

Acid Salt M

Acid Salt M is a non-fluoride bearing dry acid salt which may be used in place of sulfuric or hydrochloric acid in a pre-plate or metal finishing line for the removal of rust, heat scale, annealing scale, weld scale, or oxides for metal activation.

Acid Salt M may be used when processing ferrous metals, brass, bronze, copper, zinc die casting and aluminum alloys.

Acid Salt M may be used in a barrel or rack lines as a cathodic pickle or as a simple immersion arrangement. In fact, Acid Salt M is ideally suited for barrel operations where the cover clamps of the barrels are made of titanium.

Features & Benefits

Dry acid salt	No fumes; safer work environment
Low surface tension	Fast wetting; higher productivity Fast rinsing; higher productivity

Typical Applications

- Pre-plate lines in place of sulfuric or hydrochloric acids
- In line with other metal finishing for rust removal
- Wherever heat treating is done to remove heat treat or annealing scale

Operating Conditions

Ferrous metals, stainless alloys, and nickel-plated surfaces.

Note: When used cathodically concentrations should be maintained between 12 to 48 oz/Gal.

Concentration	4 – 48 oz/Gal (30.0 – 360 g/L)
Temperature	Ambient – 160°F (71°C)
Time	15 sec – 3 min
Current density (work)	25b – 60 amps/ft ² (2.5b – 6.0 amps/dm ²)



Cleaning
the Hard to Clean



Finishing
the Hard to Finish



Treating
the Hard to Treat

Voltage	2 – 8 volts
Electrode to work ratio:	Area 2:1
Tanks	Rubber lined, Polyethylene, PVC, Polypropylene, Koroseal
Tanks for elevated temperatures (150°F – 160°F)	Koroseal
Heating coils	Karbate, graphite, chemical lead
Ventilation	Required when used as a cathodic pickle
Electrodes	Chemical lead or carbon, type agr

The life of the anodes is dependent upon the ampere hours used.

Note: When carbon anodes are used, they must be securely fastened to the bus bar. Lead anodes because of their weight will maintain a secure contact with the bus bar.

As a rule, a lead anode's service life will surpass that of carbon anode.

It is also preferred that when carbon anodes are used that they are bagged to prevent or minimize carbon particles from spreading throughout the Acid Salt M solution. A carbon anode, in time, will slowly tend to disintegrate. High current densities, solution temperature, are contributing factor to the degrading of a carbon anode, also just long service.

For immersion applications where the soils on the ferrous metals may consist of light rust, weld scale or heat scale, the Acid Salt M concentrations may range from 16 to 32 oz/Gal to achieve their removal

For copper, copper alloys, zinc die castings, lead alloys white metals, pewter.

Concentration	2 to 12 oz/Gal (15 – 90 g/L)
Temperature	Ambient
Time	15 sec – 2 min
Tanks	Rubber lined, Polyethylene, PVC, Polypropylene, Koroseal

Tumbling barrels: Concentrations may range from 2 to 6 oz/Gal with time variable, depending on metal and desired results.

After either still or tumbling operations, parts should be water rinsed.



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Titration Method

1. Pipette 10 mL of sample into a 250 mL Erlenmeyer flask.
2. Add 50 mL of water and three drops Bromocresol Green indicator.
3. Titrate with 1.0 N Sodium Hydroxide solution until solution turns a blue-green color.
4. Record mL used.

Calculation

$$\begin{array}{r} \text{Factor (oz/Gal)} \quad 1.7 \\ \text{Factor (g/L)} \quad 12.6 \\ \text{Concentration} = \text{mL } 1.0 \text{ N NaOH} \times \text{Factor} \end{array}$$

Test Kit Method

1. Using syringe, place ½ sample into sample bottle ¼ full of water.
2. Add 5 to 10 drops of Methyl Orange Indicator.
3. Add 0.72 N Sodium Hydroxide solution drop wise, counting the drops until the color changes from Reddish-Orange to yellow endpoint.
4. Record mL used.

Calculation

$$\begin{array}{r} \text{Factor (oz/Gal)} \quad 0.76 \\ \text{Factor (g/L)} \quad 5.7 \\ \text{Concentration} = \# \text{ Drops } 0.72 \text{ N NaOH} \times \text{Factor} \end{array}$$

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

Acid Salt M is an acidic product and should be handled accordingly. Avoid skin and eye 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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WARRANTY: THE QUALITY OF THIS PRODUCT IS GUARANTEED ON SHIPMENT FROM OUR PLANT. IF THE USE RECOMMENDATIONS ARE FOLLOWED, DESIRED RESULTS WILL BE OBTAINED. SINCE THE USE OF OUR PRODUCTS IS BEYOND OUR CONTROL, NO GUARANTEE EXPRESSED OR IMPLIED IS MADE AS TO THE EFFECTS OF SUCH USE, OR THE RESULTS TO BE OBTAINED.

Our people. Your problem solvers.

For more information on this process please call us at

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