

**TECHNICAL DATA SHEET**

Name and address of manufacturer	:	PROTAN TÜRKİYE YALITIM SAN. VE TİC. A.Ş. G.O.S.B. İhsandede Caddesi No:111/1 Gebze/KOCAELİ / TÜRKİYE
Product trade name	:	PROTAN GEO/S
Description	:	PVC Tunnel membrane, homogenous, incompatible with bitumen respectively /
European Standart	:	EN 13967/ EN 13941
Type of application	:	Exposed application (mechanical fastened)
Standart dimensions	:	Width : 2200 mm Length : 20 m

CHARACTERISTICS	TEST RESULT 1,50 mm	TEST RESULT 2,00 mm	UNIT	TEST METHODS
THICKNESS	1,50 ± %10	2,00 ± %10	mm	EN 1849-2
WATER PERMEABILITY	Waterproof	Waterproof /	-	EN 1928
WATER TIGHTNESS TO LIQUID WATER	Waterproof	Waterproof /	-	EN 1296 and EN 1928
TENSILE STRENGTH	Machine Direction ≥ 15	Machine Direction ≥ 15	N/mm <sup>2</sup>	EN 12311-2 (Method B papyon)
	Cross Direction ≥ 15	Cross Direction ≥ 15		
ELONGATION AT BREAK	Machine Direction ≥ 250	Machine Direction ≥ 300	%	EN 12311-2 (Method B papyon)
	Cross Direction ≥ 200	Cross Direction ≥ 250		
RESISTANCE TO IMPACT	≥ 500	≥ 750	mm	EN 12691
RESISTANCE TO TEAR (NAIL SHANK)	≥ 350	≥ 400	N	EN 12310-1
REACTION TO FIRE	CLASS E	CLASS E	-	CLASSIFICATION AFTER EN 13501-1
JOINT STRENGTH	≥ 900	≥ 1000	N/50mm	EN 12317-2
PEEL RESISTANCE OF JOINT	≥ 175	≥ 200	N/50mm	EN 12316-2
DIMENSIONAL STABILITY	≤ ± 2	≤ ± 2	%	EN 1107-2
FOLDABILITY AT LOW TEMPERATURE	-20	-20	°C	EN 495-5
VISIBLE DEFECTS	Pass	Pass	-	EN 1850-2

MDV = Manufacturer's Declared Value

L = Machine Direction

T = Cross Direction

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