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ROOF AND WATERPROOFING MEMBRANES

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WATERPROOFING SYSTEMS THAT PROTECT VALUES



Protan Protects Values



Protan is a Norwegian industrial group that is a world leader in membrane technology. We develop and supply membranes, roof systems, ventilation systems and technical textiles with 850 employees.

Our largest business area is roofing and membranes. We also specialise in tailor-made, flexible ventilation ducts for mines and tunnels. In addition, we supply multi-purpose technical textiles for a range of applications. Protan is also one of the largest roofing contractors in the Nordic region.

With over 80 years' experience, Protan has developed innovative solutions that are adapted to a global market and demanding climates. We work closely with our customers and suppliers to stay at the forefront of technology, the environment and competence. This gives us unique experience and insight that means that we can deliver flexible, tailor-made solutions adapted to local requirements – whether our customers need environmentally friendly watertight roofing, ventilation for demanding environments or other technical protection. Our most important role as an international group is to protect values by supplying world-leading solutions.





Protan, Professional Solutions From Foundation To Roof

Foundations and roofs are the most sensitive parts of buildings. Materials inserted incorrectly in time lead to renovation work, which are more expensive than the initial installation.

The waterproofing membranes PROTAN correspond to the latest state of the art and provide a perfect safety from the foundation of the individual floors up to the roof.

Our PVC membranes are durable, against any kind of weather resistant and extremely durable. Because of these characteristics it is environmentally conscious customers preferred.

All materials we use are fully recyclable and thus environmentally friendly.

Application areas

Roofs

- Light metal roofs
- · Concrete roofs with or without insulation
- · Covered roofs, gravel and green roofs
- Ballasted roofs
- · Dome or other shaped concrete or steel roofs
- · Sandwich roof panels

Foundations

- · Vertical and horizontal foundation waterproofing
- · Basement walls, underground garages

BENEFITS OF PROTAN WATERPROOFING SYSTEMS

- · Highest quality
- Long lifetime
- Flame-resistant
- · High mechanical strength
- · Simple and quick installation by hot air welding
- Use in all climates
- Root resistant
- Production in different colors

Our roof coverings and membranes are very flexible and withstand all kinds of extreme weather. They have been developed for the tough Scandinavian climate, so special attention has been paid to material properties at low temperatures. Long-duration tests show that, even after 30 years, Protan's roof coverings and membranes still retain their beneficial properties and will function for many years beyond their expected life.

Underground Structures

- Concrete Protection
- Highway tunnels
- · Underground hangar and storehouses
- Subway applications

Water Structures

- Potable and process water tank
- · Artificial lakes and ponds
- Irrigation canals
- Reservoirs





Protan SE, is a roofing membrane made of PVC-P for single-ply waterproofing. The polyester reinforced material is resistant to direct weather influences and solar radiation and can be processed by hot air welding.



Applications

- Metal Roofs
- · Concrete roofs with or without insulation
- Roofs with unusual roof shapes

- Complies with EN 13956 and meets all standard requirements
- Broof (T1) / Broof (T2) classification
- Reinforced with Polyester scrim
- · UV and weather resistant
- Root resistant
- Single-layer loose laying with mechanical fastening or ballast as wind uplift
- · Simple and reliable hot-air welding at the seams
- High dimensional stability and tensile strength by polyester reinforcement
- · Low diffusion resistance to moisture
- Reduction of roof temperature by high reflection
- · Not Compatible with bitumen
- Recyclable and environmentally friendly.

