FSS 000839R

Excerpts from Specifications Pertaining to the Flammability or Smoke Developed by Certain Materials

Chapter 101—Federal Property Management Regulations

SUBCHAPTER D—PUBLIC BUILDINGS AND SPACE

PART 101–19—MANAGEMENT OF BUILDINGS AND GROUNDS

Subpart 101–19.1—Operation and Maintenance

FIRE SAFETY

Section 101–19.109–7 is revised to provide a temporary exception to the requirement that movable partitions shall be of noncombustible construction.

Section 101–19.109–7 is revised to read as follows:

§ 101–19.109–7 Movable partitions.

(a) All movable partitions, including partial-height (bank type), shall be of noncombustible construction, with the following exception. Movable partitions containing translucent plastic panels may be used until July 1, 1971, if the following conditions are met:

(1) The maximum value of specific optical density under flaming test conditions does not exceed 700 when tested in accordance with the smoke test chamber procedures as described on pages 166 through 204 in Special Technical Publication No. 422, published by the American Society for Testing and Materials;

(2) The height of the plastic panels does not exceed 3 feet; and

(3) The movable partition meets all the other requirements for noncombustible construction.

(b) After July 1, 1971, this temporary exception shall revert back to the requirement that all partitions be of noncombustible construction as defined in § 101–19.109–1(b) to comply with the American Society for Testing and Materials, Test E 84, Surface Burning Characteristics of Building Materials.

(Sec. 205(c), 63 Stat. 390; 40 U.S.C. 486(c))

Effective date. This regulation is effective upon publication in the FEDERAL REGISTER.

Reprinted from FEDERAL REGISTER 35-152, August 6, 1970 (Underlining Ours)

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

[14 CFR Part 25]

[Docket No. 9611; Notice 69–30]

COMPARTMENT INTERIOR MATERIALS

Smoke Emission; Advance Notice

The Federal Aviation Administration is considering rule making to establish standards governing the smoke-emission characteristics of aircraft interior materials. The need for a smoke-emission standard for aircraft interior materials was discussed in Notice 66–26 (31 F.R. 10275, July 29, 1966). However, the FAA determined that it could not propose standards at that time because not enough was known about the smoke-emission characteristics of then-available materials to form a basis for rule making. The FAA now believes that the state-of-the-art may have developed to the point that smoke-emission standards can be established.

This advance notice of proposed rule making is being issued in accordance with the FAA's policy for early institution of public proceedings in actions related to rule making. An "advance" notice is issued when it is found that the resources of the FAA and reasonable inquiry outside the FAA do not yield a sufficient basis to identify and select tentative or alternate courses of action upon which a rule-making procedure might be undertaken, or when it would otherwise be helpful to invite early public participation in the identification and selection of such tentative or alternate courses of acton. The subject matter of this advance notice has been found to involve the situation contemplated by this policy.

Interested persons are invited to participate in the making of the proposed rules by submitting such written data, views, or arguments as they may desire. Communications should identify the notice or docket number, and be submitted in duplicate to the Federal Aviation Administration, Office of the General Counsel, Attention: Rules Docket, GC–24, 800 Independence Avenue SW., Washington, D.C. 20590. Communications should be received on or before October 28, 1969, to assure proper consideration. All comments submitted will be available in the Rules Docket, both before and after the closing date for comments, for examination by interested persons. If it is determined to proceed further, after consideration in the light of the available data and the comments received in response to this notice, a notice of proposed rule making will be issued.

Subsequent to the issuance of Notice 66–26, the FAA has conducted extensive research in an effort to determine the full extent to which available aircraft interior materials produce smoke when burning. In addition, as noted in the preamble to Amendment 25–15 (32 F.R. 13255, Sept. 20, 1967), industry development programs were established. The E. I. du Pont de Nemours & Co. (du Pont), in a petition for rule making dated June 26, 1968, stated that its research and evaluation of the smoke emission characteristics of currently-available materials established that certain of these materials, if used in aircraft interiors, would significantly advance aircraft crashworthiness. Du Pont recommended the adoption of a standard which would use the National Bureau of Standards nonflaming and flaming smoke generation tests (set forth in ASTM STP422, 1967: "Method for Measuring Smoke from Burning Materials," by D. Gross, J. J. Loftus, and A. F. Robertson) with a minmum of 2 minutes to reach the critical visibility level $D_s = 16$.

