AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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AMS 2505A

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ALUMINUM PAINT FINISHING

1. ACKNOWLEDGMENT: A vendor shall mention this specification number and its revision letter in all quotations and when acknowledging purchase orders.

2. APPLICATION: Primarily for parts which do not exceed a temperature of 350 F.

3. PREPARATION: Before parts are painted, they shall be prepared in accordance with the following requirements:

3.1 Aluminum and Aluminum Alloys: Both wrought and cast parts shall be treated in accordance with AMS 2470 immediately before the first priming coat.

3.1.1 Aluminum Assemblies: Aluminum alloy parts, which with other materials constitute assemblies, shall be anodized in accordance with AMS 2470 before assembling with other materials. Assemblies with other metals may be anodized if the other metals are insulated.

3.2 Magnesium Alloys: Both wrought and cast parts shall be treated in accordance with AMS 2475 immediately before the first priming coat. No machining of external surfaces shall be done after this treatment.

3.3 Steel: Cadmium plated parts shall be thoroughly neutralized, before priming, in accordance with AMS 2400. Unplated parts shall be cleaned to remove all oil, dirt, and rust, then treated in accordance with AMS 2480 immediately prior to the first priming coat.

4. PROCEDURE:

4.1 Priming Coat: A coat of zinc chromate primer conforming to AMS 3110 shall be applied to all metallic materials requiring painting, immediately after the treatment required in Section 3, except that anodized rivets shall not be primed as details.

4.1.1 When there are intervening operations between the first prime and the finish coats, such as assembling or additional machining, the parts shall be thoroughly cleaned by spraying with clean naphtha, or other solvent of low volatility, and then given another coat of zinc chromate primer before the first coat of paint is applied.

4.2 Baking: Each coat of primer shall be baked at 250-300 F, unless a lower temperature is approved for specific parts.

4.3 Aluminum Paint Finishing: Three coats of aluminum paint conforming to the requirements of Section 5 shall be applied on magnesium alloys for applications other than engines, and two coats on all other metals. Two coats shall be applied on magnesium alloys to be used on engines. Each coat of paint shall be thoroughly baked at a temperature within the range of 250-310 F, or preliminary coats may be air-dried dust free, and final coat baked firm and hard at a temperature within the range of 250-310 F.

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