Characteristics		Test Methods	Test Result 1,50 mm	Unit
	Thickness	EN 1849-2	1,50 ± %5	mm
	Water Permeability	EN 1928, Method B	Waterproof	-
	Resistance To Static Loading	EN 12730	≥ 20	kg
	Tensile Strenght	EN 12311-2	Machine Direction≥ 1000	N/50 mm
		(Method A)	Cross Direction ≥ 900	
	Elongation At Break	EN 12311-2	Machine Direction≥ 20	%
		(Method A)	Cross Direction ≥ 20	
	Resistance To Impact	EN 12691	Hard Substrate : ≥ 300	mm
			Soft Substrate : ≥ 600	
	Tear Resistance	EN 12310-2	Machine Direction ≥ 180	N
			Cross Direction ≥ 180	
	Resistance To Root Penetration	TS EN 13948	Resistant	-
	Reaction To Fire	EN 13501-1	CLASS E	-
	External Fire Performance	ENV 1187 EN 13501-5	Broof (t1)	-
	External Fire Performance	ENV 1187 EN 13501-5	Broof (t2)	-
	Determination Of Water Vapor Trans- mission	EN 1931	≥ 20.000 ±%30	μ
	Peel Resistance Of Joint	EN 12316-2	≥ 300	N/50mm
	Joint Strenght	EN 12317-2	≥ 700	N/50mm
	Dimensional Stability	EN 1107.2	Machine Direction ≤0,5	0/
		EN 1107-2	Cross Direction ≥0,5	. 70
	Foldability At Low Temperature	EN 495-5	-25	°C
	Hail Resistance	EN 43593	Hard surface : ≥ 17	
		EN 13563	Soft surface : ≥ 25	11/5
	Uv Exposure (5000 h)	TS EN 1297	On Resistant	-
	Visible Defects	EN 1850-2	Pass	-
	Effects Of Liquid Chemicals, Including Water (28 Days / 23° C)	EN 1847	Resistant	-

	Thickness(mm)	Width (m)	Lenght (m)	Color	Storage
	1,2 , 1,5,1,8* ,2,0*	2,20	20	Light Grey **	Dry and cool place, in original packaging
* Project-based production			on	** Pro	piect-based special color production



Protan EX, is a roofing membrane made of PVC-P for single-ply waterproofing. The polyester reinforced material is covered with geotextile fabric and is resistant to direct weather influences and against solar radiation. Processing is carried out by hot air welding or fully adhered system.

Applications

- Metal Roofs
- Concrete roofs with or without insulation
- · Roofs with unusual roof shapes
- · Production of sandwich panels

- Complies with EN 13956 and meets all standard requirements
- Reinforced with polyester scrim and nonwoven geotextile
- UV and weather resistant
- Root Resistant
- Broof (T1) / Broof (T2) classification
- Rotting and dissolution resistant
- Single-layer loose laying with mechanical fastening
- Simple and reliable hot-air welding at the seams
- High dimensional stability and tensile strength
- · Low diffusion resistance to moisture
- Reduction of roof temperature by high reflection
- · Not Compatible with bitumen
- Recyclable and environmentally friendly.

Characteristics		Test Methods	;		fest Result 1,20 mm	Unit
Thickness		EN 1849-2			1,20 ± %5	mm
Visible Defects		EN 1850-2			Pass	-
Water Permeability		EN 1928 Method	В		Waterproof	-
External Fire Performanc	e	ENV 1187-EN 135	01-5		Broof (t2)	-
Reaction To Fire		TS EN 13501-	1		CLASS E	-
Peel Resistance Of Joint		TS EN 12316-	2	≥ 200		N/50mm
Joint Strenght		TS EN 12317-	2	Crack Other Than At The Joint		-
Tensile Strenght		TS EN 12311-2 Method A	2	Machine Direction ≥ 1000 Cross Direction ≥ 900		N/50mm
Elongation At Break		EN 12311-2(Method A)		L ≥ 20		0/_
Elongation At break				T <u>≥</u> 20		70
Resistance To Impact		EN 12691(Method A)			≥ 800	mm
Resistance To Static Loading		EN 12730			≥ 20	kg
Pasistanas To Toor (Nail	Shank)	EN 12210.2			L ≥ 200	N
Resistance to tear (Nail	olialik)	EN 12310-2		T ≥ 200		IN

Thickness(mm)	Width (m)	Lenght (m)	Color	Storage
1.2, 1.5	1.10	20 , Jumbo Roll	Light Grey **	Dry and cool place, in original packaging
* Project-based production			** Project-based sp	ecial color production



Protan TPO / FPO is a waterproofing membrane which is resistant against atmosphere conditions and solar rays, reinforced, and jointed with hot air welding, and thermoplastic polyolefin based.Multiplan TPO is developed to be used in all roofs especially being exposed to harsh air conditions and solar rays.

Applications

- · Light Metal Roofs,
- · Heat insulated and uninsulated roofs,
- Dome and other shaped concrete, steel roofs.

