

NOVAGUM-P HFR MINERAL

WPBIT0442.a

DESCRIPTION

NOVAGUM-P HFR MINERAL is a elastomeric modified bitumen waterproofing membrane (SBS), industrially manufactured by impregnation of the reinforcement with the waterproofing compound based on distilled bitumen modified with elastomeric polymers and integrated with a special fire resistance additive, which gives to the compound superior technical characteristics.

The composite reinforcement, made of nonwoven spunbond polyester in combination with fiberglass, conveys high mechanical characteristics, excellent dimensional stability, isotropic behaviour and elastic performance. Shaping of sheets, straightness, dimensional and surface uniformity are accomplished by hot calendering of the mass at hot melt fluid state.

It is a self-protected membrane, the upper surface is coated with coloured slate chips and selvedge slate free at one side for easy welding overlap. Lower surface is coated with a thermo-fusibile polyolefin film.

FIELD OF APPLICATION

NOVAGUM-P HFR MINERAL is particularly suitable to be applied exposed sigle layer and as top layer in multi-layer waterproofing systems, with compatible membranes, for roof coverings exposed to external fire (product class: B-roof (t2) in accordance with CEN TS 1187 and EN 13501-5). General roofing on every substrate (concrete, masonry, steel, wood, insulation panel, etc.) a valid examples of the design application of this product.

It is very appropriate where the substrate undergoes significant and frequent movements. It is not suitable to waterproof roof garden.

The excellent mechanical characteristics and high level thermo-dynamic stability make it suitable for any climate conditions and all the situations where a barrier against water is required or as underlayers for discontinuous roofing.

METHOD OF INSTALLATION

The excellent thermoplastic properties of the waterproofing compound allow the application with torchon system or hot air generator. In particular situations, it could be applied with appropriate sealants or mechanical fastenings.

The application of the membrane must be carried in good weather conditions and after the substrate has been adequately cleaned and prepared.

PACKING AND STORAGE

The product is packed as standing rolls on wooden pallets wrapped with thermoshrinking protective hoods. Rolls must be stored in the upright position, without stacking the pallets to avoid deformations which can compromise the correct application of the membrane. The product must be stored indoor, protected from heat and frost.

INTENDED USE OR USES

Flexible sheets for waterproofing. Reinforced bitumen sheets for roof waterproofing

Flexible sheets for waterproofing. Bitumen damp proof sheets including bitumen basement tanking sheets

Flexible sheets for waterproofing. Underlays for discontinuous roofing

- 1. Selvedge
- 2. Mineral protection
- 3. Waterproofing mass
- 4. Reinforcement
- 5. Waterproofing mass
- 6. Torch-off film







