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Superseding AMS1550A	

Cleaner, Water Base, Aircraft interior
Hard Surface Materials

RATIONALE

AMS1550B has been reaffirmed to comply with the SAE five-year review policy.

1. SCOPE:

1.1 Form:

This specification covers a water-base cleaner in the form of a concentrated liquid.

1.2 Application:

This product has been used typically for removal of in-service soiling from hard surface interior materials of aircraft, including paint, metal, and plastics, but usage is not limited to such applications. This cleaner shall not be used on interior fabrics of aircraft.

1.3 Safety-Hazardous Materials:

While the materials, methods, applications, and processes described or referenced in this specification may involve the use of hazardous materials, this specification does not address the hazards which may be involved in such use. It is the sole responsibility of the user to ensure familiarity with the safe and proper use of any hazardous materials and to take necessary precautionary measures to ensure the health and safety of all personnel involved.

2. APPLICABLE DOCUMENTS:

The following publications form a part of this specification to the extent specified herein. The latest issue of SAE publications shall apply. The applicable issue of other publications shall be the issue in effect on the date of the purchase order.

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Documents

Document Sharing Hub

2.1 SAE Publications:

Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

AMS 2470	Anodic Treatment of Aluminum Alloys, Chromic Acid Process
AMS 2825	Material Safety Data Sheets
AMS 4045	Aluminum Alloy Sheet and Plate, 5.6Zn - 2.5Mg - 1.6Cu - 0.23Cr (7075; -T6 Sheet, -T651 Plate), Solution and Precipitation Heat Treated
AMS 4049	Aluminum Alloy Sheet and Plate, Alclad, 5.6Zn - 2.5Mg - 1.6Cu - 0.23Cr (Alclad 7075; -T6 Sheet, -T651 Plate), Solution and Precipitation Heat Treated

2.2 ASTM Publications:

Available from ASTM, 1916 Race Street, Philadelphia, PA 19103-1187.

ASTM D 56	Flash Point by Tag Closed Tester
ASTM D 1193	Reagent Water
ASTM F 483	Total Immersion Corrosion Test for Aircraft Maintenance Chemicals
ASTM F 484	Stress Cracking of Acrylic Plastics in Contact with Liquid or Semi-Liquid Compounds
ASTM F 485	Effects of Cleaners on Unpainted Aircraft Surfaces
ASTM F 502	Effects of Cleaning and Chemical Maintenance Materials on Painted Aircraft Surfaces
ASTM F 1104	Preparing Aircraft Cleaning Compounds, Liquid Type, Water Base, for Storage Stability Testing
ASTM F 1110	Sandwich Corrosion Test

2.3 U.S. Government Publications:

Available from DODSSP, Subscription Services Desk, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.

MIL-P-83310	Plastic Sheet, Polycarbonate, Transparent
MIL-STD-2073-1	DOD Materiel, Procedures for Development and Application of Packaging Requirements

3. TECHNICAL REQUIREMENTS:

3.1 Material:

Shall consist of a water-base material with additives as necessary to meet the requirements of 3.1.1, 3.1.2, and 3.2.

3.1.1 The cleaner shall not be hazardous as defined in OSHA regulations.

- 3.1.2 The concentrated cleaner shall dilute readily with water requiring minimum agitation to produce a homogenous solution, determined by adding 10 mL cleaner to 90 mL ASTM D 1193, Type IV, water in a 100 mL stoppered graduated cylinder and cycling the cylinder through four inversions. The resultant mixture shall not show evidence of stratification indicative of poor mixing.

3.2 Properties:

The cleaner shall conform to the following requirements; tests shall be performed in accordance with specified test methods on the cleaner as received in concentrated form and at use dilution as recommended by the manufacturer:

3.2.1 Effect on Aircraft Materials:

- 3.2.1.1 (R) Sandwich Corrosion: Specimens of AMS 4045 and AMS 4049 aluminum alloy, after test, shall show a rating not worse than control panels tested using ASTM D 1193, Type IV, water, determined in accordance with ASTM F 1110.
- 3.2.1.2 (R) Total Immersion Corrosion: Panels, tested in accordance with ASTM F 483, shall neither exhibit evidence of corrosion nor weight change greater than that shown in Table 1 when cleaner is tested at the highest concentration and temperature recommended for use by the manufacturer.

TABLE 1 - Total Immersion Corrosion Weight Change

	Total Weight Change mg/cm ² per 24 hours
AMS 4045 Aluminum Alloy, anodized in accordance with AMS 2470	0.3
AMS 4049 Aluminum Alloy. anodized in accordance with AMS 2470	0.3

- 3.2.2 Flash Point: Shall be not lower than 70 °C (158 °F), determined in accordance with ASTM D 56.

3.2.3 Effect on Transparent Plastics:

- 3.2.3.1 The product shall not craze, stain, or discolor Type C acrylic plastic, determined in accordance with ASTM F 484.
- 3.2.3.2 The product shall not craze, stain, nor discolor MIL-P-83310 polycarbonate plastic or polysulphone plastic, determined in accordance with test procedures specified in ASTM F 484 on specimens stressed for 30 minutes $\pm$ 2 to an outer fiber stress of 3.0 ksi (21 MPa).