



**ADRITEC**  
YOUR WAY

# 7 PLASTIC FILM & LINING



Plastic Film & Lining  
Geomembrane Lining



7b1- Geomembrane Lining

**The Geomembrane Lining Sheet** is becoming a popular concept in water management. The benefits of covering ponds and reservoirs lining with plastics geomembrane sheets dramatically reduces losses in water or any other liquids resulting from seepage yet at a reasonable cost. Water harvesting and storage, and the ability to utilize the harvested rain-water, is made easy. Geomembranes are highly useful in porous soils where water retention is minimal. It eliminates water logging and prevents upward intrusion of salts into stored water. Adritec provides a wide range of reservoir lining sheets available in many sizes, shapes and wall thickness. It comes in a square, or a rectangle shape. It is supplied in rolls, the width of each roll ranges from 6 or 12 meters. Geomembranes are manufactured from either LDPE, HDPE, or PVC material, using highly flexible and stable synthetic vinyl for the PVC sheets. The material is strong, flexible, and durable, and easy to install. It is also supplied in 3 or 5 layers to increase the strength of cohesion of the plastic. Geomembranes are supplied in thickness ranging from 250 micron up to 1500 microns.



PVC Geomembrane Technical Specifications								
Specifications	Test Method	Unit	APG 100	APG 120	APG 150	APG 200	APG 250	APG 300
			1,00mm	1,20mm	1,50mm	2,00mm	2,50mm	3,00mm
Thickness	ASTM D5199-DIN 53370	mm	1,00 ± 0,02	1,20 ± 0,02	1,50 ± ,02	2,00 ± 0,02	2,50 ± 0,02	3,00 ± 0,02
Density	ASTM D1505 / D 792-TS1320	gr/cm³	1,3 ± 0,03	1,3 ± 0,03	1,3 ± 0,03	1,3 ± 0,03	1,3 ± 0,03	1,3 ± 0,03
Tensile strength	TS 1398 EN ISO527	N/mm²	≥15	≥15	≥15	≥15	≥15	≥15
Elongation at break (transverse-longitudinal)	TS 1398 EN ISO527	%	≥200	≥200	≥200	≥200	≥200	≥200
Tear Strength	DIN 53363-TS4698 ISO34-1	N	≥50	≥60	≥75	≥100	≥125	≥150
Static Puncture	ASTM D 4833	N	≥190	≥220	≥270	≥380	≥470	≥570
Tightness Test	DIN 16938	No leakage after 72 hours, 4 Bar Pressure						
Dimensional Stability	DIN 16726	(+) 80 C for 6 hours at the end of the bubble on the material and does not prüzlenme						
At Long-Term Aging	TS 1398 EN ISO527	(+) Materials at the end of 7 days at 80 C, and length at most ± 20% Change in Tensile Strength						
At Long-Term Aging	TS 1398 EN ISO527	(+) Materials at the end of 7 days at 80 C, and length at most ± 20% Elongation Change in Value						
At Long-Term Aging	DIN 53361	(+) 80 C for 7 days at the end of both the surface of the material does not crack						
Resistance to heat cold	DIN 53361	(+) 80 C (-) 15 C for 4 hours at the end of breaking the material does not crack						
Water Absorption	TS 702 EN ISO 62-DIN 53495	%	<0,3	<0,3	<0,3	<0,3	<0,3	<0,3
Gas Permeability (24 Hours)	ASTM D 1434	Cm³.m⁻².Mpa⁻¹.d⁻¹	≤1.51x10⁸	≤1.51x10⁸	≤1.51x10⁸	≤1.51x10⁸	≤1.51x10⁸	≤1.51x10⁸
Water Soluble Article	TS 702	%	<0,4	<0,4	<0,4	<0,4	<0,4	<0,4
UV Resistance		Service Life	4	6	10	20	25	30
Resistance to solutions	DIN 16726	Unsaturated 10% NaCl and Ca (OH) 2 in solution at 23 C At 28 days standby						
		(+) 80 C (-) 15 C for 4 hours at the end of breaking the material does not crack						
Market Supply - Pack-aging Information	Roll width	mt	2.20	2.20	2.10	2.10	2.10	2.00
	Roll Length	mt	30	30	25	25	25	20

# GEOMEMBRANE LINING



HDPE Geomembrane Technical Specifications							
TESTED PROPERTY	UNIT	TEST METHOD	VALUES				
THICKNESS	mm	EN ISO 9863-1	1	1.5	2	2.5	3
DENSITY	g/cm <sup>3</sup>	EN ISO 1183-1/A	> 0.94	> 0.94	> 0.94	> 0.94	> 0.94
STRESS AT YIELD	N/mm <sup>2</sup>	EN ISO 527-3	>16	>16	>16	>16	>16
STRESS AT BREAK	N/ mm <sup>2</sup>	EN ISO 527-3	>26	>26	>26	>26	>26
ELONGATION AT BREAK	%	EN ISO 527-3	>700	>700	>700	>700	>700
TEAR RESISTANCE	N	ISO 34-1/B(a)	>130	>210	>280	>350	>420
PUNCTURE RESISTANCE	N	EN ISO 12236	>2,400	>3,700	>4,900	>6,050	>7,200
CARBON BLACK CONTENT	%	ASTM 1603	2.0-3.0	2.0-3.0	2.0-3.0	2.0-3.0	2.0-3.0
CARBON BLACK DISPERSION	CATEGORY	ASTM-D 5596	1/2b	1/2b	1/2b	1/2b	1/2b
DIMENSIONAL STABILITY	%	53377(120 0C/1h)	2	2	2	2	2
MELT FLOW INDEX	g/10min	EN ISO 1133	1.0-3.0	1.0-3.0	1.0-3.0	1.0-3.0	1.0-3.0
STRESS CRACK RESISTANCE	h	ASTM D 5397	>200	>200	>200	>200	>200
OXIDATIVE INDUCTION TIME	min	ASTM-D 3895	>100	>100	>100	>100	>100
		(200 0C,pure O <sub>2</sub> ,1atm)					
Oxidation		EN 14575	<25%	<25%	<25%	<25%	<25%
WATER PERMEABILITY	M <sup>3</sup> /(m <sup>2</sup> d)	EN 14150	<10-6 m <sup>3</sup> /m <sup>2</sup> d	<10-6 m <sup>3</sup> /m <sup>2</sup> d	<10-6 m <sup>3</sup> /m <sup>2</sup> d	<10-6 m <sup>3</sup> /m <sup>2</sup> d	<10-6 m <sup>3</sup> /m <sup>2</sup> d
EFFECTS OF WEATHER CONDITIONS		EN12224	%1-%10	%1-%10	%1-%10	%1-%10	%1-%
FIRE TEST		EN 11925-2	Class E	Class E	Class E	Class E	Class E
DETERMINATION OF RESISTANCE OF SOLID / LIQUID	A: (HOT WATER)	EN 14415	<%5 A.B	<%5 A.B	<%5 A.B	<%5 A.B	<%5 A.B
	B: (ALKALINE LIQUID)		<%25 C	<%25 C	<%25 C	<%25 C	<%25 C
	C: (ORGANIC ALCOHOL)						