



Aurous 19

Chromate

1. Description

Aurous 19 is a QPL approved and listed powdered chemical used to form a protective conversion coating on aluminum surfaces which minimizes corrosion and provides an improved bond for painting.

- QPL Number 81706
- Mil-C-5541
- Document ID Mil-DTL-81706B, Type I, Class 1A, Form II, Method C
- Document ID Mil-DTL-81706B, Type I, Class 3, Form II, Method C

2. Application instructions

To ensure a uniform coating, the aluminum surface must be clean and deoxidized.

	<u>Class 1A</u>	<u>Class 3</u>
Concentration:	1.5-2.0 oz/gal	0.30-1.0 oz/gal
pH:	1.4-1.9	1.9-2.6
Temperature:	65°-80°F	65°-80°F
Immersion time:	2-4 minutes	1-3 minutes

3. Conditions for using Aurous 19

- Tank: Tanks should be made of stainless steel, polyethylene, PVC or equal.
- pH adjustments: Lower with nitric acid-67% (42 Baume).
Raise with dilute ammonium hydroxide.
Avoid quick additions.
- Agitation: Moderate agitation improves coating uniformity.
- Rinsing: Drag in of acid or alkaline material is detrimental to the Aurous 19 solution. Ensure rinsing prior to the passivation step is thorough.
- Drying: Drying is accomplished by clean air blast, centrifuge or warm circulating air.
Avoid temperatures exceeding 140°F.
Setting or hardening begins immediately after drying.
Allow 24 hours of hardening time prior to wrapping or corrosion resistance testing to ensure consistent results.

4. Solution makeup

1. Fill tank $\frac{3}{4}$ full with water.
2. Add the required amount of Aurous 19 while stirring.
3. Add remaining water to final volume.
4. Adjust solutions pH if necessary.

5. Titration procedure

Reagents: 0.1N sodium thiosulfate
50% sulfuric acid
10% potassium iodide solution
1% starch indicator

- Procedure:
1. Pipette 10-ml of sample into 500 Erlenmeyer flask.
 2. Dilute 10-ml sample with water to 250 ml mark.
 3. Add 10-ml of potassium iodide solution.
 4. Add 5-ml of sulfuric acid.
 5. Titrate with 0.1N sodium thiosulfate to a light yellow color.
 6. Add 2-ml starch indicator.
 7. Continue titration drop by drop with constant stirring until solution turns clear.

Calculation: ml of sodium thiosulfate x .08 = **oz/gal Aurous 19**

6. Storage

Store in original container in a cool dry location.
In humid environments, powder/granule will harden.
Keep away from flammables and acids.

7. Packaging

10 lb.
100 lb.

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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