Characteristics

- Compliance with TS EN 13956 standards
- Broof T1, Broof T2 class production,
- Polyester reinforced,

• Laminated sheet resistant against any kind of atmosphere conditions, solar rays and plant roots,

- · Compatible with bitumen,
- Easy and qualified welding opportunity,
- Dissolution and decomposition resistance,
- Free spread usage in concrete and especially light metal roofs through mechanical fixation,
- Elasticity, high dimensional stability and tearing resistance,
- Recyclable material.

Characteristics	Test Resut 1,50 mm	Unit	Test Method	
Thickness	1,50± % 5	mm	EN 1849-2	
Visible Defect	Passed	-	TS EN 1850-2	
External Fire Perfomance	Broof (t1) (t2)	-	ENV 1187- EN 13501-5	
Joint Peel Resistance	≥ 300	N/50mm	TS EN 12316-2	
Joint Shear Resistance	≥ 850	N/50mm	TS EN 12317-2	
Tensile Strength	Machine Direction ≥ 1100	N/50mm	TO EN 12211 2	
Tensile Strength	Cross Direction ≥ 1000	N/SUITIT	10 EN 12311-2	
Elemention of Develo	Machine Direction ≥ 20		TO EN 40044 0	
Elongation at Break	Cross Direction ≥ 20	%	15 EN 12311-2	
Resistance to Impact	≥600	mm	TS EN 12691	
Tear Resistance (Nail Shank)	≥400	Ν	TS EN 12310-2	
Resistance to Root Penetration	Resistant	-	TS EN 13948	
Dimensional Stability	≤0,5	%	TS EN 1107-2	

Thicknesses (mm)	Width (m)	Length (m)	Color	Storage
1.2,1.5,2.0	1.60	20	Light Gray	In its original packaging in a dry an cool



Protan TPO V is a roofing membrane made of thermoplastic polyolefins for single ply waterproofing. The polyester reinforced material is covered with geotextile fabric and is resistant to direct weather influences and against solar radiation. Processing is carried out by hot air welding.

Applications

- Metal Roofs
- Concrete Roofs
- Dome and other Shaped Roofs
- Production of Sandwich Panels

- Complies with EN 13956 standards
- Polyester reinforced and geotextile felt laminated
- UV and weathering resistant
- Root resistant
- Simple and reliable hot air welding at the seams
- High dimensional stability and tensile strength by polyester reinforcement
- Strong adhesion at panels production by fleece lamination
- Compatible with bitumen
- Recyclable and environmentaly friendly

Characteristics	Test Methods		Test Result 1,20 mm		Unit
Thickness	EN 1849-2		1,20 ± %5		mm
Visible Defects	EN 1850-2		Р	assed	-
Water Permeability	TS EN 1928		Wa	terproof	-
External Fire Performance	ENV 1187- EN 13501-	-5	Br	oof (t2)	-
Reaction To Fire	Classification TS EN 13501-1		CL	ASS E	-
Peel Resistance Of Joint	TS EN 12316-2		2	≥ 200	N/50mm
Joint Strenght	TS EN 12317-2		Breakin	g out of Joint	-
Tensile Strenght	TS EN 12311-2		Machine I Cross Di	Direction ≥ 800 rection ≥ 800	N/50mm
Elongation At Break	TS EN 12311-2		Machine Direction ≥ 20 Cross Direction ≥ 20		%
Resistance To Impact	TS EN 12691		≥ 800		mm
Resistance To Static Loading	TS EN 12730			≥ 20	kg
Resistance To Tear (Nail Shank)	TS EN 12310-2			≥ 200	N
Resistance To Tear Root Penetration	TS EN 13948		Re	esistant	>180
Dimensional Stability	TS EN 1107-2			≤ 1,0	>180
Foldability at Low Temperature	TS EN 495-5			-30	>180
UV Exposure (1000 S)	TS EN 1297			Pass	>180
Hail Resistance	TS EN 13583			≥ 17	>180
Effect of Liquid Chemicals, Including Water (28 days / 23 °C)	TS EN 1847		Re	esistant	>180
Thicknoss(mm) Width (m)	Longht (m)		Color	54	orago

Thickness(iiiii)		Lengin (iii)	00101	Storage
1.2, 1.5	1.08 ,1.1	20	White, Light Grey	In its original packaging in a dry and cool place
* Project-based production			** Project-based sp	ecial color production



Protan FPO Proven, is a waterproofing membrane which completely adheres to surface it is applied to, and one surface of which is felted, and which has self-adhering tapes ProPROVEN is used in any kind of concrete reinforced foundations, curtain applications and underground constructions with the aim of waterproofing. The biggest advantage of ProPROVEN is that it can quickly and cost-effectively be applied, without requiring welding, due to its said tapes.

