

ANODAL® AANF

Anodal AANF liquid, when added to a normal sulfuric acid electrolyte, allows this tank to be used for hard anodizing without the expense of costly refrigeration or a new high-voltage power supply. Decorative, architectural and hard coat anodizing can then be accomplished in the same tank by merely adjusting the temperature and current density.

- Allows Type III hard coating in accordance with the latest versions of the government specification, MIL-A-8625 at 55 degrees.
- May eliminate the honing normally required to obtain a smooth RMS final surface after hard coating.
- Produces architectural and hard coat films that are receptive to coloring by dyeing, pigmentation or electrolytic coloring.
- Improves the uniformity of film thickness throughout the entire anodizing tank.
- In some cases, can be used to increase the productivity of sulfuric acid anodizing facilities.
- Requires less refrigeration, power and capital cost as compared to low temperature anodizing processes.
- Minimizes the effect of temperature fluctuations in the anodizing electrolyte.

PHYSICAL PROPERTIES:

Appearance: Clear to pale amber liquid

Density: 10.2 lb/gallon

RECOMMENDED PRACTICE:

For most alloys, simply add 2% by volume of *Anodal AANF* to the anodizing solution. Alloys, such as 2024 or 7075, are somewhat more difficult to process and may require increasing the concentration to 3-4% v/v.

ANALYSIS PROCEDURE:

- 1. Pipette 10 ml of the anodizing bath into a 100 ml volumetric flask, dilute to the mark with water.
- 2. Pipette "A" ml (try 5) of this solution into an Erlenmeyer flask labeled "S" (for sample).
- 3. Add 50 ml D/I water to both flask "S" and a second flask labeled "B":
- 4. Pipette 10 ml sodium periodate into each flask.
- 5. Add 10 ml conc. hydrochloric acid, mix and allow to stand 10 minutes.
- 6. After digestion add about 2 grams potassium iodide.
- 7. Titrate each flask with 0.1 N sodium thiosulfate to a yellow color, then add 3 drops of starch indicator.

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ANALYSIS PROCEDURE (CONT'D):

8. Continue titrating to a clear end point. Record the titre as "S" & "B" for the 2 samples accordingly.

Note: If the difference between "S" & "B" is greater than 7 mls, repeat the procedure using a reduced aliquot volume for "A"

Calculation: Anodal AANF (% Vol) = $(B - S) \times 3.2/A$

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