



- 6.1 Coating Weight: Shall be not less than 2500 mg per sq ft but routine determinations are not required. If parts are of such size or shape that surface area cannot readily be determined, coating weight determinations may be made on separate specimens not less than 3 x 3 in. in width and length and 0.025 - 0.063 in. thick but routine determinations are not required; separate specimens, when used, shall be of an alloy of the same class as the parts represented, as follows:

Class 1. Alloys of Aluminum Association designations 1100, 3003, 3004, 5052, 6053, 6061, 6062, 6063, and all alclad alloys.

Class 2. All wrought alloys not listed as class 1 and all casting alloys.

Separate specimens shall be processed with the work they represent. Determinations of coating weight shall be made in accordance with ASTM B137 on parts or specimens which have been anodized and rinsed but not dyed and sealed.

- 6.1.1 If small parts such as rivets and machine screws are anodized in bulk in a container, the specified coating weight shall apply to not less than 75% of the parts treated together, determined by random sampling, but in no case shall any part show uncoated areas.

6.2 Corrosion Resistance:

- 6.2.1 For control purposes, samples of AMS 4037 sheet 0.040 in. thick and not less than 3 x 10 in. (the 10 in. dimension being perpendicular to the direction of rolling) treated in accordance with Section 5 shall withstand 250 hr exposure to salt spray without corroding to the extent that would cause more than 5% decrease in tensile strength and 10% decrease in elongation from those of duplicate treated but unexposed panels; in no case shall a corroded specimen have tensile strength lower than 62,000 psi or elongation lower than 12%. The salt spray corrosion test shall be conducted in accordance with ASTM B117. Test results for both exposed and unexposed panels shall be reported as the average of three specimens from each panel. Tensile test specimens shall conform to ASTM E8.

- 6.2.2 Each part that is anodized shall be capable of withstanding salt spray test conducted in accordance with ASTM B117 for 250 hr without showing more than a few scattered visual corrosion pits.

7. PRECAUTIONS:

- 7.1 Wire, hooks, racks, and clamps used to suspend the parts in the electrolyte, if they are also in contact with the electrolyte, should be of aluminum, aluminum alloy, or commercially pure titanium. Good, tight electrical contact should be maintained during the anodic treatment to prevent burning of parts but small irregularities of coating at points of electrical contact will be permitted.
- 7.2 Anodizing baths should be provided with an exhaust system as a protection for the operators and prevention of corrosion of metal equipment in the vicinity.
- 7.3 Unless otherwise specified, all parts should be anodized after all heat treatment, machining, welding, forming, and perforating operations have been completed, insofar as practicable.
- 7.4 Sub-assemblies may be anodized provided the surfaces which are exposed after assembly are anodized, and provided there is no possibility of entrapping anodizing solution. Surfaces exposed to fuels, intake air, and coolants should not be machined after anodizing, but surfaces continually protected by oil films may be machined after anodizing.
- 7.5 Anodic films have high electrical resistance. Aluminum parts, therefore, which are to be used for bonding and radio shielding, if anodized, should have the anodic film removed at any area of electrical contact.
- 7.6 Aluminum parts which contain inserts of other metals should be properly masked during anodizing to seal off the non-aluminum material.