Applications

- It is used under foundation concrete without requiring protection concrete
- It completely and permanently adheres to surface to which it is applied,
- It is easily applied without requiring welding due to its joint places with adherent, • It is cost-effective through opportunity of quick and reliable application,
- It prevents water from horizontally moving between concrete and membrane.
- It is resistant against climate conditions, and has
 limited UV resistance.
- It does not require primer.
- It has high tensile resistance and elongation.
- It has high elasticity even under low temperatures.
- It has a high mechanical impact resistance.
- It is resistant against aggressive chemical in underground water and soil (sulfate, chloride etc.).

Properties	Test Method	Test Result	Unit
Thickness	EN 1849-2	1,00 ± %5	mm
Water Permeability	TS EN 1928	Waterproof	-
Resistance To Static Loading	TS EN 12730	≥ 20	kg
		Machine Direction ≥ 500	
Tensile Strength	IS EN 12311-2	Cross Direction ≥ 500	N/50mm
		Machine Direction ≥ 90	
Elongation at Break	TS EN 12311-2	Cross Direction ≥ 90	%
Resistance to Impact	TS EN 12691	≥ 350	mm
Resistance to Tear (Nail Shank)	TS EN 12310-1	≥ 450	N
Reaction to Fire	Classification EN 13501-1	Class E	-
Joint Strength	TS EN 12317-2	≥ 250	N/50mm
Dimensional Stability	TS EN 1107-2	≤ 1	%
Foldability at Low Temperature	TS EN 495-5	-30	°C
Water Permeability	TS EN 1296 and TS EN 1928	Passed	-
Visible Defect	TS EN 1850-2	Passed	-
Effects of Liquid Chemicals, Including Water (28 Days / 23 °C)	TS EN 1847	Resistant	-

Thickness(mm)	Widhts (m)	Length (m)	Color	Storage
1 mm Membrane +100 gr geotextile	1.06	20	Grey	In dry and cool place, in its original packaging



Protan H & D are a high-quality homogeneous thermoplastic waterproofing membrane. Protan Protan H & D contain stabilizers, which makes the product resistant to high and low temperatures, UV resistant

Applications

Protan H& D are primarily used for detailing of all types of Protan PVC roof and waterproofing membrane systems.

Characteristics

• The membrane has a textured surface (Protan D) and a flat surface (Protan H).

• The membrane is welded together using hot air which provides a homogenous joint.

• Installation is safe without the use of an open flame.

• Weather independent installation.

• The Protan D membrane has good elongation properties and is though that well suited for detail work.

• The Protan D membrane can be recycled and has a low carbon footprint.

Environment:

Protan D contains no substances which are listed on REACH/ ECHA's (European Chemicals Agency) candidate list.

The membrane contains no priority environmental pollutants or other relevant substances in quantities considered to be hazardous to health and the environment.

Leaching from the product is assessed to not adversely affect soil, groundwater, or drinking water.

Dimensions / Packaging	Protan H (Flat)	Protan D (Embossed)
Width: 1,1 m 2,2 m		
Size : 20 m	1,2, 1,5	1,5, 1,8, 2,0

Protan H & D are a high-quality homogeneous thermoplastic waterproofing membrane.

