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## ***RPP - REINFORCED POLYPROPYLENE***

RPP is a proven solution to many containment needs due to its excellent puncture resistance and UV stability.

Colorado Lining can supply you with custom sized panels or facilitate a full installation with one of our certified installation crews. We want to work with you to make your job a success.

### **Products & Features:**

- Warranty Info:
  - 36 MIL: 15 YEAR
  - 45 MIL: 20 YEAR
- Fish Friendly
- Potable
- Flexible
- Available In Custom Sized Panels
- Extremely Durable
- Quick Installation
- UV Stable
- Colors Available
- Available In 36 & 45 Mils

### **Uses & Applications:**

- Potable Water Storage
- Wastewater Treatment Plants
- Baffle Curtains
- Golf Course Ponds
- Floating Covers
- Drop-In & Large Tank Liners
- Ballast Tubes
- Irrigation Reservoirs & Canals



- ***Project Photo: Franzen Reservoir in Salem, OR***
- ***Reservoir Liner & Floating Cover***
- ***1,300,000 SF 45 Mil RPP***

## U.S. Standard Units



**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.) • lowest individual specimen – mils (nominal – 10%)	D5199	30 27	40 36	36 32	45 40	per roll
Tensile Strength • dumbbell <sup>(1)</sup> – lb/in. (min. ave.) • grab <sup>(1)</sup> – lb (min. ave.)	D6693-IV D7004	60 -	72 -	- 200	- 250	15,000 lb 15,000 lb
Tensile Elongation • dumbbell <sup>(1,2)</sup> - % (min. ave.) • grab <sup>(1)</sup> - % (min. ave.)	D6693-IV D751-A	700 -	700 -	- 22	- 22	15,000 lb 15,000 lb
Multiaxial Elongation - %	D5617	120	120	-	-	formulation
Tear Resistance • nonreinforced <sup>(1)</sup> – lb (min. ave.) • reinforced <sup>(1)</sup> – lb (min. ave.)	D1004 D5884	10 -	12 -	- 55	- 55	15,000 lb 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
Ultraviolet Light Resistance <sup>(5,6)</sup> (a) % strength retained after 20,000 light hrs. - or - (b) % elongation retained after 20,000 light hrs. - and - (c) Surface Cracking Observation after 20,000 light hrs. (d) Surface Chalking (or Powdering) <sup>(7)</sup> after 20,000 light hrs.	D7238 @ 70°C D6693-IV  D6693-IV  GM16 GM23 (draft)	 ≥ 50  ≥ 50  None minor	      	 n/a  n/a  none minor	      	per formulation

(1) Test method modified to 500 mm/min. for unreinforced and 300 mm/min. for reinforced

(2) Calculation based on a 50 mm gage length

(3) Using 32 mm mandrel for 4-hours.

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

(5) The conditions of the UV Fluorescent exposure method should be 20 hr. UV cycle at 70°C followed by 4 hr. condensation at 60°C.

(6) See Section 5.2 for fPP-R geomembranes.

(7) A GRI test method is being developed.

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