

# ITER 20 BIARMATO ROUTE

APP distilled bitumen waterproofing membrane with dual reinforcement

## DESCRIPTION

Prefabricated modified polymer bitumen membrane composed of polyolefin thermoplastic stereospecific polymers with high molecular weight and special distilled bitumens, with excellent characteristics of resistance to ageing and phase inversion (type APP). These built in elements, integrating themselves, enhance the excellent qualities of flexibility, lightness, adhesion, resistance to ageing and to UV rays of the ITER 20 BIARMATO ROUTE membrane. ITER 20 BIARMATO ROUTE is specifically designed to be used for bridges, viaducts, parking decks, roof gardens and for all those applications where very high mechanical resistance and excellent adhesion to the substrate are required. Dual reinforcement with a heavy weight woven non woven single strand polyester and rot proof fiber glass mat, which confer to the product high mechanical characteristics and excellent dimensional stability and static & dynamic puncture resistance. The ITER 20 BIARMATO ROUTE membrane is finished on the upper face with a special talc. On the application face, the membrane is finished with a woven non woven polypropylene mat, suitable for both application with adhesive cold bond glues, as well as on SELF BASE. ITER 20 BIARMATO ROUTE is a product specifically studied to be applied with an adhesive cold bond glue, without however impeding the application by torch or hot air, guaranteeing excellent results of durability and watertightness of the roof.

## ANTI-ROOT VERSION

On request a ITER 20 BIARMATO ROUTE ANTI-ROOT version is available for green roof applications. The compound has a special chemical additive (PREVENTOL B2 BAYER) which provides the membrane with high resistance to root penetration, aggressive chemical agents such as fertilizers, weedkillers, etc. The anti-root resistance of the product does not harm the health or life of the plants. The anti-root additive does not wash out with water, and remain permanently active.

**Reinforcement:** Single strand composite polyester of heavy grammage + Fibre glass

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

**Upper finish:** Talc

**Lower finish:** Polypropylene mat

**Intended use:**

**EN 13707 Continuous roofs (certificate no. CE0958-UKCA0120):** Single layer / Top layer / Under heavy protection / Anti-root

**EN 13969 Retaining Walls (certificate no. CE0958-UKCA0120)**

**EN 14695 Viaducts (certificate no. CE0958-UKCA0120)**

**Application method:** Torch / Mixed (Torch / Air) / Cold Bond Glue / Mechanical Fixing

## AREAS OF USE

Due to their characteristics, the membranes of the ITER 20 BIARMATO ROUTE series can be used with success in a wide range of waterproofing applications in civil and industrial works, particularly those applications which require high resistance to mechanical stress and static and/or dynamic puncture resistance such as: bridges, viaducts, water dams, foundations, parking decks, green roofs, etc. The particular formulation of the membranes of the ITER 20 BIARMATO ROUTE series makes them compatible with all Nord Bitumi membranes, be they either APP or SBS based. ITER 20 BIARMATO ROUTE can be used, based on the type of construction and project, either single layer or in multi-layer systems and especially in those applications where an exceptionally high dimensional stability is required. ITER 20 BIARMATO ROUTE has been specifically developed to be successfully used in systems with Mastic Asphalt (GUSSASPHALT). In the bridge deck waterproofing, waterproofing membrane must be torch apply and completely adhere to the substrate. Hot paving asphalt will be applied directly on the membrane, without the use of any separation layer. The thickness of the binder course must be minimum 6 cm with a granulometry of 0-15 mm, while for the surface course the thickness must be minimum 4 cm and

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granulometry of 0-12 mm. If used on a laying surface with a residual humidity of more than 5% it must applied PRIMER EPOX, as indicated in the product technical data sheet. In case of refurbishing an existing driveway cover, the product must be applied on original concrete support (all existing waterproofing layers must be removed). When applying on compacted earth dams, the sheets must be properly anchored to the embankment and on the slope to assure the stability of the waterproofing itself.

