



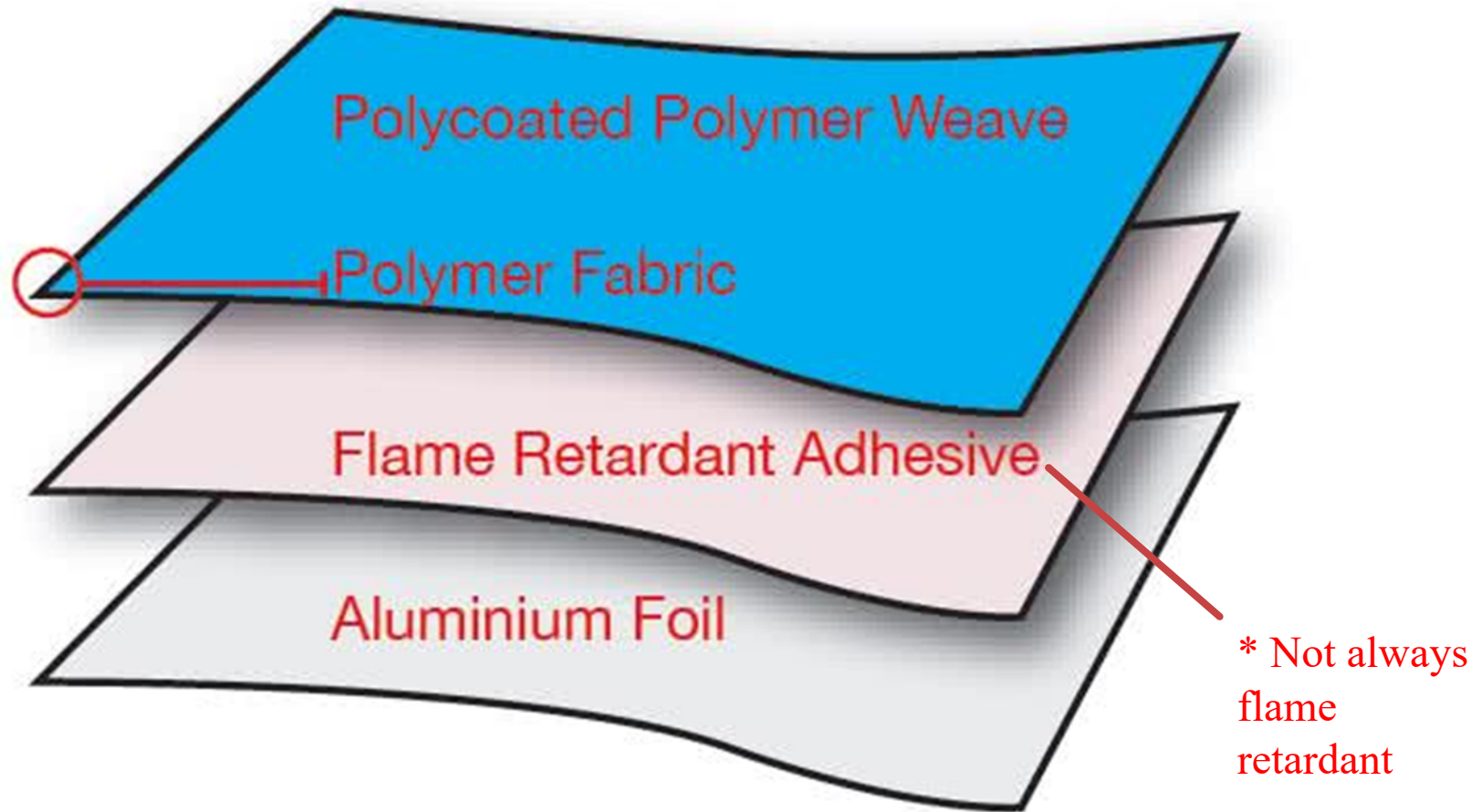
Identification and Analysis of Building Sarking

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What is Sarking?

