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:  \( \text{Anodal AANF (% Vol)} = \frac{(B - S) \times 3.2}{A} \)