



CARLISLE'S GeoMembrane

Carlisle Reinforced Polypropylene (RPP) GeoMembrane™

Carlisle's RPP is a reinforced flexible polypropylene geomembrane produced from first quality resins. Carlisle RPP contains a weft-inserted, polyester scrim reinforcement, which enhances tear and puncture resistance without reducing environmental stress crack resistance. Such properties make Carlisle RPP ideal for floating covers and any applications requiring exceptional support in high-tensioned areas. Carlisle RPP geomembranes are very flexible, durable, and have been formulated to be resistant to chemicals, ultraviolet degradation, and aging. Carlisle RPP is manufactured in black/black, tan/black and white/black.

Property	Test Method	Frequency ¹	RPP36	RPP45
Thickness (nominal) ² (mils)			36	45
Thickness (minimum) ³ (mils)	D751/D5199	per roll	32.4	40.5
Weight per Unit Area (g/sf)	D5261	50,000 SF	74	92
Tensile Properties	D751	50,000 SF		
• Grab Strength (lb/4")			250	250
• Grab Elongation (%)			22	22
Tear Resistance ⁴ (min. avg.) (lb)	D5884 (2"/min)	50,000 SF	70	70
Ply Adhesion ⁴ (lb or FTB)	D413	50,000 SF	20 lbs or UTSP	20 lbs or UTSP
Puncture Resistance (min. avg.) (lb)	D4833 FTMS 101B/ Method 2031 ⁵	50,000 SF Certified	85 250	90 250
Dimensional Stability (max) (%)	D1204	Resin Batch	±1.0	±1.0
Hydrostatic Resistance (psi)	D751 Method A, Proc. 1	Certified	350	350
Low Temp Flexibility	D2136 1/8" Mandrel, 4 Hrs	Certified	-40°F	-40°F
Stress Crack Resistance (hrs)	D1693	Certified	5,000	5,000
UV Resistance (hrs)	G155 (Xenon Arc) ⁷	Certified	8,000	8,000
Reinforcing Scrim	9 x 9, 1000 or 1300 denier weft-inserted polyester for all material thicknesses			

¹Testing frequencies are rounded to the nearest full roll.

²Nominal thickness is based on no coupon being less than 10% under specified thickness. Average thickness may be less than specified thickness.

³Minimum thickness is based on average thickness being equal to or greater than specified thickness

⁴Peak value if plies can be separated. UTSP (unable to separate plies) is also a valid test result if plies cannot be separated to determine number

⁵FTMS 101b has been replaced with D4833. Value shown for comparison purposes only.

⁶RPP black/black, tan/black and white/black is available in accordance with ANSI/NSF 61 standard and can be used for both potable and industrial applications.

⁷ASTM G26 has been replaced with ASTM G155. Conditions are 80 C BPT and 8000 hrs are at irradiance of 0.35 W/m² (4000 hrs at 0.70 W/m² is an alternate test protocol.