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TECHNICAL DATA

Roll length		lorm	Value	Unit	Tolerance
Roll width EN1848-1 1 (m) -1% Straightness EN1848-1 PASSED - 20 mm / 10 m Flexibility at low temperature (pliability) EN1109 -25 (°C) ≤ Heat flow resistance EN1110 90 (°C) ≤ Watertightness EN1928-B 60 (kPa) ≥ Watertightness EN1928-B 60 (kPa) ≥ Watertightness EN1928-A W1 PASSED (kPa) 2 kPai/24th Water vapour transmission properties EN1931 20.000 (μ) Fensile properties: maximum tensile strength EN12311-1 800 / 700 (kN50 mm) -20% Tensile properties: enagation at break EN12311-1 40 / 40 (%) -15 Resistance to tearing (nail shank) EN12310-1 300 / 300 (k) -30% Dimensional stability EN1107-1 ±0.2 / ±0.2 (%) ≤ Pal resistance of joints EN12317-1 800 / 700 (kN50 mm) -20 Resistance to static puncture EN1230-A 20 (kg) ≥ Resistance to static puncture EN12730-A 20 (kg) ≥ Resistance to impact External fire performance (note 1) EN187EN13501-5+A1 Brooft 2* Class - Reaction to fire EN11925-2/EN13501-1+A1 E Class - Reaction to fire EN11925-2/EN13501-1+A1 E Class - Durability: Flexibility at low temperature after artificial ageing EN1296/EN1110 PASSED - Durability: Flow resistance at elevated temperature after artificial ageing EN1296/EN1110 PASSED - Durability: Watertightness aginst chemicals EN1296/EN1110 PASSED - Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Tensile strength Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Tensile strength Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Tensile strength Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Tensile strength Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Tensile strength Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Tensile strengt	Thickness	EN1849-1	selvedg	(mm)	
PASSED	Roll length	EN1848-1		(m)	-1%
Elexibility at low temperature (pliability)	Roll width	EN1848-1	1	(m)	-1%
Heat flow resistance	Straightness	EN1848-1	PASSED	-	20 mm / 10 m
Watertightness EN1928-B 60 (kPa) ≥ Watertightness EN1928-A W1 PASSED (KPa) 2 kPa/24h Water vapour transmission properties EN1931 20.000 (μ) - M.d. C.d. — — M.d. C.d. — Tensile properties: elongation at break EN12311-1 800 / 700 (N/50 mm) -20% Tensile properties: elongation at break EN12311-1 40 / 40 (%) -15 Resistance to tearing (nall shank) EN12310-1 300 / 300 (N) -30% Dimensional stability EN1107-1 ±0.2 / ±0.2 (%) ≤ Peal resistance of joints EN12316-1 100 / 100 (N/50 mm) -20 Shear resistance of joints EN12317-1 800 / 700 (N/50 mm) -20 Resistance to static puncture EN12330-A 20 (kg) ≥ Resistance to impact EN1269-A 1250 (mm) ≥ External fire performance (note 1) EN1187/EN13501-5+A1 Broof (2* Class <td< td=""><td>Flexibility at low temperature (pliablility)</td><td>EN1109</td><td>-25</td><td>(°C)</td><td>≤</td></td<>	Flexibility at low temperature (pliablility)	EN1109	-25	(°C)	≤
Waterlightness EN1928-A W1 PASSED (kPa) 2 kPa/24h Water vapour transmission properties EN1931 20.000 (μ) - Female properties: maximum tensile strength EN12311-1 800 / 700 (N/50 mm) -20% Tensile properties: elongation at break EN12311-1 40 / 40 (%) -15 Resistance to tearing (nail shank) EN12310-1 300 / 300 (N) -30% Dimensional stability EN1107-1 ±0,2 / ±0,2 (%) ≤ Peal resistance of joints EN12316-1 100 / 100 (N/50 mm) ≥0 Shear resistance of joints EN12317-1 800 / 700 (N/50 mm) ≥0 Resistance to static puncture EN12331-1 800 / 700 (N/50 mm) ≥0 Resistance to impact EN12891-A 1250 (mm) ≥ External fire performance (note 1) EN1187/EN13501-5+A1 Broof 12° Class - Reaction to fire EN11925-2/EN13501-1+A1 E Class - Root resistance EN1994-8 NPD - Determination of adhesion of granules (Loss) EN1296/EN1110 NPD -	Heat flow resistance	EN1110	90	(°C)	≥
Water vapour transmission properties EN1931 20.000 (μ) - M.d. C.d. Tensile properties: maximum tensile strength EN12311-1 800 /700 (N/50 mm) -20% Tensile properties: elongation at break EN12311-1 40 / 40 (%) -15 Resistance to learing (nall shank) EN12310-1 300 / 300 (N) -30% Dimensional stability EN1107-1 ±0,2 / ±0,2 (%) ≤ Peal resistance of joints EN12316-1 100 / 100 (N/50 mm) -20 Shear resistance of joints EN12317-1 800 / 700 (N/50 mm) -20 Resistance to impact EN12730-A 20 (kg) ≥ Resistance to impact EN12691-A 1250 (mm) ≥ External fire performance (note 1) EN1187/EN13501-5+A1 Broof 12° Class - Reaction to fire EN11925-2/EN13501-1+A1 E Class - Root resistance EN13948 NPD - Determination of adhesi	Watertightness	EN1928-B	60	(kPa)	≥
