

Coating, Interior Aircraft Cabin  
Low Heat and Smoke Release

1 SCOPE:

1.1 Form:

This specification covers interior aircraft cabin coatings, which when tested under specified conditions exhibit low heat release and smoke release properties.

1.2 Application:

These products have been used typically for interior aircraft cabins, but usage is not limited to such applications. These coatings provide high adhesion, low heat release, low smoke generation, stain resistance and cleanability when applied to a variety of surfaces.

1.3 Classification:

Type 1: Primer (350 g/l VOC max.)  
Type 2, Class 1: Topcoat (420 g/l VOC max.)  
Type 2, Class 2: Topcoat (350 g/l VOC max.)

1.4 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.

SAE Technical Standards Board Rules provide that: "This report is published by SAE to advance the state of technical and engineering sciences. The use of this report is entirely voluntary, and its applicability and suitability for any particular use, including any patent infringement arising therefrom, is the sole responsibility of the user."

SAE reviews each technical report at least every five years at which time it may be reaffirmed, revised, or cancelled. SAE invites your written comments and suggestions.

Copyright 2000 Society of Automotive Engineers, Inc.  
All rights reserved.

Printed in U.S.A.

QUESTIONS REGARDING THIS DOCUMENT:

TO PLACE A DOCUMENT ORDER:

SAE WEB ADDRESS:

(724) 772-7161  
(724) 776-4970  
<http://www.sae.org>

FAX: (724) 776-0243  
FAX: (724) 776-0790

**2. APPLICABLE DOCUMENTS:**

The issue of the following documents in effect on the date of the purchase order form a part of this specification to the extent specified herein. The supplier may work to a subsequent revision of a document unless a specific document issue is specified. When the referenced document has been canceled and no superseding document has been specified, the last published issue of that document shall apply.

**2.1 SAE Publications:**

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

AMS 1550 Cleaner, Water Base, Aircraft Interior Hard Surface Materials

SAE J1885 Accelerated Exposure of Automotive Interior Trim Components Using a Controlled Irradiance Water Cooled Xenon Arc Apparatus

**2.2 ASTM Publications:**

Available from ASTM, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.

ASTM D 523 Specular Gloss

ASTM D 1475 Density of Paint, Varnish, Lacquer, and Related Products

ASTM D 2197 Adhesion of Organic Coatings by Scrape Adhesion

ASTM D 2322 Resistance of Chrome-Tanned White Shoe Upper Leather to Artificial Perspiration

ASTM D 2369 Volatile Content of Coatings

ASTM D 3792 Water Content of Water-Reducible Paints by Direct Injection into a Gas Chromatograph

**2.3 U.S. Government Publications:**

Available from DAPS, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.

FED-STD-141 Paint, Varnish, Lacquers, and Related Materials, Methods of Inspection, Sampling and Testing

MIL-C-5541 Chemical Conversion Coatings on Aluminum and Aluminum Alloys

**2.4 U.S. Government Publications:**

Available from Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

FAR 25.853 Fire Resistance of Aircraft Interior Parts and Materials

## 3. TECHNICAL REQUIREMENTS:

3.1 The coatings supplied in accordance with this specification shall be water reducible or of low solvent content within limitations of applicable regulations. Other ingredients (pigments, resins, additives, etc.) shall be non-hazardous when used in the proper application practices.

## 3.2 Properties:

The primer and topcoats, or when used together as a system, or when mixed in accordance with manufacturer's instructions, as applied and cured on panels in accordance with 4.1 shall be in accordance with Table 1.

TABLE 1 - Properties

Property	Requirement or Paragraph	Applies to Type	Test Method Paragraph
Quality	Pass	1, 2	3.3
Solvent Crazing	Pass	1, 2	4.5.3
Odor and Toxicity	Pass	1, 2	4.5.4
Condition in Container	Pass	1, 2	4.5.5
Storage Stability	24 months	1, 2	4.5.6
Non-Volatile Content	±2 percent of qualification value	1, 2	4.5.7
Density (Weight per Gallon)	±0.25 lb/gal (±30 g/L) of qualification value	1, 2	4.5.8
Pot Life of Mixed Material, minimum	3 hours	1, 2	4.5.9
Viscosity, seconds	±4 of qualification value	1, 2	4.5.10
Spraying Properties	Pass	1, 2	4.5.11
Color	Qualification value	1, 2	Per Purchaser's requirement 4.5.12
Gloss	Pass	2	4.5.13
Volatile Organic Content (VOC), g/L, maximum	Type I - 350 Type II, Cl 1 - 420 Type II, Cl 2 - 350	1 2 Cl 1 2 Cl 2	4.5.14
Drying Time, minimum		1, 2	4.5.15
Type I	Dust Free - 30 min Dry Through - 2 hours		
Type II	Tack Free - 3 hours Dry Through - 10 hours		
Adhesion	Pass	1, 2	4.5.16
Water Resistance	Pass	1, 1+2	4.5.17