

# 36mil REINFORCED POLYETHYLENE

## PRODUCT DESCRIPTION

The 36mil RPP is a highly flexible reinforced polypropylene geomembrane engineered for superior performance and durability. It features a tightly knit 9x9 weft-inserted polyester scrim, fully encapsulated between two layers of UV-stabilized polypropylene. By incorporating high levels of ethylene propylene rubber (EPR) into the polypropylene, this membrane achieves exceptional flexibility, dimensional stability, and long-term physical strength.

Unlike membranes containing plasticizers that can leach out over time, the 36mil RPP maintains its flexibility and integrity for years of reliable service. It provides outstanding resistance to environmental stress cracking, even under elevated temperatures and chemically aggressive conditions.

Standard production is black, with custom colors available upon request (minimum order quantities apply).

## PRODUCT USE

The 36mil RPP geomembrane is ideal for a wide range of exposed and buried containment applications requiring mechanical toughness, flexibility, and environmental stress-crack resistance. Its outer plies are designed for excellent heat-weld performance, providing easy, secure seaming in the field.

Installers value its high-friction surface, which enhances side-slope stability and overall liner safety. Certified to meet GRI GM18 specifications and NSF/ANSI Standard 61 for Drinking Water System Components – Health Effects, the 36mil RPP delivers dependable containment performance in critical applications.

## APPLICATIONS

Waste Lagoon Liners  
Floating Covers  
Fish Hatchery Liners  
Modular Tank Liners  
Tunnel Liners  
Remediation Liners  
Earthen Liners  
Interim Landfill Covers  
Remediation Covers  
Landfill Caps  
Farm Pond Liners  
Canal Liners  
Disposal Pit Liner  
Water Containment Ponds  
Heap Leach Liner



# 36mil REINFORCED POLYETHYLENE (RPP) Product Data Sheet

Table 1(a) – Flexible Polypropylene Nonreinforced (fPP) and Reinforced (fPP-R) Geomembranes

Property	Test Method ASTM or GRI	fPP 30 mils	fPP 40 mils	fPP-R 36 mils	fPP-R 45 mils	Testing Frequency minimum
Mass per Unit Area – lb/ft <sup>2</sup> (min. ave.)	D5261	0.12	0.16	0.15	0.18	15,000 lb
Thickness – mils (min. ave.)	D5199	30	40	36	45	roll
• lowest individual specimen – mils, nominal – 10%		27	36	32	40	
Tensile Strength						
• dumbbell <sup>(1)</sup> – lb/in. (min. ave.)	D6693-IV	60	72	-	-	15,000 lb
• grab <sup>(1)</sup> – lb (min. ave.)	D751-A	-	-	200	250	15,000 lb
Tensile Elongation						
• dumbbell <sup>(1,2)</sup> - % (min. ave.)	D6693-IV	700	700	-	-	15,000 lb
• grab <sup>(1)</sup> - % (min. ave.)	D751-A	-	-	22	22	15,000 lb
Multiaxial Elongation - %	D5617	120	120	-	-	formulation
Tear Resistance						
• nonreinforced <sup>(1)</sup> – lb (min. ave.)	D1004	10	12	-	-	15,000 lb
• reinforced <sup>(1)</sup> – lb (min. ave.)	D5884	-	-	55	55	15,000 lb
Puncture Resistance – lb (min. ave.)	D4833	25	30	75	85	15,000 lb
Ply Adhesion – lb (min. ave.)	D6636	-	-	15	15	15,000 lb
Low Temperature Flexibility - °F	D2136 <sup>(3)</sup>	-40	-40	-40	-40	formulation
Carbon Black Content <sup>(4)</sup> - %	D4218	2-3	2-3	2-3	2-3	45,000 lb
Oven Aging at 85°C <sup>(6)</sup>	D5721	Black (fPP & fPP-R)		Other Colors (fPP & fPP-R)		formulation
(a) Standard OIT (min. ave.) - % ret. after 90 days - or -	D3895	Note (5)		Note (5)		
(b) High Pressure OIT (min. ave.) - % ret. after 90 days - and -	D5885	60		50		
(c) Surface Cracking Observation	GM16	none		none		
Ultraviolet Light Resistance <sup>(6,7)</sup>	GM11	Black (fPP & fPP-R)		Other Colors (fPP & fPP-R)		formulation
(a) Standard OIT (min. ave.) - % ret. after 1600 hrs. - or -	D3895	Note (5)		Note (5)		
(b) High Pressure OIT (min. ave.) - % ret. after 1600 hrs. - and -	D5885	80		60		
(c) Surface Cracking Observation	GM16	none		none		

(1) Test methods modified to 20 in./min. for unreinforced and 12 in./min. for reinforced

(2) Calculation based on a 2.0 in. gage length

(3) Using 1/8 in. mandrel for 4-hours.

(4) Applicable only to black geomembranes. Also D1603 is an acceptable method to determine carbon black content.

(5) Not recommended since the high temperature of the Std-OIT test produces an unrealistic result for some antioxidants used in fPP formulations

(6) It is also recommended to evaluate samples at 15 days to compare with the 30 day response.

(7) The condition of the test should be 20 hr. UV cycle at 75°C followed by 4 hr. condensation at 60°C.