Protan Protan H & D contain stabilizers, which makes the product resistant to high and low temperatures, UV resistant

Properties	Test Method	Test Result 1,20 mm	Unit	
Thickness	ickness EN 1849-2		mm	
Visible Defects	EN 1850-2	Pass	-	
Water Permeability	TS EN 1928	Waterproof	-	
External Fire Performance	ENV 1187-EN 13501-5	Broof (t2)	-	
Reaction To Fire	Classification After TS EN 13501-1	Class E	-	
Peel Resistance Of Joint	TS EN 12316-2	≥ 200	N/50mm	
Reaction To Fire	TS EN 12317-2	Class E	-	
Joint Strenght	TS EN 12317-2	> 200	N/mm2	
		Cross Direction ≥ 16		
Tensile Strenght	(Method B Dumble)	Machine Direction ≥ 17	-	
	TS EN 12311-2	Machine Direction ≥ 250	%	
Elongation At Break	(Method B Dumble)	Cross Direction ≥ 250		
Resistance To Tear (Nail Shank)	TS EN 12310-2	> 150	N	
Resistance To Root Penetration	TS EN 13948	Resistant	-	
Dimensional Stability	TS EN 1107-2	< 2	%	
Foldability At Low Temperature	TS EN 495-5	-20	°C	



Protan EVA is a high quality plastic sheet, which has similar features as roofing membranes TPO. Through the use of high polymer plastics, the material is very elastic and offers long service, easy installation and upkeep, and low life time ownership costs.The exceptional light and heat reflective properties of a white membrane can reduce a building s internal cooling costs.

Applications

- Metal Roofs
- · Concrete roofs
- · Roofs with ballast
- Production of sandwich panels with fleeced-back

- · Extremely UV and weather resistant
- · Low heating by white surface
- Compatible with bitumen
- Root resistant
- 20-year warranty (foor 1.8 mm thickness and more)
- · Fast installation, easy repair
- Recyclable and environmentally friendly

	Character	ristics		Test Methods	Test Result	1,50 mm	Unit
	Thickness	hickness		EN 1849-2	1,50 ± %5		mm
	Water Permeability			EN 1928, Metot B	Waterproof		-
ĺ	Resistance To Static Loading			EN 12730	≥ 20	≥ 20	
	Tanaila Otaanakt			EN 12311.2	Machine Direc	tion ≥ 1200	N//50
	Tensile Strengrit			LIN 12311-2	Cross Directi	on ≥ 1100	N/50 mm
	Elemention At Dress			EN 40044-0	Machine Dire	ction ≥ 20	0/
	Elongation At Break			EN 12311-2	Cross Direc	%	
	Resistance To Impact			EN 12691	≥ 60	mm	
	Resistance To Tear (Nail Shank)			EN 12310-2	≥ 300		N
	Peel Resistance Of Joint			EN 12316-2	≥ 500		N/50mm
	Joint Strenght			EN 12317-2	≥ 11(≥ 1100	
	Dimensional Stability			EN 1107-2	≤ 1		%
	Foldability At Low Temperature		ure	EN 495-5	-40		°C
	Visible Defects			EN 1850-2	Pass		-
	Post Thermal Agin	Deet The small Asian Occurities		EN 14575	Tensile Strenght ≤ %90		%
	Post Thermal Aging Condition			EN 14575	Elongation At E	%	
	After 0 1/2 1	0		EN 4007	Tensile Strenght ≤ %90		%
	After 2 Years Aging Condition		'n	EN 1297	Elongation At E	%	
	Thickness(mm)	Widtl	n (m)	Lenght (m)	Color	Sto	orage
	1,2 ,1,5 1,8*, 2,0*	1,6	62	20	White **	Dry and cool pack	place, in original kaging





Protan BA is a waterproofing membrane made of PVC-P to the horizontal and vertical waterproofing of foundations, basements and terraces. A use as roofing membrane for gravel and green roofs is also possible. The material is non - UV-resistant and can therefore not directly weather exposed. Protan BA is a homogeneous membrane without reinforcement. Processing is carried out by hot air welding.



Applications

- Roofing sheets for gravel and green roofs
- UV protected waterproofing eg. for terraces and balconies
- Horizontal and vertical Waterproofing of foundations, floor slabs and basements

- Complies with EN 13967 & EN 13491 and meets all standard requirements
- Homogeneous material
- Root resistant
- Rotting and dissolution resistant
- · Simple and reliable hot-air welding at the seams
- · Low diffusion resistance to moisture
- Not Compatible with bitumen
- · Recyclable and environmentally friendly.

