



# Policy Letter (PL)

## Use of the FAA Aircraft Materials Fire Test Handbook

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**1.0 INTRODUCTION ..... 2**

1.1 Purpose ..... 2

1.2 Guidance Applicability..... 2

1.3 Description of Changes..... 2

1.4 Termination..... 2

**2.0 REFERENCES ..... 2**

2.1 Reference Documents ..... 2

**3.0 BACKGROUND ..... 2**

**4.0 PREFERRED TEST METHODS ..... 3**

**5.0 PROCESS FOR MODIFYING THE PREFERRED TEST METHODS..... 3**

**6.0 LABORATORIES USING FIRE TEST PROCEDURES..... 3**

**7.0 HEADQUARTERS CONTACT..... 3**

## 1.0 INTRODUCTION

### 1.1 Purpose

The purpose of this Policy Letter (PL) is to:

- (a) Describe Transport Canada Aircraft Certification Branch policy applicable to the use of Federal Aviation Administration (FAA) report DOT/FAA/AR-00/12, "Aircraft Materials Fire Test Handbook" (hereafter referred to as "the Handbook"); and
- (b) Identify where to locate information on those laboratories that are using the procedures discussed in the Handbook.

### 1.2 Guidance Applicability

This document is applicable to Headquarters (HQ) and the Regional Aircraft Certification personnel, including delegates, and other Civil Aviation Branches supporting Aircraft Certification activities.

### 1.3 Description of Changes

This document is a new issue.

### 1.4 Termination

This document does not have a terminating action. It will however, be reviewed periodically for suitability of content.

## 2.0 REFERENCES

### 2.1 Reference Documents

It is intended that the following reference materials be used in conjunction with this document:

- (a) Chapter 525 of the Airworthiness Manual (AWM)—*Transport Category Aeroplanes*;
- (b) Part 25 (FAR 25) of the Federal Aviation Administration (FAA) Title 14, Code of Federal Regulations (CFR)—*Airworthiness Standards: Transport Category Airplanes*;
- (c) U.S. Department of Transportation, Federal Aviation Administration (FAA), Office of Aviation Research report DOT/FAA/AR-00/12, *Aircraft Materials Fire Test Handbook*. This is accessible from the FAA Fire Safety Branch (AAR-440) website at <http://www.fire.tc.faa.gov/handbook.stm>.

**Note:**

*The Handbook references FAR 25 sections, which in this case are equivalent to the corresponding AWM sections. When referring to the Handbook, there are no interpretive or regulatory differences between FAR 25 and Chapter 525 of the AWM. The sections of Chapter 525 that apply are 525.853, 525.855, 525.857, 525.858 and 525.869.*

## 3.0 BACKGROUND

In September 1990, the FAA contracted the Boeing Company to develop the Handbook with the assistance of the former McDonnell Douglas Aircraft Company. Its purpose was to detail various tests that Boeing and McDonnell Douglas had used to show compliance with the FAA material flammability regulations identified in FAR 25.

Since the original publication of the Handbook, the FAA has relied on the International Aircraft Materials Fire Test Working Group (IAMFTWG) to review and recommend revisions to the test methods. The IAMFTWG consists of materials and fire testing experts who help refine and support the development of test methods used in aviation. The IAMFTWG is chaired by a representative from the FAA's Technical Center, and includes representatives from airlines, airframe manufacturers, material suppliers, and regulatory authorities, among others. The

IAMFTWG is a participative technical peer group that contributes to FAA research, but its activities are not regulatory in nature.

Modifications to the test methods described in the Handbook are not incorporated until the FAA has accepted the supporting data provided by the IAMFTWG, and has determined that they comply with the applicable regulations. Accepted modifications are publicized by updating the Handbook (at the writing of this PL, the current version was dated April 2000).

#### **4.0 PREFERRED TEST METHODS**

Test methods identified in Appendix F of Chapter 525 of the AWM are to be applied first. Transport Canada only recognizes the test methods described in Chapters 1 through 10 and Chapter 15 of the Handbook to show compliance with, or demonstrate an equivalent level of safety to, the applicable material flammability standards in the AWM. If they are used, however, then they are to be adopted in total. It is not intended that applicants selectively apply some methods from the AWM and some from the Handbook. However, on a case-by-case basis, Transport Canada will consider alternative methods and supporting data that demonstrate an equivalent level of safety.

#### **5.0 PROCESS FOR MODIFYING THE PREFERRED TEST METHODS**

New materials and technology may make it necessary to modify the various test methods to address newly identified testing anomalies. In these cases, the applicant must first assure Transport Canada that such changes do not affect the intended pass or fail criteria of the test, but do provide an increase in repeatability, reproducibility, or ease of test conduct.

#### **6.0 LABORATORIES USING FIRE TEST PROCEDURES**

Appendix F of the Handbook identifies laboratories by:

- (a) Company name, address and phone number; and
- (b) The fire tests regularly conducted, with the note that they may be able to conduct additional tests.

Identification of the above laboratories does not indicate Transport Canada acceptance or recognition. In all cases, it remains the applicant's responsibility to ensure that the tests and supporting data are suitable for their intended purpose.

#### **7.0 HEADQUARTERS CONTACT**

For more information please contact:

Policy Standards Coordinator (AARDH/P)

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