M.d. C.d.	Watertightness	EN1928-A W1	PASSED	(kPa)	2 kPa/24h
Tensile properties: maximum tensile strength	Water vapour transmission properties	EN1931	20.000	(µ)	-
Tensile properties: elongation at break EN12311-1 40 / 40 (%) -15			M.d. C.d.		
Resistance to tearing (nail shank) EN12310-1 300 / 300 (N) -30%	Tensile properties: maximum tensile strength	EN12311-1	800 / 700	(N/50 mm)	-20%
Dimensional stability	Tensile properties: elongation at break	EN12311-1	40 / 40	(%)	-15
Peal resistance of joints EN12316-1 100 / 100 (N/50 mm) -20 Shear resistance of joints EN12317-1 800 / 700 (N/50 mm) -20% Resistance to static puncture EN12730-A 20 (kg) ≥ Resistance to impact EN12691-A 1250 (mm) ≥ External fire performance (note 1) EN1187/EN13501-5+A1 Broof t2° Class - Reaction to fire EN11925-2/EN13501-1+A1 E Class - Root resistance EN13948 NPD Determination of adhesion of granules (Loss) EN12039 PASSED (%) <30 Visible defects EN1850-1 PASSED Durability: Flexibility at low temperature after artificial ageing EN1296/EN1109 -25 (°C) +15 ageing Durability: Flow resistance at elevated temperature after artificial ageing EN1296/EN1928-B PASSED (kPa) ≥ 60 Durability: Watertightness after artificial ageing EN1297/EN1850-1 PASSED - PASSED Durability: Watertightness against chemicals EN1296/EN1847 NPD Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Tensile strength Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Elongation Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Elongation Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Elongation Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Watertightness	Resistance to tearing (nail shank)	EN12310-1	300 / 300	(N)	-30%
Shear resistance of joints EN12317-1 800 / 700 (N/50 mm) -20% Resistance to static puncture EN12730-A 20 (kg) ≥ Resistance to impact EN12691-A 1250 (mm) ≥ External fire performance (note 1) EN1187/EN13501-5+A1 Broof 12* Class - Reaction to fire EN11925-2/EN13501-1+A1 E Class - Reot resistance EN13948 NPD Determination of adhesion of granules (Loss) EN12039 PASSED (%) <30 Visible defects EN1850-1 PASSED Durability: Flexibility at low temperature after artificial ageing EN1296/EN1110 NPD after artificial ageing EN1296/EN1110 NPD Durability: Watertightness after artificial ageing EN1296/EN1850-1 PASSED - PASSED Durability: Watertightness against chemicals EN1296/EN1860-1 PASSED - PASSED Durability: Watertightness against chemicals EN1296/EN1847 NPD Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Tensile strength Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Elongation Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Watertightness EN1296/EN1928-A W1 Class - Combination of UV radiation and elevated temperature and heat: Watertightness	Dimensional stability	EN1107-1	±0,2 / ±0,2	(%)	≤
Resistance to static puncture EN12730-A 20 (kg) ≥ Resistance to impact EN12691-A 1250 (mm) ≥ External fire performance (note 1) EN1187/EN13501-5+A1 Broof t2* Class - Reaction to fire EN11925-2/EN13501-1+A1 E Class - Root resistance EN13948 NPD Determination of adhesion of granules (Loss) EN12039 PASSED (%) <30 Visible defects EN12039 PASSED Durability: Flexibility at low temperature after artificial ageing EN1296/EN1109 -25 (*C) +15 ageing Durability: Flow resistance at elevated temperature after artificial ageing EN1296/EN1110 NPD Durability: Watertightness after artificial ageing EN1296/EN1928-B PASSED (kPa) ≥ 60 Durability: Watertightness against chemicals EN1296/EN1847 NPD Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Tensile strength Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Elongation EN1296/EN1928-A W1 Class - combination of UV radiation and elevated temperature and heat: Watertightness	Peal resistance of joints	EN12316-1	100 / 100	(N/50 mm)	-20
Resistance to impact EN12691-A 1250 (mm) ≥ External fire performance (note 1) EN1187/EN13501-5+A1 Broof 12° Class - Reaction to fire EN11925-2/EN13501-1+A1 E Class - Root resistance EN13948 NPD Determination of adhesion of granules (Loss) EN12039 PASSED (%) <30 Visible defects EN1850-1 PASSED Durability: Flexibility at low temperature after artificial ageing EN1296/EN1109 -25 (°C) +15 Durability: Flow resistance at elevated temperature after artificial ageing EN1296/EN1110 NPD Durability: Watertightness after artificial ageing EN1296/EN1928-B PASSED (kPa) ≥ 60 Durability: Watertightness against chemicals EN1296/EN1847 NPD Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Tensile strength Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Elongation Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Elongation Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Elongation Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Elongation Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Watertightness	Shear resistance of joints	EN12317-1	800 / 700	(N/50 mm)	-20%
