

TECHNICAL DATA SHEET

Name and address of manufacturer	: PROTAN TURKEY YALITIM SAN. VE TİC. A.Ş. : G.O.S.B. İhsandede Caddesi No:111/1 Gebze/KOCAELİ / TÜRKİYE
Product trade name	: PROTAN TPO/FPO
Description	: TPO 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	UNIT	TEST METHODS
VISIBLE DEFECTS	Pass	Pass	Pass	-	EN 1850-2
LENGTH	MDV	20 (-%0,+%5)	15 (-%0,+%5)	m	EN 1848-2
WIDTH	MDV	1,60 (-%0.5, +%1) 2,00 (-%0.5, +%1)	1,60 (-%0.5, +%1) 2,00 (-%0.5, +%1)	m	EN 1848-2
STRAIGHTNESS	MLV	≤ 50	≤ 50	mm	EN 1848-2
FLATNESS	MLV	≤ 10	≤ 10	mm	EN 1848-2
MASS PER UNIT AREA	MDV	1,35 (-%5,+%10)	1,65 (-%5,+%10)	kg/m ²	EN 1849-2
EFFECTIVE THICKNESS	MDV <i>i</i> BD	1,20 ± %5	1,50 ± %5	mm	EN 1849-2
WATER TIGHTNESS	Pass	Pass	Pass	-	EN 1928 (Method B)
EXTERNAL FIRE PERFORMANCE	In accordance with prEN 13501-5	Broof (t2)*	Broof (t2)*	-	ENV 1187
EXTERNAL FIRE PERFORMANCE	In accordance with prEN 13501-5	Broof (t1)*	Broof (t1)*	-	ENV 1187
REACTION TO FIRE	EN 13501-1	CLASS E	CLASS E	-	CLASSIFICATION AFTER EN 13501-1
JOINT PEEL RESISTANCE	MLV	≥ 250	≥ 300	N/50mm	EN 12316-2
JOINT SHEAR RESISTANCE	MLV	≥ 800	≥ 850	N/50mm	EN 12317-2
TENSILE STRENGTH	MLV	MACHINE DIRECTION ≥ 1100	MACHINE DIRECTION ≥ 1100	N/50mm	EN 12311-2 (Metot A) (Method A)
	MLV	CROSS DIRECTION ≥ 1000	CROSS DIRECTION ≥ 1000		
ELONGATION AT BREAK	MLV	MACHINE DIRECTION ≥ 20	MACHINE DIRECTION ≥ 20	%	EN 12311-2 (Metot A)

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ELONGATION AT BREAK	MLV	CROSS DIRECTION ≥ 20	CROSS DIRECTION ≥ 20	%	(Metot A) (Method A)
RESISTANCE TO IMPACT	MLV	≥ 600	≥ 600	mm	EN 12691 (Metot A) (Method A)
RESISTANCE TO STATIC LOAD	MLV	≥ 20	≥ 20	kg	EN 12730
TEAR RESISTANCE	MLV	≥ 350	≥ 400	N	EN 12310-2
DIMENSIONAL STABILITY	MLV	$\leq 0,5$	$\leq 0,5$	%	EN 1107-2
FOLDABILITY AT LOW TEMPERATURE	MLV	-30	-30	°C	EN 495-5
UV EXPOSURE (1000 h)	Pass	Pass Geçti	Pass Geçti	-	EN 1297
EFFECTS OF LIQUID CHEMICALS, INCLUDING WATER (28 DAYS / 23° C)	See Annex C	On request	On request	-	EN 1847
HAIL RESISTANCE	MLV	≥ 17	≥ 17	m/s	EN 13583
WATER VAPOUR TRANSMISSION PROPERTIES	MDV	150 000 \pm %30	150000 \pm %30	μ	EN 1931
EXPOSURE TO BITUMEN**	Pass	Pass	Pass	-	EN 1548 (B)

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

** Protan TPO is competible to old bitumen

MDV = Manufacturer's Declared Value

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CHARACTERISTICS	EXPRESSION OF RESULTS	TEST RESULT 1,20 mm	TEST RESULT 1,50 mm	UNIT	TEST METHODS
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MLV = Manufacturer's Limiting Value

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

Documentation No: PDS-001-011019

Publishing Time: 01.10.2019

Revision: 1st issue