

## TYPICAL APPLICATION



## Sapphire TECHNICAL DATA

### Sapphire Specifications

|                  |                                      |
|------------------|--------------------------------------|
| Width per roll:  | 4.94ft/1.5m                          |
| Length per roll: | 164ft/50m                            |
| Roll size:       | 802ft <sup>2</sup> /75m <sup>2</sup> |

### Sapphire Technical Data

|                                                    |                |
|----------------------------------------------------|----------------|
| Nominal Thickness                                  | 9.84 mils      |
| Water Vapour Transmission (perms)                  | 0.06           |
| Water Tightness (2000mm, 2h)                       | Pass           |
| Maximum Tensile Force (MD)(N/50mm, ≥)              | 180            |
| Maximum Tensile Force (CD) (N/50mm, ≥)             | 130            |
| Resistance to Tearing MD (Nail Shank)              | 200            |
| Resistance to Tearing CD (Nail Shank)              | 200            |
| Tensile Strength after Ageing (MD)(%, ≥)           | 80             |
| Tensile Strength after Ageing (CD) (%, ≥)          | 80             |
| Resistance to Water Penetration after Ageing(%, ≥) | 80             |
| UV Resistance (Days)                               | 180            |
| Temperature Range                                  | -40°F to 240°F |

\* The Data shown above is based on the test averages and independent test reports. There can be a +/- 10% variation in the individual test results. This report should not be considered as a warranty for the manufacturer. The manufacturer is not responsible for the misrepresentation or misinterpretation of the data by the reader.

Sapphire Meets or exceeds the following code standards: ASTM D8257, ASTM D4869, ASTM E96, ASTM D1204, ASTM D5035, ASTM D4533, ASTM D228, ASTM D4798.

Install right from the start with  
**Arkint® Sapphire**  
 SYNTHETIC UNDERLAYMENT  
 LOGO PRINTING AVAILABLE



## Installation Instructions:

**Storage** Rolls of Sapphire should be stored flat or on their sides on a clean, level surface, ideally on pallets, and kept covered to protect them from direct sunlight.

**Damage Prevention** Handle the membrane carefully to minimize the risk of tears or punctures. Minor punctures may be repaired using ARK Acrylic Tape, while larger damaged areas should be replaced with new material.

**Installation Orientation** Sapphire is installed on the internal side of the building envelope, with the smooth blue side and logo facing the interior. The membrane may be laid horizontally or vertically depending on the substrate.

**Fixing – Timber** Initial fixing can be achieved using ARK Double Sided (acrylic) Tape together with stainless steel staples. For long-term security, timber battens should be installed over the membrane, also sealing staple penetrations.

If battens are not used, apply ARK Butyl Tape (double sided) to studs or nogginns before stapling. Subsequent internal lining fixings should also penetrate through the ARK Butyl Tape.

**Fixing – Masonry** Sapphire may be attached to masonry using suitable anchor fasteners, masonry nails, or screws with EPDM washers. Fixings should not exceed 500mm spacing. ARK Double Sided (acrylic) Tape may be used alongside mechanical fixings.

If compressible washers are not used, apply ARK Butyl Tape (double sided) at fixing points to maintain airtightness. For chalky or porous masonry, a primer may be applied to enhance adhesion before taping.

**Fixing – Steelwork (SFS)** Temporary fixing may be carried out using continuous strips of ARK Double Sided (acrylic) Tape, supplemented by mechanical fixings into the steel structure using drill-tip or self-tapping screws. A rubber or EPDM washer should be positioned between the screw head and membrane.

Screws are typically spaced vertically at 500mm per stud (common 600mm stud centres). Membrane security may be further enhanced by installing battens or lining brackets after fixing.

**Rainscreen Cladding Applications** Sapphire may be fixed to cement-bonded particle board, OSB, or plywood sheathing using ARK Double Sided (acrylic) Tape and stainless-steel staples. It may also be secured by fixing through the sheathing into the supporting structure (see steelwork fixing).

In many rainscreen assemblies, battens or metal brackets (with insulation) provide the main restraint for the membrane. Ensure components are tightened to prevent water ingress; ARK Butyl Tape may be applied where additional sealing is required.

**Fixing – Insulation** Attach Sapphire to rigid insulation using proprietary expanding insulation attach anchors at maximum 500mm spacing. Penetrations caused by wall ties or cladding brackets should be sealed using ARK Acrylic Tape or ARK UltraWrap Flex Tape.

**Laps** Maintain minimum 100mm laps between sheets and seal using ARK Acrylic Tape or ARK Double Sided (acrylic) Tape.

**Detailing** Ensure continuous coverage across internal wall or roof surfaces. Maintain airtight continuity at wall, floor, and roof junctions, sealing with ARK Acrylic Tape or ARK Double Sided (acrylic) Tape.

**Windows, Doors, and Loft Hatches** Sapphire should be sealed tightly to frames using ARK Acrylic Tape or ARK Double Sided (acrylic) Tape. Internal corners may be reinforced with ARK Sapphire Tape or ARK UltraWrap Flex Tape. Where plaster or render is to be applied, ARK Plastering Tape should be used for window perimeter sealing.

**Penetrations** All penetrations (lighting, pipework, cabling, etc.) must be sealed with ARK UltraWrap Flex Tape. Fixings through timber, masonry, or steel should be sealed using ARK Butyl Tape.

**Batten / Service Void** An internal lining such as plasterboard may be spaced off Sapphire to form a service void, helping to avoid membrane perforations from electrical or plumbing installations while maintaining airtightness and reflective performance.

Timber battens should be a minimum of 25mm thick, with ARK Butyl Tape applied behind them for added sealing.

**Light Fittings** Where no service void exists, a sealed enclosure should be formed around light fittings and sealed using ARK Butyl Tape or ARK Acrylic Tape. Wiring penetrations should be sealed thoroughly with ARK UltraWrap Flex Tape.

For downlights, sealed low-energy LED units with F-Capped approval are recommended to allow continuous insulation coverage. If halogen lighting is used, an F-Capped approved loft cap must be installed above