



Specialty Yellow 3GL

Aluminum Dye

1. Description

Specialty Yellow 3GL is a single component, water soluble dye, used to color anodized aluminum vivid shades of yellow with a slight greenish hue.

- Eco-friendly, contains no heavy metals.
- Excellent light fastness
- Unique fluorescent appearance on finished work.
- RoHS compliant

2. Application instructions

| | Indoor applications | Outdoor applications |
|--------------------|--|--|
| Concentration: | 2-3 g/l | 3-5 g/l |
| pH: | 5.5 ±0.5 | 5.5 ±0.5 |
| Buffering: | Not required | Not required |
| Temperature: | 140°F ±5°F / 60°C | 140°F ±5°F / 60°C |
| Coating thickness: | 0.20 mils. or greater | 0.80 mils. or greater |
| Dye time: | 2 minutes minimum | 20-30 minutes |
| Preferred sealing: | Specialty Sealant MTL Specialty Sealant | Specialty Sealant MTL Specialty Sealant |

3. Conditions for using Specialty Yellow 3GL

- Tank: Stainless steel or other acid resistant materials such as neoprene, polyethylene and polypropylene that can withstand a constant operating temperature of 140°F.
- Water quality: Deionized
- pH adjustments: Raise with sodium hydroxide.
Lower with acetic acid.
- The pH should be checked once per shift with a calibrated meter and maintained within recommended range.
- Bath agitation: Moderate agitation must be used for high uniformity of color.
- Rinsing: It is important to remove all acid residues clinging to the work and acid retention in the oxide pore itself. Rinse work load thoroughly after anodizing. A minimum of two rinses is recommended, with the second rinse at over-flow.
- To increase rinsing effectiveness, add vigorous air agitation in all rinse tanks. This also improves your rinsing of surfaces on complicated shaped parts.

4. Light fastness

Rating: 8 (1=poor, 8=excellent)

5. Storage

Shelf life is virtually unlimited.
Store in original container in a cool dry location.
Close package tightly after removal of dye.
In humid environments, dye powder may clump-up.

6. Preparation of a new dyebath

1. A cleaned tank is filled with deionized water to about 75% of final volume and raised to dyeing temperature.
2. The required amount of dye is weighed out and dissolved in hot deionized water (160°-180°F) in a separate container until a slurry is formed. This is your stock solution.
3. With agitation turned on in tank, pour stock solution into tank.
4. Top off the tank to final working solution volume with more hot deionized water and agitate for 15 minutes.
5. Using a calibrated pH meter, check the pH and adjust if necessary.
6. The dyebath is brought to dyeing temperature, 140°F ±5°F.

7. Conversion factor

Converting grams per liter (g/l) to ounces per gallon (oz/gal)

$$\text{g/l} \times 0.134 = \text{oz/gal}$$

8. Product safety

We recommend that the company/operator read and review the **Material Safety Data Sheet** for the appropriate health and safety warnings before use.

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