

## ARMOURPLAN SM120

### PRODUCT INFORMATION

Armourplan SM is a polyester scrim reinforced membrane for mechanically fastened roofing systems on both flat and sloping roofs and is suitable for both new build and refurbishment installations

The membrane is mechanically fastened in the overlap using IKOfix Stress Plates and IKOfix Screws into the deck

Overlaps are securely hot air welded

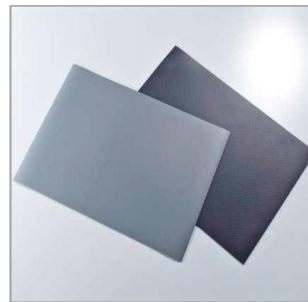
Armourplan SM can also be used for ballasted systems or alternatively in adhered systems bonded using Armourplan contact adhesive or Sprayfast PCA adhesive

Armourplan SM is also used as the upstand detailing membrane on all Armourplan SM/SG systems

Description	Armourplan SM120
<b>Thickness</b>	1.2mm
<b>Widths</b>	1.06m / 1.50m / 2.12m
<b>Length</b>	20m
<b>Colour</b>	Mid Grey (nearest RAL 7046) Slate Grey (nearest RAL 7015)
<b>Material</b>	PVC-P
<b>Reinforcement</b>	Woven Polyester Scrim
<b>Product Code</b>	420xxxxx – Mid Grey 430xxxxx – Slate Grey

### FEATURES & BENEFITS

- BBA Certified 05/4287
- Good UV resistance and durability
- Good mechanical properties and product performance
- Efficient and safe installation
- Secure seam welding quality
- Aesthetically pleasing finish
- Complete range of fixings and accessories available



### INDEPENDENT ACCREDITATION

- BBA Agrément Certificate. 05/4287
- Euro Agrément ProcédureBATc ATG (No.2877)
- SGS/CTG (629)
- Czech Republic Protokol C 010\_011555
- Slovakia Co-operating Institute Certifikat 2601A/04/0520/1/c/c04
- Manufactured in accordance with BS EN ISO 14001, ISO 9001 and BES6001

### SPECIFICATION

To complete the installation of Armourplan SM, the system includes a wide range of accessories, including detailing and walkway membrane, cover strips, preformed corners and outlets, standing seam profile, pre-coated metal sheet for forming edge details, IKOfix fastening systems and termination bars, insulation and vapour control layers, adhesives, cleaners, sealants and rooflights.

# **DESIGN CONSIDERATIONS**

## **CONFIGURATION**

Before use, thoroughly stir the Armourplan PVC Contact Adhesive. Replace the container lid when work is interrupted.

Unroll the Armourplan SM over the substrate and fold back approximately half its length.

Apply a primer coat of Armourplan PVC Contact Adhesive using a roller or apply Sprayfast PCA adhesive to the prepared substrate surface, priming only the area of substrate where the membrane will be laid the same day. Allow adhesive to become tacky.

If the substrate is PIR insulation then all the board joints are to be taped using self-adhesive foil faced tape prior to the primer coat being applied.

Apply a coat of Armourplan PVC Contact Adhesive using a roller or apply Sprayfast PCA adhesive to the underside of the Armourplan SM membrane ensuring the weld area is kept free of adhesive and allow to become tacky.

Carefully roll out the Armourplan SM over the previously primed surface and roll with water filled roller or soft broom to ensure intimate contact between the two surfaces.

Fold back other half of the roll of Armourplan SM and repeat the procedure.

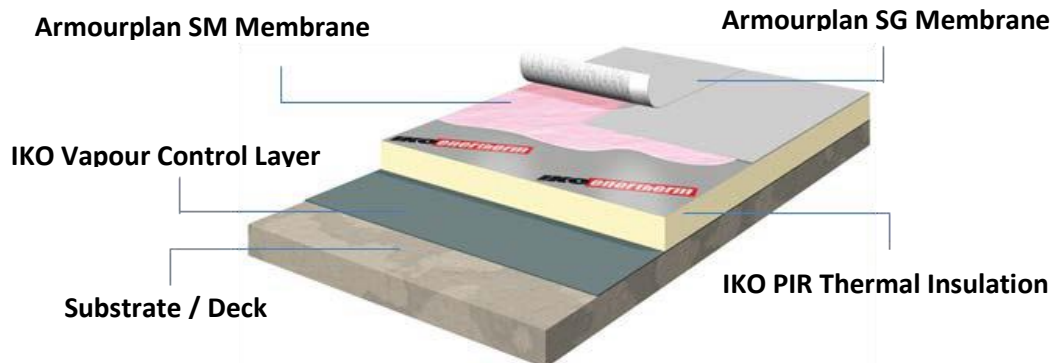
Unroll the next roll of Armourplan SM, ensuring the end laps are staggered and the side overlaps the previously installed sheet by 60mm.

Repeat the adhering process.

Fully hot air weld the 60mm side lap, allow to cool completely.

Mechanically check the integrity of the cooled weld by running a seam probe or 4mm wide screwdriver (with rounded edges) along the seam applying pressure into the seam.

**Important:** Armourplan PVC Contact Adhesive must only be applied to 100% dry substrates at temperatures above 5 °C. Failure to do so could result in the membrane de-bonding.



