

# TERANAP – 431 4 M



## Commercial Product Data Sheet

### Product Description

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 consists of a nonwoven polyester mat impregnated and coated with high quality styrene-butadiene-styrene (SBS) modified bitumen. The surface of the sheet is covered with a silica parting agent and the bottom is protected by a polyester film.

### Product Uses

Teranap – 431 4M is a waterproofing sheet used in geotechnical waterproofing applications, and is lapped 8 inches (20.24 cm) side and end. Teranap is loose laid and secured by means of a trench or mechanical fixation at the top of the slope. Contact Siplast for specific approval on other product uses.

### COMMERCIAL PRODUCT INFORMATION

Unit:	Roll		
Coverage:	3,441 sq ft	(320 m <sup>2</sup> )	
Coverage Weight Per Square:	Min: 109 lb	(5.3 kg/m <sup>2</sup> )	
Roll Length:	Min: 262.47 ft	(80 m)	
Roll Width:	Avg: 13.12 ft	(4.00 m)	
Thickness:	Avg: 161 mils	(4.1 mm)	
	Min: 154 mils	(3.9 mm)	
Selvage Width:	8 inches (202 mm)		
Selvage Surfacing:	Removable Kraft Paper		
Top Surfacing:	Silica Parting Agent		
Back Surfacing:	Polyester film		

Packaging: Rolls are wound onto a six inch metal core. The rolls are placed horizontally in an open-topped container.

Number Rolls Per Container: 9

Shipping Weight Per Roll: 3748 lb (1700 kg)

Storage and Handling: Teranap - 431 4M geomembrane rolls need to be stored horizontally with the ends of the cores supported to keep the membrane off the ground. Care should be taken that rolls are not dropped on ends or edges. Deformation resulting from these actions will make proper installation difficult. All waterproofing should be stored in a dry place, out of direct exposure to the elements, and should not be double stacked. Material should be handled in such a manner as to ensure that it remains dry prior to and during installation.

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## Physical and Mechanical Properties

<b>Property (as Manufactured)</b>	<b>Values/Units</b>	<b>Test Method</b>
Thickness (minimum)	154 mils (3.9 mm)	ASTM D 5147 section 6
Thickness (average)	161 mils (4.1 mm)	ASTM D 5147 section 6
<sup>1</sup> Peak Load @ 73°F (average)	90 lbf/inch (15.8 kN/m)	ASTM D 5147 section 7
<sup>1</sup> Elongation @ Peak Load, 73°F (average)	45%	ASTM D 5147 section 7
<sup>1</sup> Ultimate Elongation @ 73°F (average)	100%	ASTM D 5147 section 7
<sup>1</sup> Tear Strength (average)	100 lbf (0.45 kN)	ASTM D 5147 section 8
Water Absorption (maximum)	1 %	ASTM D 5147 section 10
Dimensional Stability (maximum)	1 %	ASTM D 5147 section 11
Low Temperature Flexibility (maximum)	-15°F (-26°C)	ASTM D 5147 section 12
Compound Stability (minimum)	225°F (107°C)	ASTM D 5147 section 16

1. The value reported is the lower of either MD or XD.