Characteristic	Test Method	ds	Test Result 1,50 mm		Unit	
Thickness	En 1849-2		1,50 ± %5		mm	
Water Permeability	En 1928		Waterproof		-	
Water Tightness To Liquid	Water	En 1296 And En	1928		Waterproof	-
Resistance To Static Load	ing	En 12730			≥ 20	kg
Tensile Strenght	En 12311-2 (Method B Dumble)		Ma Cr	chine Direction ≥ 16 oss Direction ≥ 15	N/mm²	
		En 12311-2		Mac	hine Direction ≥ 300	
Elongation At Break		(Method B Dumble)		Cross Direction ≥ 250		%
Resistance To Impact		En 12691			≥ 800	mm
Resistance To Tear (Nail S	Shank)	En 12310-	1		≥ 350	N
Reaction To Fire		En 13501-1			Class E	-
Joint Strenght		En 12317-2			≥ 750	N/50mm
Determination Of Water Va mission	apor Trans-	En 1931			≥ 18.000 ± 30 %	m
Peel Resistance Of Joint		En 12316-2			≥ 180	N/50mm
Dimensional Stability		En 1107-2		≤2		%
Foldability At Low Temperature		En 495-5			-20	°C
Visible Defects		En 1850-2			Pass	-
Effects Of Liquid Chemicals, Including Water (28 Days / 23° C)		En 1847, En 1928, Metot B			Resistant	-

Thickness (mm)	Width (m)	Lenght (m)	Color	Storage
1,2*, 1.5 ,1,8*, 2,0	1,2*, 1.5 ,1,8*, 2,0 2,20		Anthracite **	Dry And Cool Place, In Original Packaging
* Project-Base	d Production		** Project-Bas	ed Special Color Production





Protan BA/T is a soft PVC water proofing membrane which is light colored, signal layered, flexible and made of polyvinyl chloride, and can be joited through hot air welding.



Applications

- Any kind of tunnel, subway applications
- Storage and concrete protection applications,
- Insulation of underground constructions.

- · Compliance with TS EN 13967 standards,
- · Homogeneous,
- Easy and qualified welding opportunity,
- Fast and cost-effective application due to roller sizes that can be produced largely.
- Dissolution and decomposition resistance,
- Contribution to ambient lighting with light reflections occurring on its surface,
- · Easy damage assessment on membrane,
- High waterproofing even in permanent deformations,
- · Vapor permeability,
- High puncture resistance
- Limited UV resistance,
- Recyclable material.

Characteristics	Test Method	Test Resut 2,00 mm	Unit
Thickness	EN 1849-2	2,00 ± %5	mm
Water Permeability	EN 1928	Waterproof	-
Water Tightness To Liquid Water	EN 1296 and EN 1928	Waterproof	-
Resistance To Static Loading	EN 12730	≥ 20	kg
Topollo Stronght	En 12311-2	Machine Direction ≥ 16	N1/mamma2
Tensile Strengtit	(Method B Dumble)	Cross Direction ≥ 15	IN/11111
Elengation At Brook	En 12311-2	Machine Direction ≥ 300	0/_
Elongation At Break	(Method B Dumble)	Cross Direction ≥ 300	70
Resistance To Impact	En 12691	≥ 800	mm
Resistance To Tear (Nail Shank)	En 12310-1	≥ 500	N
Reaction To Fire	Classification After En 13501-1	Class E	-
Joint Strenght	En 12317-2	≥ 1100	N/50mm
Determination Of Water Vapor Transmission	ation Of Water Vapor Transmis- En 1931		μ
Determination Of Water Vapor Transmis- sion	En 12316-2	≥ 250	N/50mm
Dimensional Stability	En 1107-2	≤±2	%
Foldability At Low Temperature	En 495-5	-20	°C
Visible Defects	En 1850-2	Pass	-
Effects Of Liquid Chemicals, Including Water (28 Days / 23° C)	En 1847, En 1928, Method B	Resistant	-

Thicknesses (mm)	Widths (m)	Length (m)	Color	Storage			
1,5 , 2,0 , 3,0	2,20	20	Black/Yellow	In its original packaging in a dry an cool			
* Determination of Water Vapor Transmission.							





Protan Flexi Ground T - Protan TG

Chemical Resistant Artificial Lake PVC Waterproofing Membrane

Protan T & TG is a waterproofing membrane made of PVC-P, which was specially developed for the sealing of water structures as artificial lakes and ponds. The material is resistant to direct weather effects, plant roots and chemicals and to UV radiation.

