U.S. Specialty Color Corporation

Specialty Sealant MTL

Mid Temperature Seal

1. Description

Specialty Sealant MTL is a nickel acetate liquid, specifically formulated to provide a high-quality seal for dyed anodized aluminum.

- ☑ Compatible with all aluminum dyes, no matter the source.
- ☑ Excellent corrosion protection.
- ☑ Low foaming formulation.
- ☑ Contains a smut suppressant.
- ☑ Suitable for all types of anodic films; clear, hardcoat and electrolytic colored work.
- ☑ Meets current ASTM test methods: B136, B680, B117
- ☑ RoHS compliant
- ☑ REACH compliant

2. Application instructions

	Sealing dyed finishes	Sealing clear or electrolytic finishes
Concentration:	4-5% by vol	2-3% by vol
pH:	5.2-5.9	5.2-5.9
Temperature:	180-190°F	160-190°F
Seal time:	5-25 minutes	5-15 minutes

3. Conditions for using Specialty Sealant MTL

Tank:	Stainless steel or other acid resistant material that that can withstand a constant operating temperature of 190°F. Separate seal tanks for clear and dyed work.
Water quality:	Deionized
pH adjustments:	Lower with acetic acid. Raise with dilute ammonium hydroxide. pH should be checked once per shift with a calibrated meter.
Temperature:	Do not exceed 190°F.
Agitation:	Moderate agitation to maintain a uniform solution temperature.
Filtration:	Field experience has shown that continuous filtration through a 5-35 micron filter is beneficial. Do not use a carbon filter.
Sealing time:	2 minutes per 0.10 mil. oxide coating thickness.
Rinsing-before seal:	Two rinses, with good quality or deionized water at overflow.
Rinsing-after seal:	Final rinse with good quality or deionized water at over flow. or Final rinse in warm deionized water (110-140°F) at over flow helps with drying.

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4. Solution makeup

1. Fill the tank ¾ full of deionized water.
2. Adjust the pH to 5.2-5.5 with acetic acid.
3. Add the required amount of Specialty Sealant MTL and mix thoroughly.
4. Fill the tank to its final volume with more deionized water.
5. Heat to operating temperature.
6. Measure pH again and adjust if necessary.

5. Titration procedure

Reagents: Concentrated ammonium hydroxide (28-30%)
Murexide indicator
0.1M EDTA

Procedure:
1. Pipette a 100-ml of Sealant MTL solution that has cooled to room temperature.
2. Add 150-ml of deionized water.
3. Add 25-ml concentrated ammonium hydroxide and mix well.
4. Add a pinch of murexide indicator.
5. While stirring, titrate with 0.1M EDTA until a purple-violet color is obtained.
6. Record the number of mls of 0.1M EDTA required.

Calculation: % by volume of Specialty Sealant MTL = mls of 0.1M EDTA x 0.153

6. Packaging

5 gallons
55 gallons

7. Storage

Store in original container in a cool dry location.
Crystals may form in bottom of container.
Do not store near alkaline materials.
Keep from freezing.

8. Product safety

We recommend that the company/operator read and review the **S**afety **D**ata **S**heet for the appropriate health and safety warnings before use.

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