

Proposed Special Condition on Application of heat release and smoke density requirements to seat materials.

Applicable to A380

Introductory note:

The hereby presented Special Condition has been classified as an important Special Condition and as such shall be subject to public consultation, in accordance with EASA Management Board decision 02/04 dated 30 March 2004, Article 3 (2.) of which states:

"2. Deviations from the applicable airworthiness codes, environmental protection certification specifications and/or acceptable means of compliance with Part 21, as well as important special conditions and equivalent safety findings, shall be submitted to the panel of experts and be subject to a public consultation of at least 3 weeks, except if they have been previously agreed and published in the Official Publication of the Agency. The final decision shall be published in the Official Publication of the Agency."

Statement of Issue

The flammability regulations applicable in particular to passenger seats are very explicit with respect to seat cushions but do not specifically address other parts of the seats. The ETSO/TSOs for seats (C39 and C127) only requires that seat components other than cushions comply to the tests described in Appendix F part I of JAR 25.

The regulations for interior panels, for aeroplanes with 20 or more passenger seats, set in JAR 25.853(d), require compliance to heat release and smoke emission tests specified in Appendix F part IV and V of JAR 25. Seatback installed food trays were excluded from this requirement, due to their small size and to the fact that the seats were separated from each other and would not therefore spread a fire through the cabin. As seats started to include sizable, non-metallic panels, the reference of food trays served as limiting case for assessment of applicability of heat release and smoke emission requirements.

There are now new seat design concepts that make some of the other components (other than the seat cushions) having dimensions such that they cannot be considered as small parts any more.

A380 Special Condition D-43 - Seat Heat Release Requirements

1. Except as provided in paragraph 3 of these special conditions, compliance with JAR 25, Appendix F, parts IV and V, heat release and smoke emission, is required for seats that incorporate non- traditional, large, non-metallic panels that may either be a single component or multiple components in a concentrated area in their design.
2. The applicant may designate up to and including 0.13935 m² (1.5 square feet) of non-traditional, non-metallic panel material per seat place that does not have to

comply with special condition Number 1, above. A triple seat assembly may have a total of 0.41805 m² (4.5 square feet) excluded on any portion of the assembly (e.g., outboard seat place 0.0929 m² (1 square foot), middle 0.0929 m² (1 square foot), and inboard 0.23225 m² (2.5 square feet)).

3. Seats do not have to meet the test requirements of JAR 25, Appendix F, parts IV and V, when installed in compartments that are not otherwise required to meet these requirements. Examples include:
 - a. Airplanes with passenger capacities of 19 or less and
 - b. Airplanes exempted from smoke and heat release requirements.
4. Only airplanes associated with new seat certification programs applied for after the effective date of these special conditions will be affected by the requirements in these special conditions. This Special Condition is not applicable:
 - a. On the existing airplane fleet and follow-on deliveries of airplanes with previously certified interiors,
 - b. For minor layout changes of already certified versions,
 - c. For major layout changes "not affecting seat design" or "not introducing changes to or new seat designs"