- Sarking is a flexible, pliable membrane, which acts as a ‘wall wrap’ to help protect the building against the elements and provide greater insulation.
- Sarking is often used under cladding and has been largely overlooked in the combustible cladding crisis.

Typical Sarking Composition



Construction & Composition of Sarking

- Wall sarking is a composite wrap made up of a layer of polymer-coated woven glass fabric with aluminium foil laminate designed to provide protection against water and offer insulation properties in commercial wall applications.
- *Sisalation* is the brand name for a special type of sarking material. Manufacturers have added aluminium foil to woven cloth or kraft paper and strengthened it with fiberglass, making it an excellent material to protect against the water and thermal gains/losses. Some types of *Sisalation* products are also flame retardant.

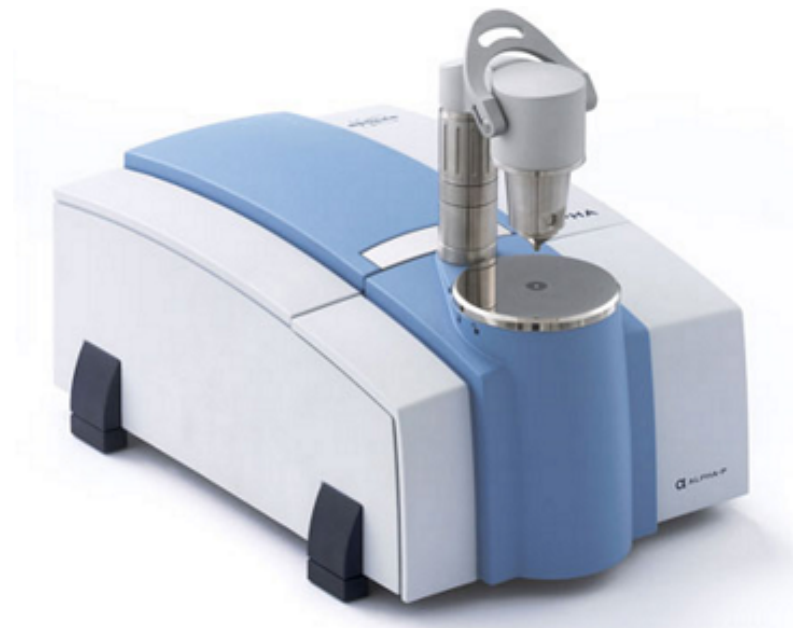
Tools for Identification of Sarking

ExcelPlas uses the following techniques and tools for determining the composition and risk profile of sarking:

- Infra-red spectral ‘fingerprinting’ to determine polymer types
- DSC Thermal Analysis to determine melting points
- TGA Thermal Weight Loss to determine degree of combustibility
- ICP Elemental Analysis to determine metal and additives
- Flammability testing to determine flame spread and flammability

Fourier Transform Infrared

- FTIR – (Fourier Transform Infrared) ‘finger-printing’ to identify molecular structural properties.
- **Purpose:** Able to Identify components of polymer layer/s and Flame Retardant Adhesive in the sarking



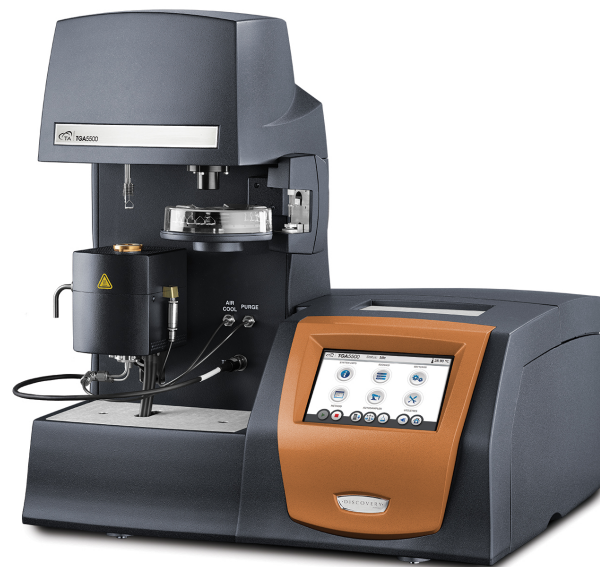
Differential Scanning Calorimetry

- DSC – (Differential Scanning Calorimetry) to determine melting point and crystallinity of the supplied parts
- **Purpose:** Able to measure the decomposition temperature of the Flame Retardant Adhesive assisting in identification and quantification of the flame retardant used.



