NORD-TEC MINERAL F.R.

APP bituminous waterproofing membrane fire resistant

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. These built in elements, integrating themselves, enhance the excellent qualities of flexibility, lightness, adhesion, resistance to ageing and to UV rays of the NORD-TEC MINERAL F.R. membrane. The waterproofing compound has a special inorganic and non toxic additive which confer to the product a flame retardant action. The particular stabilized composite reinforcement used in NORD-TEC MINERAL F.R. confer to the product exceptional mechanical characteristics and excellent dimensional stability. The NORD-TEC MINERAL F.R. membrane can be finished on the upper face with natural mineral slate, besides extending the life expectancy of the membrane, reduces heat buildup on the surface. Alternatively it can be finished with a white reflex mineral slate with good reflective capacities, besides extending the life expectancy of the membrane, its reduces heat buildup both on the external surface as well as inside the building with a reasonable savings in terms of energy consumption. The emissivity of the NORD-TEC MINERAL F.R. furthermore favors the dissipation of accumulated heat during the night. 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. NORD-TEC MINERAL F.R. is provided with a side selvedge of 10 cm and a head selvedge of 15 cm, which favors the joining and water resistance of the sheets.

AREAS OF USE

Due to its characteristics, the membrane of the NORD-TEC MINERAL F.R. series can be used with success in a wide range of waterproofing applications in civil and industrial works, for example flat, sloped & barrel roofs, etc. The particular formulation of the membranes of the NORD-TEC MINERAL F.R. series makes them compatible with all NORD BITUMI membranes, be they either APP or SBS based. NORD-TEC MINERAL F.R. 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. In the applications with cold bond adhesives NORD-TEC MINERAL F.R. is used as a single layer, prior to having applied suitable bituminous adhesive glue (PRATIKO ADHESIVE). The application over heat sensitive substrates (ex. Polystyrene insulation) can only be done prior to having applied a layer of SELF BASE V or P 2,5 mm membrane. The adhesion to the first layer must be total.

Reinforcement: Stabilized composite
Compound: Elasto-plastomeric polymer bitumen (APP)
Upper finish: Natural / White reflex mineral slate *
Lower finish: Polypropylene mat
Intended use:
EN 13707 Continuous roofs (certificate no. CE0958-UKCA0120): Top layer / Single layer
EN13859-1 Under roof tile
Application method: Torch / Mixed (Torch / Air) / Cold bond glue / Mechanical fixing

* Mineral self-protected products may undergo color tone variations due to the time and length of storage. Exposure to atmospheric conditions, after application, will tend to uniform the color after a few months. The change in color tone cannot therefore be contested and / or complained of as it is a natural phenomenon that the slate manufacturer himself cannot guarantee.

Technical Data Sheet

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APPLICATION

WITH SELF BASE

- On cementious substrates or similar apply by roller or airless the bituminous primer PRIMERTEC AD, approx. consumption 300 g/m^2.
- Apply by torch application in correspondence to the verticals, a strip of APP 4 mm membrane 25 cm wide.
- NORD-TEC MINERAL F.R. must always be applied in the same direction and staggered for half of its width for about ¼ in the direction of the length, with the same procedure to that of the layer of SELF BASE.
- In order to have all the overlaps with the slope, position and apply the NORD-TEC MINERAL F.R. membrane starting from the lowest point.
- Position the sheets alternating the overlapped areas, in order to not create joints against the slope towards the drains.
- Cut at 45° the angles of the membrane which will overlap with next sheet (10 x 10 cm).
- Weld to the SELF BASE membrane the NORD-TEC MINERAL F.R. by means of a gas torch.

