




# Flame Retardancy: Disambiguation

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# Disambiguation

... a disambiguation

*n. : clarification that follows from the removal of ambiguity.*


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# Scope

- Explore flame retardancy issues
  - Testing
  - Regulations
  - Requirements placed on industry
- Clarify BCA 2007 criteria
- Future standard development


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# Imperatives

- The correct test for the intended use and location
- Two ways to approach:
  - Practical Requirements
  - Ethical Concerns


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# Practical Requirements

- Minimise cost to the industry by adopting a universal approach to assessing tensile membrane fabrics
- Guide industry in their interpretation of BCA regulations
- Ensure certification does not retard development, tendering or construction

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# Example

- Current BCA 2007 confusion
  - C1.10 vs C1.10a

**SPECIFICATION C1.10 FIRE HAZARD PROPERTIES - GENERAL**


*Deemed-to-Satisfy Provisions*

**1. Scope**

This Specification sets out requirements in relation to the *fire hazard properties* of materials and assemblies in Class 2 to 9 buildings other than—

- (a) floor materials and floor coverings; and
- (b) wall and ceiling linings.

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## Example

- Current BCA 2007 confusion
  - C1.10 vs C1.10a

**SPECIFICATION C1.10a FIRE HAZARD PROPERTIES - FLOORS, WALLS AND CEILINGS**


*Deemed-to-Satisfy Provisions*

**1. Scope**

This Specification sets out requirements in relation to the *fire hazard properties* of—

- (a) floor materials and floor coverings; and
- (b) wall and ceiling linings.


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## Ethical Imperatives

- Develop a standard that reflects the true requirements of the industry
- Current testing measures:
  - Ignitability
  - Spread of Flame
  - Heat Evolved
  - Smoke Developed


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## Ethical Imperatives

- Only two indices are assessed:
  - Spread of Flame
  - Smoke Developed
- Requirements differ depending on end usage (area of egress etc), but are essentially variations of the above.


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## The Problem

- AS/NZ 1530.3 testing changes introduce variability to results
- Globally accepted membrane textiles may or may not pass
- Unsuitable: Fabric or test?


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## The Status Quo

- Pre-2003 reports accepted by some but not by all
- Ongoing development of a new standard – months... years...?
- Regulations in force that are difficult to understand and not reflective of purpose

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## What to Measure?

- Ignitability
  - Sufficient to open the membrane
- Behaviour
  - Should not fuel the fire
  - Should not rain flaming droplets
- Smoke
  - How much?
  - Noxious / harmful?

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## Behaviour

Standardised Swedish test conducted by Ferrari



- > self extinction
- > limited degradation
- > self venting
- > no flaming drops

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## A Universal Approach

- Current development is focussed on marquees and temporary structures
- The requirements of all lightweight structures should be taken into consideration
- A flame retardant membrane cannot, on its own, make a fire situation safe.

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## Conclusion

- Balance practical and ethical concerns
- Practical:
  - Simple
  - Accessible
  - Affordable
- Ethical:
  - Failure to act exposes us all to commercial and financial risk

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## Conclusion

- Role of the LSAA
  - Voice of the industry
  - Guidance in new standard development or adoption
  - Prevent a future in which testing standards are unrealistically harsh or expensive

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