

# SOLAR

Waterproofing composite self-adhesive membrane (APP)



## DESCRIPTION

The bitumen-polymer SOLAR membranes are the arrival point of the latest generation of membranes denominated "composite". These membranes are thus defined because thanks to a production technology, Nord Bitumi can produce materials with differentiated waterproofing mass, which allows the optimal use of each layers properties, satisfying the different requirements. SOLAR has a continuous single strand composite woven non woven polyester reinforcement with high mechanical characteristics. SOLAR is an innovative self-adhesive membrane with increased adhesiveness, enhanced resistance of the adhesion to aging and the cold (the product maintain good adhesion even at low temperatures).

## FIELDS OF USE

The SOLAR membranes are capable of resolving specific application and functional requirements and present numerous and important advantages, such as ease of application with consequential savings on time and the possibility to apply the material on surfaces which are not suitable to open flame. Therefore SOLAR is insuperable in the waterproofing of wood structures, insulation panels which are heat sensitive, panel decks and refurbishment of historical roofs. Furthermore SOLAR can be used and allows the waterproofing of particular roof details (ex. bandaging of plastic tubes, etc.) and the possibility to also apply with the traditional application method of open flame or hot air, obtaining an exceptional level of adhesion. SOLAR guarantees a perfect level of adhesion to the application surface, providing the system with an excellent level of wind uplift resistance and allowing accidental infiltrations to be traced.

**Reinforcement:** Single strand polyester

**Compound:** Elasto-plastomer polymer bitumen (APP)

**Top finish:** Special printed film finish / Polypropylene mat finish

**Lower finish:** Silicon release film

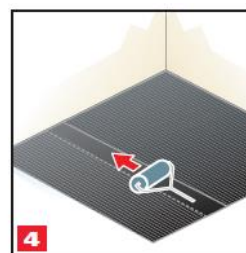
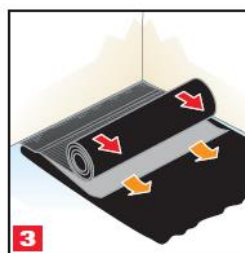
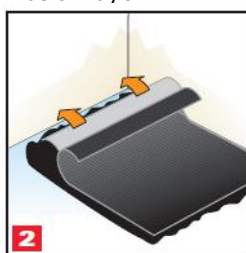
**Intended use:**

**EN 13707 Continuous roofs (certificate no. CE0958-UKCA0120):** Complimentary layer

**Application method:** Self-adhesive / Mechanical fixing

## APPLICATION

1. On cementitious surfaces and similar apply, by roller or airless, synthetic primer PRIMER SINT, approx. consumption 200-400 g/m<sup>2</sup>. This application is not required on wooden roofs except OSB boards.
2. Position the SOLAR on the application surface; provide side & head laps respectively of 10 & 15 cm's between the sheets.
3. Remove the release film from the lower face, this is divided longitudinally in two sections, in one or two steps. It is always suggested to mechanically fix head & side laps.
4. Use suitable roller by applying pressure over all of the membrane surface, particularly the side & head laps to further promote adhesion.
5. Position suitable single or double battens for subsequent laying of the sealing element consisting of a discontinuous covering mantle (tiles, roof tiles, etc.) as required by the UNI 9460: 2008 standard - Discontinuous roofing for roofs.
6. In the event of high internal relative humidity, or the presence of humidity in the wooden deck application surface, to prevent the formation of condensation on the inner face of the adhesive membrane during the night, which may cause marks or stains over time in the ceiling of the rooms below, foresee the use of NORD BASE vapor separation and diffusion layer having a polypropylene film finish mechanically fixed to the support with broad-headed nails. The adhesive membrane is then applied over the vapor diffusion layer.



