

#### USES: BITUMINUOUS GEOMEMBRANE

Roll Lengths	262.47 ft (80 m)	295.28 ft (90 m)
Roll Width	Avg: 13.12 ft (4.0 m)	
Coverage	3441 sq ft (320 m <sup>2</sup> )	3875 sq ft (360 m²)
Coverage Weight per Square Foot	Min: 1.09 lb (5.3 kg/m²)	
Selvage Surfacing	Removable Kraft Paper	
Top Surfacing	Silica Parting Agent	
Back Surfacing	Polyester Film	

# TERANAP<sup>®</sup> 431 4M

Commercial Product Data Sheet

Teranap 431 4M is a high performance modified bitumen geomembrane waterproofing ply designed for use in geotechnical applications requiring additional subgrade protection or direct concrete placement. Teranap 431 4M consists of a nonwoven polyester mat impregnated and coated with high quality styrene-butadiene-styrene (SBS) modified bitumen.

Contact Siplast for information on approved product uses.

### PRODUCT INFORMATION

#### Application

Refer to the applicable Siplast Technical Guide for detailed application information and slope limitations. Teranap 431 4M is lapped 8 inches (202 mm) side and end.

#### Storage and Handling

All Siplast 4 meter geomembrane products should be stored on end on a clean, flat surface. Rolls should not be dropped on ends or edges. Deformation resulting from these actions will make proper installation difficult. All products should be stored in a dry place out of direct exposure to the elements. Rolls are supplied with metal mandrels 15.7 ft (4.8 M) long with an internal diameter of 6.3 in  $\pm$  0.02 in (159  $\pm$  0.5mm).

See product packaging and the Safety Data Sheet for specific information on the safe handling of this product.

#### Packaging

Rolls Per Container: 9 Shipping Weight Per Roll: 80m Roll: 3748 lb (1700 kg) 90m Roll: 4217 lb (1913 kg)

Current copies of all Siplast Commercial Product Data Sheets & Safety Data Sheets are posted on our website at www.siplast.com Rev Date 6/2022 Physical and Mechanical Properties

## TEST STANDARDS

Property (as Manufactured)	Values / Units	Test Method
Thickness (minimum)	154 mils (3.9 mm)	ASTM D5147 Section 6
Thickness (average)	161 mils (4.1 mm)	ASTM D5147 Section 6
*Peak Load @ 73°F (23°C) (average)	90 lbf/in (15.8 kN/m)	ASTM D5147 Section 7
*Elongation @ Peak Load 73°F (23°C) (average)	45%	ASTM D5147 Section 7
*Ultimate Elongation (average)	100%	ASTM D5147 Section 7
Elongation at Break % (nominal)	55% x 60%	ASTM D7275
Tensile Strength at Break (nominal)	29 x 21 kN/m	ASTM D7275
Static Puncture Resistance (nominal)	550 N	ASTM D4833
Tensile Tear Resistance (nominal)	940 x 720 N	ASTM D4073
Tearing Strength Resistance (nominal)	130 x 105 N	ASTM D5884
*Tear Strength (average)	100 lbf (0.45 kN)	ASTM D5147 Section 8
Water Absorption (maximum)	1%	ASTM D5147 Section 10
Dimensional Stability (maximum)	1%	ASTM D5147 Section 11
Low Temperature Flexibility (maximum)	-15°F (-26°C)	ASTM D5147 Section 12
Compound Stability (minimum)	225°F (107°C)	ASTM D5147 Section 16
Gas Tightness	27.6E-6 M <sup>3</sup> /(M <sup>2</sup> /.j)	ASTM D1434
Water Permeability	> 2.10 <sup>-14</sup> m/s	ASTM E96
*The value reported is the lower of either MD or XD.		·