

Development/Updating of Material Flammability Test Methods in Support of Proposed Part 25 Regulatory Change.

Presented to: The Sixth Triennial International Fire &
Cabin Safety Research Conference

By: Richard Hill, FAA Technical Center

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**Federal Aviation
Administration**



Eleven Task Groups:

1. Seat Oil Burner for Cushioning
2. Seat Structure
3. Cargo Liner
4. OSU
5. Bunsen Burner
6. Radiant Panel for Insulation
7. Insulation Burnthrough
8. Radiant Panel for Ducting
9. Radiant Panel for Wire
10. Radiant Panel for Fuselage Skin
11. Evacuation Slide

+ Continued Task Group on Heat Flux

Seat Oil Burner for Cushioning

Incorporate sonic burner

Update Advisory Material

Incorporate lightweight seat criteria

Testing of other padded areas (footrests, headrests, ottomans)

Large surface areas on seats (either small part or not!)

Incorporate testing of inflatable bladders

Incorporate testing of non-traditional materials used in place of foam

Seats – Flammability of Structure

Develop new Handbook Chapter to include test using sonic burner

If seat structure is other than aluminum:

1. Test for composite structure
2. Test for magnesium-alloy structure

Cargo Liner – Flammability

Incorporate sonic burner

Update Advisory Material

Include testing criteria for seams, joints, fastening systems, light fixtures

Include testing criteria for cargo liner patches, repair

OSU

Update Handbook Chapter, incorporate similarity results

Incorporate Handbook OSU Minimum Checklist

Fix Heat Flux Problem – Develop Aviation Standard?

(Applies To Test Methods With Heat Flux Requirements)

Bunsen Burner Test (or similar)

Update Handbook Chapter

For example, B-gas will be removed, and current manufacturers of Bunsen burners will be added

Update Advisory Material

Incorporate the latest upgrades

Include testing criteria for carpeting

Include testing criteria for curtains

Radiant Panel Test for Insulation

Write Handbook Chapter for this test method

For example, in the Rule, use of an Air Propane panel is acceptable but in the Handbook it will be eliminated.

Update Advisory Material

Include information on electrical panel specs

Burnthrough Test for Insulation

Write Handbook Chapter for this test method incorporating sonic burner

Update Advisory Material



Radiant Panel Test for Ducting Materials

Write Handbook Chapter for this test method

- Update test method (as needed) found in Appendix B of FAA Report # DOT/FAA/AR-08/4

Radiant Panel Test for Wiring Materials

Write Handbook Chapter for this test method

- Conduct Round Robin to determine test precision (ASTM E 691-99).
- Update test method (as needed) found in Appendix A of FAA Report # DOT/FAA/AR-10/2

Radiant Panel Test for Nonmetallic Skin And Composites in Hidden Areas:

Write Handbook Chapter for this test method

Radiant Heat Test for Evac Slide Materials

Update Handbook Chapter for this test method



Task Group Chairmen

1. Seat Oil Burner for Cushioning (Dick Hill)
2. Seat Structure (Tim Marker)
3. Cargo Liner (Tim Marker)
4. OSU (Mike Burns)
5. Bunsen Burner (Dick Hill)
6. Radiant Panel for Insulation (Brian Conover)
7. Insulation Burnthrough (Rob Ochs)
8. Radiant Panel for Ducting (Pat Cahill)
9. Radiant Panel for Wire (Pat Cahill)
10. Radiant Panel for Fuselage Skin (Rob Ochs)
11. Evacuation Slide (Dung Do)

+ Continued Task Group on Heat Flux (Mike Burns)



Task Groups:

- One Representative per Company per Group
- Limit of Two Task Groups per Person
- First Meeting of Task Groups Week of Oct.25
- Time Frame Target – 2 Years.