## **MECHANICALLY FASTENED APPLICATION**

Carefully unroll the Armourplan SM out over the previously substrate. If installing on a profiled metal deck ensures that the membrane is perpendicular to the direction of the deck sheet.

Install the IKOfix fasteners, using an appropriate installation tool 35mm from the rear edge. Fasteners must be installed at the fixing centers specified by IKO for the specific project.

Unroll the next roll of Armourplan SM ensuring the end laps are staggered and the side overlaps the previously installed sheet by 110mm.

Hot air weld the side laps with an automatic welders or hot air gun and allow to cool completely.

Mechanically check the integrity of the cooled weld by running a seam probe or 4mm wide screwdriver (with rounded edges)

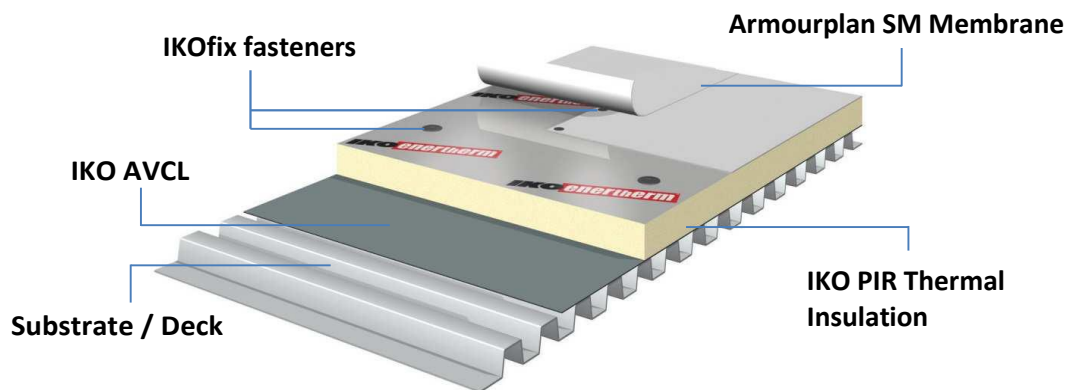
along the seam applying pressure into the seam. In corners and other areas where additional fastening is required install IKOfix fasteners through the roof sheet and cover with a 200mm wide strip of Armourplan. Hot air weld both sides and ends.

At upstands and at all roof penetrations secure the Armourplan SM membrane with a toothed bar.

Cover 10mm gap in the toothed bars with a 50mm x 50mm piece of Armourplan SM and weld to the roof sheet.

Waterproof the toothed bar with the upstand flashing hot airwelded to the roofsheet.

**NB: This is the guide only-please refer to Armourplan Application Manual for Contractor notes**



## **TYPICAL PROPERTIES**

<b>Characteristic properties</b>	<b>Unit</b>	<b>Method</b>	<b>SM120</b>
<b>Thickness +10%/- 5%</b>	mm	EN 1849-2	1.20
<b>Length +1%/- 0.5%</b>	m	EN 1848-2	20.00
<b>Width +1%/- 0.5%</b>	m	EN 1848-2	1.06/1.5/2.12
<b>Weight +10%/- 5%</b>	g/m <sup>2</sup>	EN 1849-2	1600
<b>Tensile strength (MD/TD)</b>	N/50mm	EN 12311-2	≥1000
<b>Elongation at break</b>	%	EN 12311-2	≥15
<b>Tear resistance</b>	N	EN 12310-2	≥ 150
<b>Peel strength of joints</b>	N/50mm	EN 12316-2	≥ 200
<b>Shear strength of joints</b>	N	EN 12317-2	≥ 1000
<b>Hail resistance</b>	m/s	EN 13583	≥ 30
<b>Nail Tear</b>	N	EN 12310-1	≥ 150
<b>Impact Resistance</b>	mm	EN 12691	≥ 1100 Soft ≥ 450 Hard
<b>Static Load</b>	Kg	EN 12730	≥ 20
<b>Dimensional stability 6 hrs at 80°C</b>	%	EN 1107-2	≤ 0.5
<b>Flexibility at low temperatures</b>	°C	EN 495-5	≤ -30
<b>External exposure to fire</b>		BS EN 476-3	Ext F.AB
		EN 13501	T1 – Pass T2 – Pass T3 – Pass T4 – NPD
<b>Water tightness</b>		EN 1928 method B	Pass
<b>Root Resistance</b>			NPD
<b>Minimum Overlap (Adhered/Ballasted)</b>	mm		60
<b>Minimum Overlap (Mechanically Fastened)</b>	mm		110
<b>Minimum welding width (Automatic)</b>	mm		>30
<b>Minimum welding width (Hand Welder)</b>	mm		>60
<b>Welding temperature</b>	°C		385 - 450
<b>Recommended welding speed (Automatic Welder)</b>	m/min		1.8

## **FURTHER PRODUCT INFORMATION**

Full product literature, health & safety and technical sheets are available as downloads from our website [www.ikopolymeric.com](http://www.ikopolymeric.com) or on request by email [polymeric.marketing@iko.com](mailto:polymeric.marketing@iko.com).