TGA - Instrument

- Thermogravimetric analysis was performed using a TA 2000-TGA instrument.
- **Purpose:** to investigate the thermal degradation and weight loss behavior of the components of the sarking.



ICP-AES

- Inductively coupled plasma atomic emission spectroscopy (**ICP-AES**) for the detection of chemical elements.
- **Purpose:** Identification and quantification of the metal components and mineral-based flame retardants in the Sarking

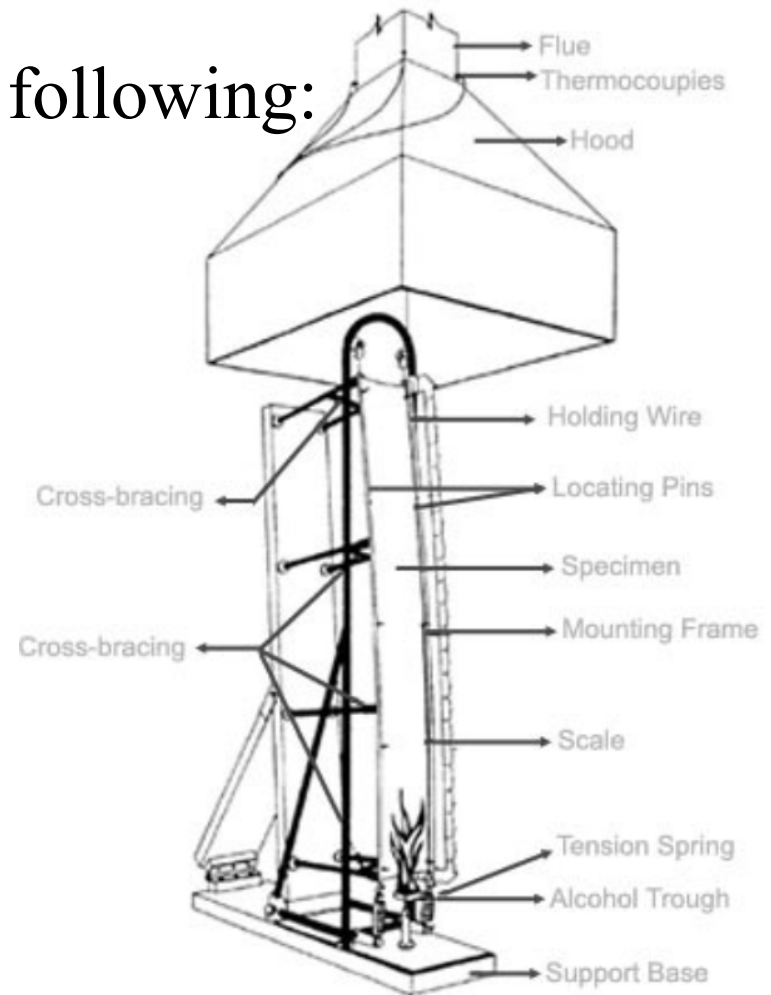


AS 1530.2

Test for Flammability of Materials

Purpose: Testing provides the following:

- Speed Factor
- Heat Factor
- Spread Factor
- Flammability Index





About ExcelPlas: With more than 25 years' experience, ExcelPlas is acknowledged as a leading provider of specialist analytical and technical capabilities for the building and construction industry in the area of polymer analysis. ExcelPlas Labs use a range of analytical techniques to assist building owners, building managers, building insurers, fire engineers and other stakeholders to provide advice relating to the flammability potential, composition and toxicity of cladding materials. ExcelPlas is a NATA-accredited laboratory and is ISO/IEC 17025 compliant.
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