



## ANODAL® ETCH SD-1 GRANULES

**Anodal Etch SD-1** is a complete formulation for etching aluminum alloys. It contains caustic soda, sequestrant and additives to enhance the bath performance and safety. The special ingredients in Anodal Etch SD-1 provide a uniform matte finish, excellent hiding of imperfections, and spangle prevention.

### **EQUIPMENT**

Mild steel is satisfactory for the tank and auxiliary equipment.

### **APPLICATION**

Anodal Etch SD-1 is added directly to the etching bath as required. Because of the heat generated by its addition, it should be added slowly and carefully with agitation. Appropriate safety equipment must be used and care taken against the hazards of splashing and overheating.

As with all caustic etch baths, the solution concentration must be maintained within the proper limits to provide consistent etch quality and prevent solution fallout. Higher concentrations of dissolved aluminum require increased amounts of Anodal Etch SD-1. The bath should be operated at 120°-150° F.

For a new make-up when no dissolved aluminum is present, start at 40 g/l (5.3 oz/gal). The Anodal Etch SD-1 concentration should be maintained at 90-100% of the aluminum concentration. The aluminum concentration will reach its own equilibrium dependent upon drag-out, time, temperature, bath chemistry etc. Dumping or decanting the solution may prove unnecessary. Anodal Etch SD-1 is compatible with most caustic etch baths and they may be converted directly. Consult a Reliant Technical Representative for specific details.

### **CONTROL METHOD:**

1. Filter a sample of the bath
2. Pipette a 5 ml. sample into a 250 ml. beaker. Add 50 ml. water.
3. Titrate with 1.0 N HCl until cloudy. Record as "A".
4. To the same beaker add 3 grams (approx.) of sodium fluoride and 3 drops of Phenolphthalein indicator (turns pink).
5. Continue titrating to a clear end point that remains for at least 30 seconds
6. Add another 3 grams of sodium fluoride.
7. If a pink color reappears, continue titration as indicated in step 6.
8. Record the total volume of titer "B".

### **CALCULATIONS:**

Active etch:  $A \times 7.5 = \text{g/l Anodal Etch SD-1}$

Dissolved aluminum:  $(B-A) \times 1.35 = \text{g/l aluminum}$

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### **HANDLING PRECAUTIONS:**

*Anodal Etch SD-1* contains caustic soda. Wear protective clothing including rubber gloves, apron, and face shield when handling.

Recommendations, notices or instructions as to handling, use, storage or disposal of this product, including its use alone or in combination with other products, or as to any apparatus or process for its use are based upon information believed to be reliable. No liability is taken with respect to any such recommendations or instructions. Sole and exclusive warranty is that products comply with published chemical and physical specifications as provided on the certificate of analysis. No other warranties, either express or implied are given.