

TECHNICAL DATA SHEET

Name and address of manufacturer	: PROTAN TÜRKİYE YALITIM SAN.TİC.A.Ş. : G.O.S.B. İhsandede Caddesi No:111/1 Gebze/KOCAELİ / TÜRKİYE
Product trade name	: PROTAN FG
Description	: UV Resistant, PVC-P Roofing Membrane with a synthetic fibre reinforcement
European Standart	: EN 13956
Type of application	: Exposed application (mechanical fastened) / Covered sheets (Gravel ballasted)

CHARACTERISTICS	EXPRESSION OF RESULTS	TEST RESULT 1,20 mm	TEST RESULT 1,50 mm	TEST RESULT 2,00 mm	UNIT	TEST METHODS
VISIBLE DEFECTS	Pass	Pass	Pass	Pass Geçti	-	EN 1850-2
LENGTH	MDV	20 (-%0,+%5)	20 (-%0,+%5)	20 (-%0,+%5)	m	EN 1848-2
WIDTH	MDV	1,62 (-%0.5, +%1) 2,20 (-%0.5, +%1)	1,62 (-%0.5, +%1) 2,20 (-%0.5, +%1)	1,62 (-%0.5, +%1) 2,20 (-%0.5, +%1)	m	EN 1848-2
STRAIGHTNESS	MLV	≤ 50	≤ 50	≤ 50	mm	EN 1848-2
FLATNESS	MLV	≤ 10	≤ 10	≤ 10	mm	EN 1848-2
MASS PER UNIT AREA	MDV	1,50 (-%5,+%10)	1,90 (-%5,+%10)	2,65 (-%5,+%10)	kg/m ²	EN 1849-2
EFFECTIVE THICKNESS	MDV	1,20 ± %5	1,50 ± %5	2,00 ± %5	mm	EN 1849-2
WATER TIGHTNESS	Pass	Pass	Pass	Pass	-	EN 1928 (Method B)
EXTERNAL FIRE PERFORMANCE	In accordance with prEN 13501-5	Broof (t2)*	Broof (t2)*	Broof (t2)*	-	ENV 1187
EXTERNAL FIRE PERFORMANCE	In accordance with prEN 13501-5	Broof (t1)*	Broof (t1)*	Broof (t1)*	-	ENV 1187
REACTION TO FIRE	EN 13501-1	CLASS E	CLASS E	CLASS E	-	CLASSIFICATION AFTER EN 13501-1
JOINT PEEL RESISTANCE	MLV	≥ 300	≥ 300	≥ 300	N/50mm	EN 12316-2
JOINT SHEAR RESISTANCE	MLV	≥ 650	≥ 700	≥ 750	N/50mm	EN 12317-2
TENSILE STRENGTH	MLV	Machine Direction ≥ 1000	Machine Direction ≥ 1000	Machine Direction ≥ 1000	N/50mm	EN 12311-2 (Method A)
	MLV	Cross Direction ≥ 900	Cross Direction ≥ 900	Cross Direction ≥ 900		
ELONGATION AT BREAK	MLV	Machine Direction ≥ 20	Machine Direction ≥ 20	Machine Direction ≥ 20	%	EN 12311-2 (Method A)
	MLV	Cross Direction ≥ 20	Cross Direction ≥ 20	Cross Direction ≥ 20		
RESISTANCE TO IMPACT	MLV	HARD SUBSTRATE ≥ 300	HARD SUBSTRATE ≥ 300	HARD SUBSTRATE ≥ 300	mm	EN 12691 (Method A)
	MLV	SOFT SUBSTRATE ≥ 600	SOFT SUBSTRATE ≥ 600	SOFT SUBSTRATE ≥ 600		
RESISTANCE TO STATIC LOAD	MLV	≥ 20	≥ 20	≥ 20	kg	EN 12730
TEAR RESISTANCE	MLV	Machine Direction ≥ 180	Machine Direction ≥ 180	Machine Direction ≥ 180	N	EN 12310-2

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CHARACTERISTICS	EXPRESSION OF RESULTS	TEST RESULT 1,20 mm	TEST RESULT 1,50 mm	TEST RESULT 2,00 mm	UNIT	TEST METHODS
TEAR RESISTANCE	MLV	Cross Direction ≥ 180	Cross Direction ≥ 180	Cross Direction ≥ 180	N	EN 12310-2
DIMENSIONAL STABILITY	MLV	Machine Direction $\leq 0,5 $	Machine Direction $\leq 0,5 $	Machine Direction $\leq 0,5 $	%	EN 1107-2
		Cross Direction $\geq 0,5 $	Cross Direction $\geq 0,5 $	Cross Direction $\geq 0,5 $		
FOLDABILITY AT LOW TEMPERATURE	MLV	≤ -25	≤ -25	≤ -25	°C	EN 495-5
UV EXPOSURE	Pass	Pass	Pass	Pass	-	EN 1297
EFFECTS OF LIQUID CHEMICALS, INCLUDING WATER (28 DAYS / 23° C)	See Annex C	On request	On request	On request	-	EN 1847
HAIL RESISTANCE	MLV	RIGID SUBSTRATE ≥ 17	RIGID SUBSTRATE ≥ 17	RIGID SUBSTRATE ≥ 17	m/s	EN 13583
		SOFT SUBSTRATE ≥ 25	SOFT SUBSTRATE ≥ 25	SOFT SUBSTRATE ≥ 25		
WATER VAPOUR TRANSMISSION PROPERTIES	MDV	20 000 \pm %30	20 000 \pm %30	20 000 \pm %30	μ	EN 1931
RESISTANCE TO ROOT PENETRATION*	MDV	Resistant	Resistant	Resistant	-	EN 13948

* More data related to the tested built ups are available from the manufacturer.

MDV = Manufacturer's Declared Value

MLV = Manufacturer's Limiting Value

This technical data sheet was produced according to the latest technical knowledge and standards of Protan Turkey Yalitim Sanayi ve Ticaret A.Ş./ Gebze, KOCAELİ TURKEY. Technical changes due to further developments are possible