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## RECOMMENDATIONS

- ✓ The SOLAR membranes are to be applied on dry clean surfaces which must be treated with a synthetic primer, excluded are wooden roofs except OSB boards.
- ✓ Self-adhesive membranes must not be applied on sanded or talced underlays. The granulometry of these upper surfaces creates a detaching effect that prevents the self-adhering properties from achieving a fully bonded installation.
- ✓ The side & head laps must be respectively of 10 & 15 cm's.
- ✓ When applying on verticals, the apex of the membrane must be mechanically fixed with a proper flashing; where possible it is advisable to go up and over the vertical and on to the horizontal surface.
- ✓ Using the version with special printed film, immediately apply the finishing layer.
- ✓ Avoid storing the product on the roof with temperatures lower than +10°C or higher than +40°C if not for the time necessary for installation.
- ✓ With temperatures below +10°C it is necessary to apply the product using particular precautions:
  1. Store the rolls in an upright position in the original packaging, indoors and in dry and warm areas.
  2. Transport the rolls to the place of application only at the time of use.
  3. The ideal application occurs at temperatures above +10°C, however it is possible to apply the product below +5°C bringing the rolls to the ideal temperature with a leister or gas torch.
- ✓ **The application surface must not have any depressions to avoid the risk of ponding water, the slope must be at least 1.5% on concrete decks and 3% for steel or wooden ones, this to guarantee a proper run off of rainwater.**
- ✓ Program periodical roof inspections to remove debris, mud, plants, etc. and to keep under control the waterproofing as well as accessory details (drain outlets, TV antennas, air conditioning, etc.).
- ✓ In the eventuality in which the element to be waterproofed presents residual humidity (ex. refurbishment, application after heavy rains) it is necessary to foresee the use of air vents, which will be positioned in a way to allow for the evacuation of the humidity.
- ✓ Absolutely avoid the stacking of rolls and pallets for storage or transport to avoid possible deformations which may compromise a perfect installation. It is recommended to store the product at temperatures above 0°C.

## TECHNICAL SPECIFICATIONS

CHARACTERISTICS	TESTING METHOD	M.U.	TOLERANCE	VALUE		
Length/Width	EN 1848-1	m	MLV ≥	15,00/1,0	10,00/1,0	
Visible defects	EN 1850-1	visual		None		
Thickness	EN 1849-1	mm	MDV ±5%	2	3	4
Straightness	EN 1848-1	mm/10 m	MLV	< 20		
Watertightness	EN 1928	kPa	MLV ≥	60		
External Fire Performance	EN 13501-5			F ROOF		
Reaction to fire	EN 13501-1	class		NPD		
Shear resistance L/T	EN 12317-1	N/50 mm	MDV -20% +50%	300/200		400/300
Maximum tensile strength (L/T)	EN 12311-1	N/50 mm	MDV -20% +50%	400/300		500/400
Elongation (L/T)	EN 12311-1	%	MDV -15 +30	35/35		
Resistance to tearing (L/T)	EN 12310-1	N	MDV -20% +50%	120/120		140/140
Resistance to static loading	EN 12730-A	kg	MLV ≥	10		
Resistance to impact	EN 12691-B	mm	MLV ≥	700		
Peel resistance of joints L/T	EN 12316-1	N/5 cm	MDV ±20N	NPD/NPD		
Cold flexibility	EN 1109	°C	MLV ≤	-20		
Cold flexibility after ageing	EN 1296	°C	MDV +15°C	-15		
Flow resistance	EN 1110	°C	MLV ≥	90		
Flow resistance after ageing	EN 1296	°C	MDV -10°C	80		
Dimensional stability	EN 1107-1	%	MLV ≤	0,3		
Root resistance	EN 13948			NPD		

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Peel resistance on steel support	UEAtc 4.3.3 ASTM D 1000	N/50 mm	50	MDV±20N
Peel resistance on steel support after ageing	UEAtc 4.3.3 ASTM D 1000	N/50 mm	100	MDV±20N
Peel resistance at 180° on new polymeric selvedge	EN 12316-1	N	50	MDV±20N
Peel resistance at 180° on new polymeric selvedge after ageing	EN 1296	N	150	MDV±20N
Peel resistance at 180° on removable selvedge	EN 12316-1	N	40	MDV±20N
Peel resistance at 180° on removable selvedge after ageing	EN 1296	N	130	MDV±20N

NPD : No Performance Declared in accordance with the EU Construction Products Directive.

MDV : value declared by the manufacturer associated with a declared tolerance.

MLV : limit value, minimum or maximum, declared by the manufacturer

## PACKAGING

PRODUCT	ROLL SIZE	WEIGHT KG/M <sup>2</sup>	THICKNESS MM	SQUARE METRES PER PALLET
SOLAR	15 m x 1 m	-	2	450
	10 m x 1 m	-	3	300
	10 m x 1 m	-	4	250

The waterproofing membrane based on distilled bitumen and polymers, as shown in this data sheet does not require the issue of a MSDS, because it does not contain dangerous substances. The information data sheet for the proper use of products is available. The technical data given is based on average values obtained during production. We reserve the rights to change or modify the nominal values without prior notice or advice. The informations contained in this data sheet are based on our experience. We cannot take any responsibility for a possible incorrect use of the products. The customer has to choose under their own responsibility a product fit for the intended use.

26/02/2025 - This version supersedes all previous ones.