



Firestone Unsupported Polypropylene (fPP) Geomembrane

Firestone Item Number:
Various: See Attached Page

DESCRIPTION:

Firestone fPP Unsupported Geomembrane is made from a non-reinforced polypropylene/rubber-based geomembrane and is designed to be used in geo applications. Available in black, white, patina, tan and grey all with a black backing.

PREPARATION OF SUBSTRATES:

1. Substrates must be dry, smooth, free of sharp edges, loose or foreign materials, oil, grease, and other materials which may damage the geomembrane
2. All rough surfaces or voids which could damage the geomembrane shall be repaired prior to installing the geomembrane, as specified.
3. All surface voids greater than 6.3 mm (0.25") wide shall be properly filled with an acceptable fill material.

METHOD OF APPLICATION:

Install the Firestone fPP Unsupported Geomembrane material with the appropriate heat welding equipment in accordance with current Firestone specifications and details.

STORAGE:

1. Store material in its original unopened packaging away from sources of physical damage or chemical contamination.
2. Store away from ignition sources as geomembrane will burn when exposed to open flame.

This sheet is meant only to highlight Firestone's products and specifications. Information is subject to change without notice. Firestone takes responsibility for furnishing quality materials, which meet Firestone's published product specification. As neither Firestone itself nor its representatives practice design, Firestone offers no opinion on and expressly disclaims any responsibility for the soundness of any project on which its products may be applied. If questions arise as to the soundness of a project, or its ability to support a planned installation properly, the Owner should obtain opinions of competent design engineers before proceeding. Firestone accepts no liability for any failure or for resultant damages, and no Firestone Representative is authorized to vary this disclaimer.



PRODUCT DATA

PACKAGING:

Thickness	Weight
1.02 mm (0.040")	0.93 kg/m ² (0.19 lb/ft ²)
1.52 mm (0.060")	1.32 kg/m ² (0.27 lb/ft ²)

See attached page for available length, width and color options.

PRECAUTIONARY DATA:

1. Take care when moving, transporting, handling, etc. to avoid sources of punctures and physical damage.
2. Isolate waste products, such as petroleum products, greases, oils (mineral and vegetable) and animal fats from the geomembrane. Contact Firestone Specialty Products for specific recommendations regarding chemical compatibility.
3. Refer to Material Safety Data Sheets (MSDS) for safety information.

LEED INFORMATION:

Post Consumer Recycled Content:	0%
Post Industrial Recycled Content:	10% max.
Manufacturing Locations:	Wellford, SC Muscle Shoals, AL

Firestone Specialty Products
250 West 96th Street, Indianapolis, Indiana 46260
Specialty Products (800) 428-4442
Internet Address: <http://www.firestonesp.com>

S723-SPP-113

Firestone fPP Unsupported Geomembrane

PHYSICAL PROPERTIES

<u>Physical Property</u>	<u>Test Method</u>	<u>Specification</u>
Thickness, lowest individual reading, non-reinforced	D 5199	0.92 mm (0.036")
Tensile strength, kN/m	D 6693	10.5kN/m (60 lbs/in)
Ultimate elongation %, minimum	D 6693	600 %
Tear resistance, minimum	D 1004	45 N (10 lbs)
Low-temperature bend	D 2136	-40°C (-40°F)
Properties after heat aging & Weathering	D 573, G151, G155	
• 670 hrs at 116°C, heat aging		
• 15,210 kJ/(m ² .nm) at 80°C @ 70 W/(m ² .nm), weathering		
Retention of tensile strength		85 %
Retention of ultimate elongation, %		85 %
Retention of tear resistance, minimum		60 %
Visual inspection no cracks or crazing (10X)		Pass
Linear dimensional change, maximum change	D1204	3%
Puncture resistance non- reinforced, min	D4833	110 N (25 lbs)
Factory prepared, ply adhesion strength, min	D6636	NA
Potable Water Accepted	NSF-61	Passes
Chronic Toxicity Screening	EPA/600/4-89/ 001 ASTM E-729 Method 1000.0	Passes

Firestone fPP Unsupported Geomembrane Panel Sizes

<u>Dimensions</u>		<u>Packaging Type</u>	<u>Part Number</u>	<u>Gauge</u>	<u>Color</u>	<u>Coverage</u>		<u>Weight (typical max weight)</u>	
SI Units (Meters)	Eng Units (Feet)					SI Units (Sq Meters)	Eng Units (Sq Feet)	SI Units (kg)	Eng Units (lbs)
3.05 x 152.40	10 x 500	Roll	W56VBA1050	1.02 mm (0.040")	Black	464.52	5,000	521	1148
3.05 x 91.44	10 x 300	Roll	W56VBB1030	1.52 mm (0.060")	Black	278.71	3,000	445	982
3.05 x 152.40	10 x 500	Roll	W56VWA1050	1.02 mm (0.040")	White	464.52	5,000	521	1148
3.05 x 91.44	10 x 300	Roll	W56VWB1030	1.52 mm (0.060")	White	278.71	3,000	445	982
3.05 x 152.40	10 x 500	Roll	W56VPA1050	1.02 mm (0.040")	Patina	464.52	5,000	521	1148
3.05 x 91.44	10 x 300	Roll	W56VPB1030	1.52 mm (0.060")	Patina	278.71	3,000	445	982
3.05 x 152.40	10 x 500	Roll	W56VTA1050	1.02 mm (0.040")	Tan	464.52	5,000	521	1148
3.05 x 91.44	10 x 300	Roll	W56VTB1030	1.52 mm (0.060")	Tan	278.71	3,000	445	982
3.05 x 152.40	10 x 500	Roll	W56VGA1050	1.02 mm (0.040")	Grey	464.52	5,000	521	1148
3.05 x 91.44	10 x 300	Roll	W56VGB1030	1.52 mm (0.060")	Grey	278.71	3,000	445	982