Protan T is a homogeneous membrane to use on unstable solid fields while Protan TG is polyester reinforced suitable to use over stable concrete fields.

Processing is carried out by hot air welding.



Applications

- Artificial Lakes
- · Irrigation canals
- · Watercourses and waterfalls
- · Dams and Hydraulic Structures

Characteristics

- Complies with EN 13967 and meets all standard requirements
- Protan T is a homogeneous membrane and Protan TG is polyester reinforced.
- UV and weather resistant
- · Resistant to chemicals in the soil and in the water
- · Rotting and dissolution resistant
- High tensile strength, elasticity and dimensional stability
- · Simple and reliable hot-air welding at the seams
- · Low diffusion resistance to moisture
- Recyclable and environmentally friendly.

Characteri	stics		Test meth	ods	Test result T 1,50 mm		i0 Test result TG 1,50 mm	Unit	
Thickness	Thickness		En 1849	-2	1	I,50 mm	1,50 ± %5	mm	
Water Permeability	Y		En 1928		Waterproof		Waterproof	-	
Water Tightness To Water	o Liquid		En 1296, En	1928	w	aterproof	Waterproof	-	
Resistance To Sta	tic Loadin	ng	En 1273	30		<u>≥</u> 20	≥ 20 N/mm ²	kg	
Tongilo Stronght			En 12311	1-2		L≥16	Machine Direction ≥ 900 N/50mm	N/mm²	
Tensile Strenght			(Method B Dumble)			T ≥ 15	Cross Direction ≥ 850 N/50mm	IN/IIIIIF	
			En 12311	1-2		L≥250	Machine Direction ≥ 15	0/	
Elongation At Break			(Method B Dumble)			T ≥ 250	Cross Direction ≥ 15	70	
Resistance To Impact			En 12691			≥ 450	≥ 700	Mm	
Resistance To Tear (Nail Shank)			En 12310-1			≥ 300	≥ 180	N	
Reaction To Fire			CLASSIFICATION AFTER EN 13501-1			Class E	Class E	-	
Joint Strenght			En 12317	7-2		≥ 600	≥ 850	N/50mm	
Determination Of V Transmission	Determination Of Water Vapor Transmission En 1937		1	≥ 18.000 ± 30 %		b ≥ 18.000 ± 30 %	м		
Peel Resistance C	of Joint		En 12316-2		≥ 180		≥ 200	N/50mm	
Dimensional Stabi	lity		En 1107	-2	≤ 2		≤ 1	%	
Foldability At Low Temperature		ture	En 495-	5	-20		-20	°C	
Visible Defects			En 1850	-2	Pass		Pass	-	
Effects Of Liquid Chemicals, Including Water (28 Days / 23° C)		5,	En 1847, En 1928, Metot B		Resistant		Resistant	-	
Thickness(mm)	Width	(m)	Lenght (m)	Col	or		Storage		
1.5 .1.8*. 2.0*	2.20		20	Anthra	cite** Dry and cool place, in original package		al packaging		

** Project-based special color production



* Project-based production

Protan Aqua Blue - Protan Flexi Dura PVC Waterproofing Membrane For Use In Contact With Drinking Water

Protan aqua blue is a homogeneous non-UVresistant waterproofing membrane made of PVC-P, which is especially suitable for sealing of drinking and potable water tanks.

The material is resistant to all chemicals that may be present in drinking water and service water.

Processing is carried out by hot air welding.

Applications

- Drinking Water Storage
- Process water storage tank

- Complies with EN 13967 and meets all standard requirements
- Homogeneous membrane
- Water quality (color, smell, etc.) will not be affected
- Not UV-resistant
- · Resistant to chemicals in the water
- Anti-bacterial
- · Rotting and dissolution resistant
- High tensile strength, elasticity and dimensional stability
- Simple and reliable hot-air welding at the seams
- · Low diffusion resistance to moisture
- Recyclable and environmentally friendly.

