

RTCA Update

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**Federal Aviation
Administration**



Commercial Aircraft Electronics (Avionics)

- RTCA, Inc.
 - Not-for-Profit corporation that functions as a Federal Advisory Committee
 - Dozens of “Special Committees” working with oversight from a Program Management Committee, and input from the FAA



Background (A Review)

- Advisory circular (AC21-16F) identifies RTCA Doc. No. (RTCA/DO)-160F as an acceptable means of environmental qualifications for showing compliance with airworthiness requirements.
- This AC excludes Section 26, “Fire and Flammability” as it is not as stringent as FAA accepted methods.

Table 26-2 Type of Test Determination

Components	Method	Paragraph
All materials other than rubber or elastomer parts, wire and cable	Vertical 12 second bunsen burner test	26.7.2
Rubber or elastomer parts	Horizontal bunsen burner test	26.7.3
Wire and cable	60 degree bunsen burner test	26.7.4

- Methods verbatim from Fire Test Handbook

RTCA Updates

- DO 160 Rev. G has been published
- Advisory Circular (AC) 21-16 G was issued on June 22, 2011 and accepts Section 26 –Flammability
- The AC identifies RTCA Document No. (RTCA/DO) 160 versions D,E,F,and G as containing acceptable environmental qualifications to show compliance with certain airworthiness requirements.
- The AC stipulates that RTCA/DO-160G, Section 26 is sufficient for 14 CFR Part 25, but not for 14 CFR Part 33.
- The FAA strongly encourages the use of RTCA/DO-160G for new articles.
- Any work dealing with an “electronic box” test will have to be initiated by the FAA

