

# PP (S) - Geomembrane

Supported Polypropylene styles have excellent cold temperature flexibility, long term UV resistance, and substantial tensile strength.

Americover's supported styles of Polypropylene (PP (S)) combine the unique attributes of the PP polymer formulation with the mechanical strength of a 250 lb polyester scrim. PP (S) is composed of the same industry proven blend of polymers and additives that is found in Americover's unsupported styles of PP.

PP (S) brings together two soft, supple PP films laminated around a reinforcing scrim layer. The resulting geomembrane is strong enough to hang vertically in the form of a baffle curtain or tank liner, and durable enough to leave exposed to the elements for many years. PP (S) is UV stabilized with 2 to 3% carbon black included in the formulation.

PP (S) is chemically resistant to water purification chemicals, and carries the NSF 61 certification for contact with potable water. This resilient polymer is also inert to surfactants that can cause environmental stress cracking in HDPE.

PP (S) offers a combination of strength and flexibility that has led to it being the replacement of choice for Hypalon as a floating cover material. PP (S) maintains its flexibility at low temperatures, making severe winter installations or service conditions an easy application to resolve. In any water or wastewater containment project PP (S) is a clear choice when a strong and chemically resistant geomembrane is required.



21 Nov 2003	PP (S) Minimum Material Properties		
Style	ASTM	PP 36 (S)	PP 45 (S)
Thickness (nominal)	D1593	36 mil 0.91 mm	45 mil 1.14 mm
Tensile Strength @ Break (MD/CD)	D751	250/225 lbs 1,100/1000 N	250/225 lbs 1,100/1000 N
Tear Resistance	D5884	70 lbs 310 N	70 lbs 310 N
Puncture Resistance	FTM 101 C Method 2031	250 lbs 1,100 N	250 lbs 1,100 N
Low Temperature	D2136	-40°F -40°C	-40°F -40°C
Hydrostatic Resistance	D751 Method A	350 psi 2.40 mPa	350 psi 2.40 mPa

21 Nov 2003		PP (S) Minimum Shop Seam Strengths		
Style	ASTM	PP 36 (S)	PP 45 (S)	
Heated Bond Seam Strength	D4545 25.4 mm (1") Strip	75 ppi 13.1 N/mm	75 ppi 13.1 N/mm	
Heated Bond Peel Adhesion Strength	D4545 25.4 mm (1") Strip	FTB 22 ppi 3.9 N/mm	FTB 25 ppi 4.4 N/mm	

12 Sept 2003		PP (S) Minimum Field Seam Strengths		
Style	ASTM	PP 36 (S)	PP 45 (S)	
Heated Bond Seam Strength	D6392 25.4 mm (1") Strip	60 ppi 10.5 N/mm	60 ppi 10.5 N/mm	
Heated Bond Peel Adhesion Strength	D6392 25.4 mm (1") Strip	FTB 20 ppi 3.5 N/mm	FTB 20 ppi 3.5 N/mm	

Each and every liner panel produced is a custom panel. The way we set up our shop is unique in that our shop welders produce prefabricated panels to best match your containment area. We size each panel to fit, without waste, in a logical sequence in your containment area. In containments with irregular shapes we size our panels to best accommodate the irregular size.

POLYPROPYLENE (S) FABRICATION SIZES		
Material Style	3000 lb Panel size 1400 kg	4000 lb Panel size 1800 kg
PP 36 mil (S) Supported	18,800 ft <sup>2</sup> 1,750 m <sup>2</sup>	25,000 ft <sup>2</sup> 2,300 m <sup>2</sup>
PP 45 mil (S) Supported	15,400 ft <sup>2</sup> 1,400 m <sup>2</sup>	20,500 ft <sup>2</sup> 1,900 m <sup>2</sup>

There are no theoretical limits to the size of the liner panels that we can prefabricate but there are some practical limits, notably panel weight. Panel weight is important because of the limits of handling equipment that will be available in the field. If a forklift or other piece of equipment is available for placement and deployment then a panel up to 1800 kg (4000 lbs) could be used. If only "hand power" is available for deployment then a panel weight of 1400 kg (3000 lbs) should not be exceeded. Under certain circumstances larger panels can be provided. Please contact Americover for further details.

Hot air fusion and hot wedge fusion welding are utilized for fabrication of PP (S) materials. This welding technique produces welds with full Film Tear Bonds.

Panels are accordion folded in one direction and then rolled in the other direction. Unfolding instructions and dimensions are marked on the individual liner panel. Each panel is wrapped in an opaque, weather resistant, covering suitable for shipment and storage at site.

*Americover*<sup>®</sup>

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