Aircraft crashworthiness would be significantly upgraded if smoke emission from burning interior materials could be reduced in sufficient measure. The FAA recognizes that there are no industry-wide standards, test equipment, and test methods in common use by aircraft manufacturers, and that the current nonstandardized test practices may not yield consistent results. However, valuable technical information concerning the smoke emission characteristics of materials has been collected as a result of the FAA and industry research programs. The FAA believes that additional information may be available from other interested persons, and desires to review the entire technical situation prior to proposing the establishment of practical maximum smoke emission levels for aircraft interior materials, or the adoption of a test method or methods for evaluating the smoke emission characteristics of these materials. To this end, the FAA welcomes the participation of aircraft manufacturers, material producers, Government agencies and other interested persons and, by means of this advance notice of proposed rule making, solicits the views of all interested persons on the following questions:

1. Are there aircraft interior materials now available that, in like circumstances, emit appreciably less smoke than currently used materials, but that still meet the flame resistance standards prescribed in § 25.853 of the Federal Aviation Regulations?

2. Are there test methods that can correctly and consistently measure the smoke emission characteristics of aircraft interior materials?

3. Would it be feasible to standardize on one of these test methods to determine compliance with a specified smoke emission standard?

4. Using this standard test method, what level of smoke emission performance should be specified?

This advance notice of proposed rule making is issued under the authority of sections 313(a), 601, and 603 of the Federal Aviation Act of 1958 (49 U.S.C. 1354 (a), 1421, and 1423), and section 6(c) of the Department of Transportation Act (49 U.S.C. 1655(c)).

Issued in Washington, D.C. on July 23, 1969.

R. S. SLIFF,
Acting Director,
Flight Standards Service.

Reprinted from FEDERAL REGISTER 34-144, July 30, 1969 (Underlining Ours)

Excerpts from:

Specifications Governing the Flammability and Smoke Developed Rating of Carpets

I

All carpeting, backing, and underlayments shall pass the methenamine pill test (Department of Commerce Standard FF 1-70).

II

a) Carpeting assemblies, (carpet, underlay and adhesives) representative of the actual installation on floor areas of exits shall not have a flame spread index or smoke developed rating greater than 25

b) Carpeting assemblies representative of the actual installation on floor areas of corridors shall not have a flame spread index greater than 75. The smoke developed rating of carpets in corridors shall not exceed 100.

III

Flame spread ratings for carpet assemblies in general areas shall not exceed 150 for areas less than 1,000 square feet and shall not exceed 100 for areas over 1,000 square feet

IV

Other than for exits and corridors, where the requirements of item II above shall apply, smoke developed rating for carpet assemblies shall not exceed 200

The ratings, specified in items II, III and IV above, shall be obtained in accordance with the requirements of ASTM E-84-70 "Standard Method of Test for Surface Burning Characteristics of Building Materials – 1961."

In lieu of using the ASTM E-84-70 test method to determine the flame spread rating and/or the smoke developed rating for carpets other than in exits and corridors, the following tests and indices may be utilized. The radiant panel test method, ASTM E162-67, may be used to arrive at the flame spread rating. The rating obtained from using this test shall comply with the requirements of paragraph III above. However, when the radiant panel test is used to obtain the flame spread rating for carpets other than in exits and corridors, the smoke developed rating shall be obtained by the National Bureau of Standards Smoke Density Chamber Test as described in "ASTM Special Technical Publication No. 422." If this *test* is used, the smoke developed rating, when taken as an arithmetical mean of the "flaming" and "smoldering" tests, shall not exceed 300; and the individual results of each test shall not exceed 375.

V

The manufacturer of the assembly components (carpeting and underlayments) shall submit a certification, by a recognized independent testing laboratory, of the service life of the flame retardance of the treated material or a certification that the self-extinguishing properties of the material are inherent therein by virtue of the chemical properties of the material. Materials which are not inherently self-extinguishing may be used only when the certified flame retardant service life exceeds that of the planned service life of the carpet and underlayments, when cleaning, traffic, and other environmental conditions, which may affect the treatment, are taken into consideration.

The Port of New York Authority
Revised August, 1971

Editorial Note: Underlining Ours

The above regulations apply to all facilities in New York and New Jersey under the jurisdiction of the PORT AUTHORITY OF NEW YORK.

The FIRE ADVISORY BOARD to the NEW YORK CITY FIRE DEPARTMENT has issued the identical advisory to all owners and tenants of High-rise Commercial buildings in New York City.

Reprint No. 470 **Smoke Density Chamber**

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