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A2LA Accredited ISO/IEC 17025:2005 Certificate # 2558.01

161 ALUMINUM

Super Etch *etchant for aluminum alloys*

Introduction

Aluminum alloys develop a surface oxide film almost immediately upon exposure to air. Various machining and handling operations leave scratches or other surface flaws. Aluminum processing lines require an etching stage to remove these imperfections, providing a finer surface for later anodizing or chromating operations. **161 Super Etch** is formulated to provide an even, fine-grained surface on aluminum alloys which is ideal for subsequent chemical processes. Additionally, **161 Super Etch** minimizes the build-up of aluminate sludge and scale. This reduces both particulate contamination of the aluminum surface and scale build-up on the tank and heat exchangers.

Features and Benefits

Fine-grained etched surface
Controls scale build-up

Ideal for chromating or anodizing
Improves metal finish, heat transfer

Operating conditions for 161 Super Etch

Concentration	4 - 10 oz/gal (30 - 75 g/L)
Temperature	80 - 140 °F (25 - 60 °C)
Immersion time	1 - 5 minutes

How to use 161 Super Etch

- 1) Drain spent etch solution. Clean and rinse all equipment.
- 2) Fill etchant tank approximately $\frac{1}{2}$ full with water.
- 3) Add the required volume of **161 Super Etch**. We suggest an initial concentration of 5 oz/gal (38 g/L). Experience will determine whether you may need to adjust your concentration slightly higher or lower.
- 4) Fill tank to working volume and mix thoroughly.
- 5) Heat tank to operating temperature. We have found that alloys can be suitably etched at 120 °F (50 °C) with an immersion time of 1 - 2 minutes. Again, your experience is the best guide for temperature and time.
- 6) Solution is now ready for production.

General guide for best results from 161 Super Etch

- 1) As alloys and workloads vary widely between operations, no single combination of conditions will work in all applications. It is best to review existing production guidelines before charging up a new solution.
- 2) Consider all aspects of the finishing line to determine exactly what is expected in terms of performance. Whether your goal is reduced coat or improved performance, several considerations are important in evaluating performance.
- 3) **161 Super Etch** rinses well and must be followed by thorough rinsing before deox/desmut and pickling stages. Insufficient rinsing may produce other problems down-line and may result in rejects or chromate failure.
- 4) Maintaining the temperature of the etchant within the operating range is very important. Etch rates vary significantly with temperature and alloy.

Analytical control of your 161 Super Etch solution

Regular chemical analysis of your etchant solution will maximize performance and life. Analytical services are available from ACCU-LABS, INC.; the procedure is also available if you perform this analysis in-house.

Safety and handling

161 Super Etch and its working solutions contain caustic soda. Avoid splashing onto skin and into eyes may cause chemical burns and blindness. Use only with suitable protective clothing. Wash thoroughly after any work with this product. Refer to Material Safety Data Sheet for more complete information. Handle this and all chemicals with care.

Non-warranty

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