accordance with Federal, State, and Local Regulations.

### XI. SAFETY AND HANDLING PRECAUTIONS

#### HIGHLY ACIDIC INDUSTRIAL PRODUCT CONTAINS TRIVALENT CHROMIUM AND FLUORIDE

**DANGER!** Causes severe burns that may or may not be immediately painful or visible.

#### HARMFUL IF SWALLOWED OR INHALED.

Avoid contact with eyes, skin, and clothing.

Wear safety goggles, rubber gloves, and other suitable protective clothing when handling.

Wash thoroughly after handling.

Avoid inhalation of mist.

Use with adequate ventilation.

Do not take internally.

Avoid prolonged contact with glass, ceramic or concrete. If contact is made, flush promptly and thoroughly with water.

Keep concentrate away from combustible, organic, or readily oxidizable materials.

Avoid contact or mixing with materials containing chlorine.

Before opening container, loosen closure slowly to relieve any pressure build-up.

In case of spills and leakage, flush area with plenty of water.

Do not mop up or dry up with paper, rags, or sawdust.

#### FIRST AID IN CASE OF CONTACT

**FOR EYES:** Immediately flush with cool water for 15 to 30 minutes. Hold eyelids apart while flushing to insure contact of water with all surfaces of eyes and lids. Get immediate medical attention.

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### **XII. SAFETY AND HANDLING PRECAUTIONS (Continued)**

**FOR SKIN:** Immediately flush with large quantities of cool water until all acid is removed, paying particular attention to skin under the nails. Immediately remove contaminated clothing and shoes. Wash clothing and shoes before re-use. Get immediate medical attention.

**IF SWALLOWED:** Rinse out mouth thoroughly with water. Give water to drink without delay. Follow with milk or two (2) ounces of milk of magnesia, then soapy water or salty water (1 tablespoon per glass). Get immediate medical attention.

**IF INHALED:** Remove from exposure. Get medical attention, if warranted.

### **KEEP OUT OF REACH OF CHILDREN**

### **FOR INDUSTRIAL USE ONLY**

This product is sold for industrial use only. Our suggestions for its use are based upon tests and procedures, which from experience we believe to be reliable. Since the use is beyond our control, neither we nor our distributors can assume responsibility, either expressed or implied for the results and/or for violation of any patents or any claims resulting from such use.

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