Characteristics	Test Methods	Test Result 1,50 mm	Unit
Thickness	EN 1849-2	1,50 ± %5	mm
Water Permeability	EN 1928	Waterproof	-
Water Tightness To Liquid Water	En 1296 And En 1928	Waterproof	-
Resistance To Static Loading	EN 12730	≥ 20	kg
Terreile Oberecht	EN 12311-2	Machine Direction ≥ 17	N/mm²
Tensile Strenght	(Method B - Dumble)	Cross Direction ≥ 16	
	EN 12311-2	Machine Direction ≥ 300	%
Elongation At Break	(Method B - Dumble)	Cross Direction ≥ 300	
Resistance To Impact	EN 12691	≥ 800	mm
Resistance To Tear (Nail Shank)	EN 12310-1	≥ 300	N
Reaction To Fire	EN 13501-1	Class E	-
Joint Strenght	EN 12317-2	≥ 800	N/50mm
Determination Of Water Vapor Transmission	EN 1931	≥ 18.000 ± 30 %	М
Peel Resistance Of Joint	EN 12316-2	≥ 180	N/50mm
Dimensional Stability	EN 1107-2	≤2	%

Thickness (mm)	Width (m)	Lenght (m)	Color	Storage			
1,5 , 2,0*	1,62	20	Blue	Dry And Cool Place, In Original Packaging			
* Project-Based Production							



P

Protan PVC Membrane

PVC Profile Metal Deck

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Omega Profile

Protan ProDESIGN consists of a roofing membrane made of PVC and special plastic profiles. The system provides 100% watertight and an aesthetically pleasing appearance. The installation of Protan ProDESIGN is uniquely simple and inexpensive. The system is suitable for many different roof shapes and surfaces.

A profile

Vapour barrier

- Permits diffusion by avoiding condensation.
- 100% waterproof.
- Cost savings of 40% compared to standing seam roofs.
- No problems due to thermal expansion.
- Simple installation and roof design with flexible structure.
- · Suitable for many roof geometries.
- Weight savings of 30% compared to metal roofs.
- · Easy modification options and cleansing

Protan FG Membrane Characteristics	Test Methods	Test Result 1,50 mm	Unit
Thickness	En 1849-2	1,50 ± %5	Mm
Water Permeability	En 1928, Metot B	Waterproof	-
Resistance To Static Loading	En 12730	≥ 20	Kg
Tanaila Stranght	En 10011 0 (Matet A)	Machine Direction ≥ 1000	N/50 Mm
	En 12311-2 (Metol A)	Cross Direction ≥ 900	
	E= 40044 0 (Mater A)	Machine Direction ≥ 20	%
Elongation At Break	En 12311-2 (Metot A)	Cross Direction ≥ 20	
Resistance To Impact	En 12691	Hard Surface : ≥ 300	Mm
Resistance To Tear (Nail Shank)	En 12310-2	≥ 180	N
Resistance To Root Penetration	Ts En 13948	Resistant	-
Reaction To Fire	En 13501-1	Class E	-
External Fire Performance	Env 1187-En 13501-5	Broof (T1)	-
External Fire Performance	Env 1187-En 13501-5	Broof (T2)	-
Determination Of Water Vapor Trans- mission	En 1931	≥ 20.000 ± %30	м
Peel Resistance Of Joint	En 12316-2	≥ 300	N/50mm
Joint Strenght	En 12317-2	≥ 700	N/50mm
Dimensional Stability	En 1107-2	≤ 1	%
Foldability At Low Temperature	En 495-5	-25	°C
Hail Resistance	Ts En 1297	Hard Surface : ≥ 20 Soft Surface: ≥ 18	-
Uv Exposure (10000 S)	En 1850-2	Resistant	-
Visible Defects	En 1850-2	Pass	
Effects Of Liquid Chemicals, Including Water (28 Days / 23° C)	En 1847	Resistant	-





APPLICATION DETAILS

Protan Vacuum System





Protan Parapet Details





Protan FPO/TPO Installation Detail





Protan Green Roof System







PVC membrane. It should not come into contact with bituminous and hard polystyrene foam thermal insulation materials. If necessary, a separating layer should be used in between.

CERTIFICATES



PRODUCTS USAGE AREAS

ALLUNDER THE SAME

Choosing one of Protan's single ply membranes is a choice for the future. With highly durable, flexible and sustainable roof solutions we are able to reduce the total consumption of resources in the entire value chain. Let's talk roofs for the future!

WEAR

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