



## Fire Safety (Applicable to both Thermal and Acoustic Installations)

ThermaCoustic Industries thinks it essential that any product used in a building interior that can be left exposed - and is of more than film thickness - should contain very little, if any, combustible material.

### Non-Combustibility versus Flame Spread:

- There is some confusion in the construction industry concerning a product rated as non-combustible as compared to one rated as having a low flame spread;
- These distinctions are often seen as minor, and of no particular consequence in terms of product usage within a building. Nothing could be further from the truth.
- Determining non-combustibility of a material is straightforward – when subjected to test procedures as accepted by regulatory authorities, its flaming time, temperature rise and mass loss are less than specified;
- Determining 'low flame spread' is equally straightforward in terms of initial classification. It depends, initially, upon the basic distinction between combustible and non-combustible as noted below:
  - a) All **non-organic materials** (for instance: glass, steel, concrete) are **non-combustible**;
  - b) All **organic materials** (for instance: paper, wood, petrochemical compounds) are **combustible**.

Therefore, a 'low flame spread' rating is irrelevant if the material is **non-organic** because it is automatically rated as **non-combustible**, but it is very relevant if the material is **organic** and is expected to be used in exposed locations within a building.

- An organic substance such as paper can be treated with flame retardant material that ensures that it will burn slowly, and can then be considered to have a low flame spread;
- An organic material, even when treated with fire retardant and rated as 'low flame spread', can **never** be rated as non-combustible because its flaming time, temperature rise and mass loss are more than allowed when subjected to industry-accepted test procedures;
- Only inorganic materials, or mixtures containing a very small organic component, can be rated non-combustible according to industry standards – e.g. – ASTM E-136, CAN/ULC S114.

The major component of **AF90** is inorganic glass fibre, and it has been tested to CAN/ULC S114 and ASTM E-136 and rated as **non-combustible**. Since it is so rated, it can be applied to any fire resistive material **without affecting the fire rating of the assembly**.

**Note:** Unlike spray applied organic insulation materials, that can only qualify for low flame spread ratings, the low flame spread and non-combustible ratings of **AF90** are **permanent**. Therefore, it does not require either initial addition of a fire retardant at time of application or periodic top up of the material to maintain its ratings.

In consideration of the foregoing information, we urge that you know clearly whether or not the product you are specifying is **non-combustible** or merely a combustible with a low flame spread rating.