WITH COLD BOND GLUE NORD-TEC ADHESIVE

- On cementious substrates or similar apply by roller or airless the bituminous primer PRIMERTEC AD, approx. consumption 300 g/m^2.
- Apply by torch application in correspondence to the verticals, a strip of APP 4 mm membrane 25 cm wide.
- Position the sheets always starting from the lowest point, in order to have all the overlaps with the slope.
- When applying staggered, position the sheets alternating the overlapped areas, in order to not create joints against the slope towards the drains.
- Cut at 45° the angles of the membrane which will overlap with next sheet (10 x 10 cm).
- Fold or re-roll the membrane halfway, leaving the substrate exposed on which the cold bond glue will be applied.
- Pour the bituminous cold bond glue PRATIKO ADHESIVE based on the absorption of the substrate (from 0.8 to 1.5 kg/m^2). To avoid spillage along the pails, scrape the edge with the squeegee.
- Pour and uniformly spread in a homogeneous fashion the cold adhesive glue with a metal/rubber squeegee. Cover with the membrane the cold adhesive glue and fold back the other half.
- Carry out the same procedure as described above with the remaining area.

COMMON PROCESS BETWEEN THE SYSTEMS

OVERLAPS

- Weld the side (10 cm) and head laps (15 cm) by torching with suitable overlap torch or hot air gun. During this operation, apply pressure to the overlap with a metal roller (15 kg); a bead of bitumen compound must come out from the overlap. For this it is not necessary to iron the overlaps.
- Apply the vertical membrane by overlapping it to the flat surface by at least 10 cm, torching it with a suitable safety burner or hot air gun, squeezing the overlaps with a heated trowel, this in order to have a bead of bitumen to round off the edges.

RECOMMENDATIONS

- The height of the verticals must be equal or superior to 15 cm of the superior finished layer of the roof.
- 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 application surface must be smooth, dry and clean.
- The application surface must be priory treated with suitable bituminous primer (PRIMERTEC AD or ECOPRIMER), to eliminate dust and promote 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 temperatures superior to +5°C.
- The application must be interrupted in poor atmospheric conditions (high humidity, rain, etc.).
- The pallets are intended for normal warehouse use and not to be lifted to roof tops.

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TECHNICAL SPECIFICATIONS

CHARACTERISTICS	TESTING METHOD	M.U.	TOLERANCE	VALUE
Adhesion of granules	EN 12039	%	MLV ≤	30
Length/Width	EN 1848-1	m	MLV ≥	8,00 / 1,0
Visible defects	EN 1850-1	visual		None
Thickness	EN 1849-1	mm	MDV ±5%	4 on selvedge
Straightness	EN 1848-1	mm/10 m	MLV	< 20
Watertightness	EN 1928	kPa	MLV ≥	60
Watertightness after ageing	EN 1296	kPa	MLV ≥	60
External Fire Performance	EN 13501-5			B_{ROOF} (t2) **
Reaction to fire	EN 13501-1	class		NPD
Shear resistance L/T	EN 12317-1	N/50 mm	MDV -20% +50%	750/550
Maximum tensile strength (L/T)	EN 12311-1	N/50 mm	MDV -20% +50%	850/650
Elongation (L/T)	EN 12311-1	%	MDV -15 +30	40/40
Resistance to tearing (L/T)	EN 12310-1	N	MDV -20% +50%	200/200
Resistance to static loading	EN 12730-A	kg	MLV ≥	20
Resistance to impact	EN 12691-B	mm	MLV ≥	1500
Peel resistance of joints L/T	EN 12316-1	N/5 cm	MDV ±20N	50/50
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
Dimensional stability	EN 1107-1	%	MLV ≤	0,3
Root resistance	EN 13948			NPD
S.R.I. Solar Reflectance Index ***	ASTM E-1980	%		Pass
Vapour transmission	EN 1931	μ	MLV ≥	20000

** External fire behavior classification valid exclusively for the membrane applied in the systems indicated as per certification available on request.
*** with white reflex mineral slate.
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/M²	THICKNESS MM	SQUARE METRES PER PALLET
Nord-tec Mineral F.R.	8 m x 1 m	-	4 on selvedge	184

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.