External fire performance (note 1) EN1187/EN13501-5+A1 Broof 12* Class - Reaction to fire EN11925-2/EN13501-1+A1 E Class - Root resistance EN13948 NPD Determination of adhesion of granules (Loss) EN12039 PASSED (%) <30 Visible defects EN1850-1 PASSED Durability: Flexibility at low temperature after artificial ageing EN1296/EN1109 -25 (°C) +15 Durability: Flow resistance at elevated temperature after artificial ageing EN1296/EN1110 NPD Durability: Watertightness after artificial ageing EN1296/EN1928-B PASSED (kPa) ≥ 60 Durability: Visual defects after artificial ageing EN1297/EN1850-1 PASSED - PASSED Durability: Watertightness against chemicals EN1296/EN1847 NPD Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Tensile strength Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Elongation Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Elongation Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Watertightness	Resistance to static puncture	EN12730-A	20	(kg)	2
Reaction to fire EN11925-2/EN13501-1+A1 E Class - Root resistance EN13948 NPD Determination of adhesion of granules (Loss) EN12039 PASSED (%) <30 Visible defects EN1850-1 PASSED Durability: Flexibility at low temperature after artificial ageing EN1296/EN1109 -25 (°C) +15 ageing Durability: Flow resistance at elevated temperature after artificial ageing EN1296/EN1110 NPD after artificial ageing Durability: Watertightness after artificial ageing EN1296/EN1928-B PASSED (kPa) ≥ 60 Durability: Watertightness against chemicals EN1296/EN1850-1 PASSED - PASSED Durability: Watertightness against chemicals EN1296/EN1847 NPD Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Tensile strength Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Elongation Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Elongation Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Watertightness	Resistance to impact	EN12691-A	1250	(mm)	≥
Root resistance EN13948 NPD Determination of adhesion of granules (Loss) EN12039 PASSED (%) <30 Visible defects EN1850-1 PASSED Durability: Flexibility at low temperature after artificial ageing EN1296/EN1109 -25 (°C) +15 ageing Durability: Flow resistance at elevated temperature after artificial ageing EN1296/EN1110 NPD Durability: Watertightness after artificial ageing EN1296/EN1928-B PASSED (kPa) ≥ 60 Durability: Watertightness after artificial ageing EN1297/EN1850-1 PASSED - PASSED Durability: Watertightness against chemicals EN1296/EN1847 NPD Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Tensile strength Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Elongation Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Sendation Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Watertightness EN1296/EN1928-A W1 Class - EN1296/EN1928-A W1 Class -	External fire performance (note 1)	EN1187/EN13501-5+A1	Broof t2*	Class	-
Determination of adhesion of granules (Loss) EN12039 PASSED (%) <30 Visible defects EN1850-1 PASSED Durability: Flexibility at low temperature after artificial ageing EN1296/EN1109 -25 (°C) +15 ageing Durability: Flow resistance at elevated temperature after artificial ageing EN1296/EN1110 NPD Durability: Watertightness after artificial ageing EN1296/EN1928-B PASSED (kPa) ≥ 60 Durability: Visual defects after artificial ageing EN1297/EN1850-1 PASSED - PASSED Durability: Watertightness against chemicals EN1296/EN1847 NPD Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Tensile strength Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Elongation Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Elongation Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Elongation Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Watertightness	Reaction to fire	EN11925-2/EN13501-1+A1	Е	Class	-
