



Deoxidizer 13L

Deoxidizer 13L is an acidic, non-chromated, iron based, water-soluble liquid product for deoxidizing-de-smutting wrought aluminum alloys and cast alloys that have a low silicon content (less than 1%).

Deoxidizer 13L may be used in rack, barrel lines or spray operations prior to spot welding, chromating, bright dipping, anodizing or plating.

The function of Deoxidizer 13L, besides deoxidizing and de smutting, is also to inhibit the reformation of the natural oxide film on the aluminum surface.

Note: Deoxidizer 13L is not recommended for use on 5000 series aluminum as pitting may occur.

Features & Benefits

Does not contain nitric acid	Safer work environment
Non-fuming	Safer work environment
Does not contain chrome compounds	Less complex waste-water treatment; lower cost

Typical Applications

- For use on low silicon cast aluminum and other aluminum alloys as a deoxidizer or desmutter. Used for pretreatment in all aluminum processing lines after cleaning.

Operating Conditions

Concentration	20% – 50%
Temperature	Ambient
Time	30 sec – 3 min, depending upon smut buildup
Equipment	316 Stainless steel, PVC, Polypropylene or rubber lined tank
Agitation	Air agitation aids smut removal



Titration Method

Chemicals and Equipment Required

500 mL Erlenmeyer flask
50 mL burette
25 mL graduate
10 mL pipette

Concentrated HCL
40% (weight) Potassium Iodide solution
0.1 N Sodium Thiosulfate solution
Starch indicator solution

1. Pipette a 5 mL sample of Deoxidizer 13L into a 500 mL Erlenmeyer flask and dilute with 100 mL of water.
2. Add 25 mL of concentrated Hydrochloric Acid and mix thoroughly.
3. Add 10 mL of 40% (weight) Potassium Iodide solution and swirl flask to mix.
4. Titrate to a light red color with 0.1N Sodium Thiosulfate solution; then add 2 to 3 mL of Starch indicator solution and continue titrating until the deep blue color just disappears.
5. Record mL used.

Calculation

$$\text{Concentration} = \text{mL } 0.1N \text{ Na}_2\text{S}_2\text{O}_3 \times 0.96$$

Note: The only control is a titration procedure. Because of the complexity of the formulation, it is not possible to use a test kit.

Waste Disposal

Discharge to a disposal system. In order to be completely informed on the latest regulations for your area, please contact the local authorities.

Caution

Deoxidizer 13L is an acidic liquid and should be handled accordingly. Avoid skin, eye and oral contact. Wear protective clothing, gloves and goggles when handling the product. Flush exposed areas immediately with clean, cold water. Contact a doctor immediately in case of injury.



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