## APPLICATION

- On cementitious surfaces and similar apply primer by roller or airless.
- Apply by torch application a 25 cm strip of membrane reinforced with polyester along all vertical up stands.
- To have all overlaps with the slope, position the membrane always starting from the lowest point.
- Position the membrane sheets staggered, avoiding to create any overlaps against the slope and the drains.
- Cut the corners of membrane sheet which will be laid under the nest sheet at a 45° angle (10 x 10 cm).
- The joints, both side and head, must be respectively overlapped by 10 & 15 cm.
- The bituminous membrane will be applied with a propane gas torch to the substrate. It is necessary to heat the entire surface, except for the side & head laps, making sure that the compound forms a liquid mass in front of the roll to assure that it saturates any superficial porosity.
- The side laps (10 cm) and head laps (15 cm) will be heat welded with an appropriate torch; during this stage the overlaps should be pressed by using a roller (15 kg) from which a bead of compound should flow and therefore avoiding to have to iron the overlaps.
- Apply the vertical membrane sheet having the same characteristics of the waterproofing membrane and dimensions equal to the width of the roll, making sure that it overlaps the horizontal one by at least 10 cm, heating it with a gas torch and squeezing it with a trowel until a bead of compound appears from underneath.
- The height of the verticals must be equivalent or superior to the finished surface by at least 15 cm.
- Apply the hot asphalt directly over the ITER 20 BIARMATO ROUTE using a paving-machine. The bituminous emulsion is required only on the perimeter area. The thickness of the structural course has to be minimum of 6 cm (size 0-15 mm) while the thickness of the friction course has to be 4 cm at least (size 0-12 mm).

## RECOMMENDATIONS

To best use the technical characteristics of bituminous membranes and guarantee the maximum performance and durability of the jobs where they are used, some simple but fundamental rules must be respected.

- The rolls are to be stored in an upright position, indoors in a dry and ventilated area, away from heat sources. 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.
- The rolls shall be kept in a warm or heated storage area during application, should the workability of the material deteriorate or become stiff and difficult to install during application, these should be returned to the heated storage area and substituted with new rolls. The rolls that are temporarily stored on the roof before application, shall be kept elevated by being left on their own pallets and shall be covered and protected from the weather.
- The application surface must be smooth dry & clean.
- The application surface must be previously treated with a suitable bituminous primer, to eliminate dust and enhance the adhesion of the membrane.
- 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.
- The application must be done at temperature higher than +5°C.
- The application must be interrupted in adverse weather conditions (high humidity, rain, etc.).
- The pallets on which the rolls are packaged are intended for normal warehouse use.
- The materials on stock should be rotated following a first in first out rotation.

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## TECHNICAL SPECIFICATIONS

CHARACTERISTICS	TESTING METHOD	M.U.	TOLERANCE	VALUE
Length/Width	EN 1848-1	m	MLV ≥	7,27 / 1,1
Visible defects	EN 1850-1	visual		None
Thickness	EN 1849-1	mm	MDV ±5%	5
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
Artificial U.V. ageing	EN 1297			Pass
Maximum tensile strength (L/T)	EN 12311-1	N/50 mm	MDV -20% +50%	1200/1000
Elongation (L/T)	EN 12311-1	%	MDV -15 +30	50/50
Resistance to tearing (L/T)	EN 12310-1	N	MDV -20% +50%	250/250
Dimensional stability	EN 1107-1	%	MLV ≤	0,2
Peel resistance of joints (L/T)	EN 12316-1	N/50 mm	MDV ±20N	40/40
Cold flexibility	EN 1109	°C	MLV ≤	-20
Cold flexibility after ageing	EN 1296	°C	MDV +15°C	-15
Flow resistance	EN 1110	°C	MLV ≥	140
Flow resistance after ageing	EN 1296	°C	MDV -10°C	140
Joint strength (shear resistance) (L/T)	EN 12317-1	N/50 mm	MDV -20% +50%	1100/900
Resistance to impact	EN 12691-B	mm	MLV ≥	1500
Resistance to static loading	EN 12730-A	Kg	MLV ≥	25
Root resistance	EN 13948			NPD
Watertightness after ageing	EN 1296	kPa	MLV ≥	60
Vapour transmission	EN 1931	μ	MLV ≥	20000
Bond strenght	EN 13596	N/mm <sup>2</sup>	MLV ≥	0,42
Shear strenght	EN 13653	N/mm <sup>2</sup>	MLV ≥	0,24
Compatibility by heat conditioning	EN 14691	%	MLV ≥	165
Crack Bridging Ability	EN 14224	°C	MLV ≥	-20
Resistance to dynamic water pressure	EN 14694			Pass
Resistance to compaction of an asphalt layer	EN 14692			Pass
Behaviour of bitumen sheets during application of mastic asphalt	EN 14693	%, mm, %		0 / -0,79 / 0
<b>Anti-root version</b>				
Root resistance	EN 13948			Pass

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

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

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

## PACKAGING

PRODUCT	ROLL SIZE	WEIGHT KG/M <sup>2</sup>	THICKNESS MM	SQUARE METRES PER PALLET
Iter 20 Biarmato Route	7,27 m x 1,1 m	-	5	192

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 information 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.