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| <b>EASA</b>   | <b>NOTIFICATION OF A PROPOSAL TO ISSUE<br/>A CERTIFICATION MEMORANDUM</b>  |
|  | <p><b>EASA Proposed CM No.:</b><br/> <b>EASA Proposed CM - CS – 001 Issue: 01</b><br/> <b>Issue Date: 28<sup>th</sup> of January 2011</b><br/> <b>Issued by: Cabin Safety Section</b><br/> <b>Approved by: Head of Certification Experts Department</b><br/> <b>Effective Date: [Standard date = 7 days after final CM Issue date]</b><br/> <b>Regulatory Requirement(s): FAR/CS 25.853 (including Appendix F), 25.855, 25.857, 25.858, and 25.869</b></p> |

**In accordance with the EASA Certification Memorandum procedural guidelines, the Agency proposes to issue an EASA Certification Memorandum (CM) on the subject identified below.**

**All interested persons may send their comments, referencing the EASA Proposed CM Number above, to the e-mail address specified in the "Remarks" section, prior to the indicated closing date for consultation.**

**EASA Certification Memoranda clarify the Agency's general course of action on specific certification items. They are intended to provide guidance on a particular subject and, as non-binding material, may provide complementary information and guidance for compliance demonstration with current standards. Certification Memoranda are provided for information purposes only and must not be misconstrued as formally adopted Acceptable Means of Compliance (AMC) and Guidance Material (GM). Certification Memoranda are not intended to introduce new certification requirements or to modify existing certification requirements and do not constitute any legal obligation.**

**EASA Certification Memoranda are living documents into which either additional criteria or additional issues can be incorporated as soon as a need is identified by EASA.**

## **Subject**

### **Use of the Aircraft Materials Fire Test Handbook**

**# DOT/FAA/AR-00/12**

**Log of Issues**

| <b>Issue</b> | <b>Issue date</b> | <b>Change description</b> |
|--------------|-------------------|---------------------------|
| 01           | 28.01.2011        | Initial issue.            |
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|              |                   |                           |

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## 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                     |
|--------------|-----------------------------|
| FAA          | Federal Aviation Authority  |
| JAR          | Joint Aviation Requirement  |
| CS           | Certification Specification |

### 1.4. DEFINITIONS

The following abbreviations are used in this Certification Memorandum:

| Definition | Meaning |
|------------|---------|
| ---        | ---     |

## 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 of the test methods presented in the handbook represented an acceptable, but not necessarily the only, method to show compliance. 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, international contacts, and a listing of various fire test labs.

On 22<sup>nd</sup> 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.

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 Handbook have been determined by the FAA to be equivalent to the test methods specified in Appendix F. In addition, they are more repeatable and reproducible and are easier to conduct.

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.

## 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 issued by the FAA of the following Chapters of the Aircraft Materials Fire Test Handbook DOT/FAA/AR-00/12:

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 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 TSO-C69A

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 must 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. This EASA Proposed Certification Memorandum will be closed for public consultation on the **25<sup>th</sup> of March 2011**.
2. Comments regarding this EASA Proposed Certification Memorandum should be referred to the Certification Policy and Planning Department, Certification Directorate, EASA. E-mail [CM@easa.europa.eu](mailto:CM@easa.europa.eu) or fax +49 (0)221 89990 4459.
3. For any question concerning the technical content of this EASA Proposed Certification Memorandum, please refer to [CM@easa.europa.eu](mailto:CM@easa.europa.eu).