Visible defects EN1850-1 PASSED Durability: Flexibility at low temperature after artificial ageing EN1296/EN1109 -25 (°C) +15 ageing Durability: Flow resistance at elevated temperature after artificial ageing EN1296/EN1110 NPD Durability: Watertightness after artificial ageing EN1296/EN1928-B PASSED (kPa) ≥ 60 Durability: Visual defects after artificial ageing EN1297/EN1850-1 PASSED - PASSED Durability: Watertightness against chemicals EN1296/EN1847 NPD Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Tensile strength Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Elongation Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Elongation Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Watertightness	Root resistance	EN13948	NPD		
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Durability: Flow resistance at elevated temperature after artificial ageing Durability: Watertightness after artificial ageing EN1296/EN1928-B PASSED PASSED (kPa) 60 Durability: Visual defects after artificial ageing EN1297/EN1850-1 PASSED Durability: Watertightness against chemicals EN1296/EN1847 NPD Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Tensile strength Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Elongation Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Watertightness EN1296/EN1928-A W1 Class Cla	Visible defects	EN1850-1	PASSED	-	-
after artificial ageing Durability: Watertightness after artificial ageing EN1296/EN1928-B PASSED (kPa) ≥ 60 Durability: Visual defects after artificial ageing EN1297/EN1850-1 PASSED - PASSED Durability: Watertightness against chemicals EN1296/EN1847 NPD Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Tensile strength Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Elongation Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Elongation EN1296/EN12311-1 NPD Class - combination of UV radiation and elevated temperature and heat: Watertightness		EN1296/EN1109	-25	(°C)	+15
Durability: Visual defects after artificial ageing EN1297/EN1850-1 PASSED - PASSED Durability: Watertightness against chemicals EN1296/EN1847 NPD Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Tensile strength Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Elongation Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Elongation EN1296/EN12311-1 NPD Class - combination of UV radiation and elevated temperature and heat: Watertightness		EN1296/EN1110	NPD		
Durability: Watertightness against chemicals EN1296/EN1847 NPD Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Tensile strength Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Elongation Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Elongation EN1296/EN12311-1 NPD NPD Class - Class -	Durability: Watertightness after artificial ageing	EN1296/EN1928-B	PASSED	(kPa)	≥ 60
Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Tensile strength Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Elongation Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Elongation Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Watertightness EN1296/EN12311-1 NPD VI Class -	Durability: Visual defects after artificial ageing	EN1297/EN1850-1	PASSED	-	PASSED
combination of UV radiation and elevated temperature and heat: Tensile strength Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Elongation Artificial ageing by long term exposure to the EN1296/EN12311-1 Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Watertightness EN1296/EN1928-A W1 Class -	Durability: Watertightness against chemicals	EN1296/EN1847	NPD		
combination of UV radiation and elevated temperature and heat: Elongation Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Watertightness EN1296/EN1928-A W1 Class - Class - W2 Class - W3 Class - W3 Class - W4 Class - W4 Class - W5 W6 W7 Class - W7 Class - W8 W8 W8 W8 W8 W8 W8 W8 W8	combination of UV radiation and elevated temperature		NPD		
combination of UV radiation and elevated temperature and heat: Watertightness	combination of UV radiation and elevated temperature		NPD		
Substances dangereuses (notes 2 and 3) - CONFORMS -	combination of UV radiation and elevated temperature		W1	Class	-
	Substances dangereuses (notes 2 and 3)	-	CONFORMS	-	

WARNINGS

* Classification valid only for the application of the membrane for systems as indicated by certification available on request.

NORMS

EN13707; EN13969; EN13859-1







Top layer in multi-layer systems

Fire Resistance

Under layers for discontinuou s roofing

Rev.: 2022-11-15/EN



