


EASA	CERTIFICATION MEMORANDUM
	<p>EASA CM No.: EASA CM - CS – 001 Issue No.: 01</p> <p>Issue Date: 07th of September 2011</p> <p>Issued by: Cabin Safety section</p> <p>Approved by: Head of Certification Experts Department</p> <p>Regulatory Requirement(s): FAR/CS 25.853 (including Appendix F), 25.855, 25.857, 25.858, and 25.869</p>

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Subject

Use of the Aircraft Materials Fire Test Handbook

DOT/FAA/AR-00/12

Log of Issues

Issue	Issue date	Change description
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Table of Contents

1. INTRODUCTION	4
1.1. Purpose and Scope	4
1.2. Regulatory References & Requirements	4
1.3. Abbreviations	4
1.4. Definitions.....	4
2. BACKGROUND	5
3. EASA CERTIFICATION POLICY	5
3.1. EASA Policy	5
3.2. Who this Certification Memorandum Affects	6
4. REMARKS	6

1. INTRODUCTION

1.1. PURPOSE AND SCOPE

The purpose of this Certification Memorandum is to provide specific guidance for use of the Aircraft Materials Fire Test Handbook.

This Certification Memorandum describes the EASA acceptance on corresponding FAA policy.

1.2. REGULATORY REFERENCES & REQUIREMENTS

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

Reference	Title	Code	Issue	Date
---	Certification Specification for Large Airplanes	JAR/CS 25	all	---

1.3. ABBREVIATIONS

The following abbreviations are used in this Certification Memorandum:

Abbreviation	Meaning
CS	C ertification S pecification
FAA	F ederal A viation A uthority
JAR	J oint A viation R equirement

1.4. DEFINITIONS

The following definitions are used in this Certification Memorandum:

Definition	Meaning
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2. BACKGROUND

In September 1990, the FAA published Report # DOT/FAA/CT-99/15 titled Aircraft Materials Fire Test Handbook. The Handbook was developed under contract to the FAA, by Boeing Commercial Airplane Company with the assistance of McDonnell Douglas Aircraft Company. The Handbook consisted of chapters outlining in detail the various material flammability tests utilized by Boeing and/or McDonnell Douglas to show compliance with the FAA material flammability regulations specified in Federal Aviation Regulations (FAR) §§ 25.853, 25.855, 25.857, 25.858, and 25.869. At the time of its publication, all test methods presented in the handbook represented an acceptable, but not necessarily the only, method to show compliance with the above referenced Federal Aviation Regulations. In addition, the Handbook contained other chapters containing general information on flammability testing of aircraft material, such as where in the regulations to find requirements, location of international contacts, and a listing of various fire test labs.

The FAA has made public the various accepted modifications to the original test methods (outlined in the 1990 version of the Handbook) through drafts of a revised Handbook that have been continually updated. The Aircraft Materials Fire Test Handbook DOT/FAA/AR-00/12 published in April 2000 documents these changes to the test methods.

On 22nd February 2001 the FAA issued Policy Memo ANM-01-01 to state that, although the test methods described in chapters 1 through 10 and 15 of the Aircraft Materials Fire Test Handbook DOT/FAA/AR-00/12 in the handbook cannot, and do not, supersede any method specified by and described in the regulations, they represent an acceptable means of compliance with the relevant regulation and, in some cases, a preferred option over the specified method. In addition, they are more repeatable and reproducible and are easier to conduct.

Section 25.853 includes provision for "other approved equivalent methods," when referring to the test procedures described in Appendix F. The test methods described in Chapters 1 through 10 and 15 of the "Aircraft Materials Fire Test Handbook," dated April 2000, have been determined by the FAA to be the preferred test methods to show compliance with, or demonstrate an equivalent level of safety to, the applicable material flammability regulations.

FAA Policy Memo ANM-01-01 also states that before any modifications to the test methods described in the Handbook can be incorporated, the FAA's Transport Airplane Directorate (Transport Standards Staff) must determine whether the modified test methods complied with the applicable regulations. Only if such a determination is made will the changes or modifications be incorporated into the electronic version of the Handbook (accessible at <http://www.fire.tc.faa.gov/handbook.stm>).

3. EASA CERTIFICATION POLICY

3.1. EASA POLICY

EASA concurs with the content of FAA Policy Memo ANM-01-01 and therefore recognizes as equivalent to the test methods of CS-25 Appendix F the test methods described in the latest revision of the following Chapters, as incorporated into the electronic version of the Aircraft Materials Fire Test Handbook DOT/FAA/AR-00/1 (accessible to the public at <http://www.fire.tc.faa.gov/handbook.stm>):

Chapter 1 – The 60 second and 12 second Vertical Bunsen Burner Test specified in §§ 25.853 and 25.858 and Appendix F of Part 25.

Chapter 2 – The 30 second 45 degree Bunsen Burner Test specified in § 25.857 and Appendix F of Part 25

Chapter 3 – The 15-second horizontal Bunsen Burner Test specified in § 25.853 and Appendix F of Part 25

Chapter 4 – The 30 second 60 degree Bunsen Burner Wire Test specified in § 25.869 and Appendix F of Part 25

Chapter 5 – The Rate of Heat Release Test specified in § 25.853 and Appendix F of Part 25

Chapter 6 – The Smoke Test for Cabin Materials specified in § 25.853 and Appendix F of Part 25

Chapter 7 – The Oil Burner Test for Seat Cushions specified in § 25.853 and Appendix F of Part 25

Chapter 8 – The Oil Burner Test for Cargo Liners specified in § 25.855 and Appendix F of Part 25

Chapter 9 – The Radiant Heat Test for Evacuation Slides, Ramps, and Rafts specified in TSOC69A

Chapter 10 – The Fire Containment Test of Waste Stowage Compartments to demonstrate compliance with § 25.853(e)

Chapter 15 – The Oil Burner Test for Repaired Cargo Compartment Liners to demonstrate continued compliance with § 25.855.

This EASA Certification Memorandum will be revised in the event EASA is not in agreement with any revised content of any section of the Handbook as might be issued by the FAA in the future.

Each method described in the handbook is intended to be adopted in total, if it is used. That is, use of a portion of a test method from the Handbook, and another portion of the corresponding test method from Appendix F, is not automatically acceptable. If not the latest issue of the Handbook, or a combination of sections from different sources (e.g. from the Handbook and from Appendix F or from different issues of the Handbook) is proposed to show compliance, prior agreement by EASA should be obtained. All Applicants that intend to use the Handbook test methods to show compliance with flammability requirements should state in their compliance documents that the Handbook was used in accordance with the provisions in CS-25 requirements which permit an "equivalent" test method, in lieu of that specified in Appendix F.

3.2. WHO THIS CERTIFICATION MEMORANDUM AFFECTS

Anyone who is conducting flammability tests for showing of compliance to CS-25 requirements.

4. REMARKS

1. Suggestions for amendment(s) to this EASA Certification Memorandum should be referred to the Certification Policy and Planning Department, Certification Directorate, EASA. E-mail CM@easa.europa.eu or fax +49 (0)221 89990 4459.
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