EASA Certification Memoranda clarify the European Aviation Safety 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) or as 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

Flammability Testing of Interior Materials
## Log of Issues

<table>
<thead>
<tr>
<th>Issue</th>
<th>Issue date</th>
<th>Change description</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>16.10.2013</td>
<td>First issue.</td>
</tr>
</tbody>
</table>
Table of Contents

1. INTRODUCTION .................................................................................................................... 4
   1.1. Purpose and Scope ........................................................................................................... 4
   1.2. References ......................................................................................................................... 4
   1.3. Abbreviations ....................................................................................................................... 4
   1.4. Definitions ........................................................................................................................... 5

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 about methods of compliance with the flammability requirements of JAR/CS-25 for commonly constructed parts, construction details, and materials. The methods of compliance addressed in this Certification Memorandum apply to the following paragraphs in CS-25 at Amendment 12: 25.853(a) and (d), Appendix F Parts I, IV and V; or the equivalent paragraphs in JAR/CS-25 at previous Changes/Amendments.

The same methods of compliance can also be used where CS-25 Appendix F test methods are used to meet other requirements, such as CS 25.855, CS 29.853 (a) and (b), CS 29.855 (a)(2), CS-ETSO or applicable Special Conditions. They may also be applied to meet CS 23.853(d)(3), 23.855(c) and CS-23 Appendix F requirements.

Finally, the methods of compliance addressed in this Certification Memorandum may be beneficial, but it need not be routinely applied, to show that materials are at least flame resistant as per the guidance given in FAA AC 23-2A (ref. CS 23.853(a), 23.855(b), 27.853(a) and 27.855(a)(1)).

1.2. REFERENCES

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

<table>
<thead>
<tr>
<th>Reference</th>
<th>Title</th>
<th>Code</th>
<th>Issue</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>FAA AC 25-17A</td>
<td>Transport Airplane Cabin Interiors Crashworthiness Handbook</td>
<td>N/A</td>
<td>N/A</td>
<td>18/05/2009</td>
</tr>
<tr>
<td>FAA AC 23-2A</td>
<td>Flammability Tests</td>
<td>N/A</td>
<td>N/A</td>
<td>11/05/2007</td>
</tr>
<tr>
<td>FAA PS-ANM-25.853-01-R2</td>
<td>Flammability Testing of Interior Materials</td>
<td>N/A</td>
<td>N/A</td>
<td>03/07/2013</td>
</tr>
</tbody>
</table>

1.3. ABBREVIATIONS

The following abbreviations are used in this Certification Memorandum:

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC</td>
<td>Advisory Circular</td>
</tr>
<tr>
<td>AMC</td>
<td>Acceptable Means of Compliance</td>
</tr>
<tr>
<td>CS</td>
<td>Certification Specification</td>
</tr>
<tr>
<td>EASA</td>
<td>European Aviation Safety Agency</td>
</tr>
<tr>
<td>ETSO</td>
<td>European Technical Standard Order</td>
</tr>
</tbody>
</table>
1.4. DEFINITIONS

The following definitions are used in this Certification Memorandum:

<table>
<thead>
<tr>
<th>Definition</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>---</td>
<td>---</td>
</tr>
</tbody>
</table>

2. BACKGROUND


The available guidance material included in CS-25 and in FAA AC 25-17A is not detailed enough to cover the wide range of materials and installations that currently occur in the design of the cabin interior of Large Aeroplanes. Through the years, design organizations have based their means of compliance with flammability requirements on the guidance material they have accumulated in case-by-case discussions with Aviation Authorities. This approach has led to standardization issues. There is no indication that this lack of standardization has caused significant safety issues, but the potential is there if the guidance continues to lack sufficient details and is open to interpretation.

Therefore, to provide a more standardized set of acceptable methods of compliance with CS 25.853(a) and (d), Aviation Authorities have started an exercise together with a working group composed by representatives of the main companies active in the civil aviation market, to review a listing of common design details and establish acceptable criteria to be followed when developing test plans and reports to show compliance with CS 25.853.

The outcome of this exercise is reflected in the content of FAA PS-ANM-25.853-01-R2, dated 3rd July 2013. EASA has been highly involved in the development of the above-mentioned FAA Policy Statement.

3. EASA CERTIFICATION POLICY

3.1. EASA Policy

EASA is in full agreement with the content of FAA PS-ANM-25.853-01- R2. Therefore, EASA strongly recommends that design organizations develop their compliance documentation (certification plans, test plans, test reports) following the guidelines provided by FAA PS-ANM-25.853-01-R2, wherever applicable.

EASA would like to highlight that the new guidelines are based on the review of data supplied by the aviation industry and does not introduce any additional requirement or test method. Whenever possible, it provides similarity criteria that may contribute to reducing the number of tests to be performed to certify installation of parts.
It must be noted that the new guidance clarifies that certain installations are in general not exempted from testing. For example, compliance with CS 25.853 for bonded items (placards, hook and loop, etc.) and bonded joints (ditch and pot, cut and fold, etc.) should be substantiated following the guidelines of FAA PS-ANM-25.853-01-R2.

Finally, an important aspect of the standardization exercise was the development of a consistent set of definitions of terms. This should help minimizing the potential for confusion and should reduce the variability in regulatory interpretations.

3.2. **WHO THIS CERTIFICATION MEMORANDUM AFFECTS**

This Certification Memorandum affects all organisations involved in the development of design changes that include in their certification basis the following in CS-25 at Amendment 12: 25.853(a) and (d), Appendix F Parts I, IV and V; or the equivalent in JAR/CS-25 at previous Changes/Amendments.

In addition, it applies where CS-25 Appendix F test methods are used to meet other requirements, such as CS 25.855, CS 29.853(a) and (b), CS 29.855(a)(2), CS-ETSO or applicable Special Conditions.

The Certification Memorandum may also be applied to design changes that include in their certification basis CS 23.853(d)(3) and/or 23.855(c).

Finally, this Certification Memorandum may be beneficial, but it needs not be routinely applied, whenever materials are required to be at least flame resistant (ref. CS 23.853(a), 23.855(b), 27.853(a) and 27.855(a)(1)) as per the guidance given in FAA AC 23-2A.

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.

2. For any question concerning the technical content of this EASA Certification Memorandum, please contact:
   
   Name, First Name: Canari, Enzo
   
   Function: Cabin Safety Expert
   
   Phone: +49 (0)221 89990 4049
   
   Facsimile: +49 (0)221 89990 4549
   
   E-mail: enzo.canari@easa.europa.eu