

## **Advisory Circular AC 20-178**

# **Flammability Testing of Aircraft Cabin Interior Panels After Alterations**

Date: June 4, 2012 AC No: 20-178

Initiated by: AIR-120

### 1. Purpose.

a. This advisory circular (AC) describes acceptable methods to test aircraft cabin interior materials when new finishes are used on existing aircraft cabin interior panels, typically performed on supplemental type certificates (STC) or major alterations. This AC applies to materials for self-extinguishing flammability only. This AC does not apply to materials that must meet heat release or smoke emissions standards established by Title 14 of the Code of Federal Regulations (14 CFR) part 25, Amendment 25-61, and 14 CFR part 121, Amendment 121-289. We, the Federal Aviation Administration (FAA), have written this AC for applicants, offering several methods for demonstrating compliance that may be more cost-effective and less time-consuming than current methods.

b. This AC is not mandatory and does not constitute a regulation. It describes an acceptable means, but not the only means, for you to test your altered cabin interior panel composite buildup. However, if you use the means we describe, you must follow them in their entirety.

**Table 2 Methods for Testing 60-Second Vertical Burn Length of New Finishes on Old Panels**

Option 1	Use identical flat panel spares (i.e., same part number as those installed in aircraft and evidence of flammability approval), or	
Option 2	Use a panel cut from the aircraft to be modified, or	
Option 3	If original approved data for the component to be modified (without new finish) demonstrates the 60-second vertical Bunsen burner test burn length is	Fabricate and use a surrogate panel with a burn length no less than
	Less than or equal to 1 inch	1.5 inches
	More than 1 inch and less than or equal to 2 inches	2.5 inches
	More than 2 inches and less than or equal to 3 inches	3.5 inches
	More than 3 inches and less than or equal to 4 inches	4.5 inches
	More than 4 inches and less than or equal to 6 inches	5.5 inches
Option 4	If original data does not exist for the 60-second vertical Bunsen burner test, use a surrogate panel with a burn length no less than 5.5 inches, or	
Option 5	If original data does not exist for the 60-second vertical Bunsen burner, develop new data from panel cut from the aircraft. Use a surrogate panel with a burn length as specified in Option 3. (The intent is to use the surrogate method for testing but retain as many original panels as possible installed in the aircraft.)	

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