

# LAMPIRAN I

## SPESIFIKASI WOVEN GEOTEKSTIL

Technical Specification of Woven Geotextile **BIMA Geoteks®**

BIMA Geoteks®		TEST STANDARD	UNIT	BW 150	BW 200	BW 250	
PHYSICAL	Weight	ASTM D 1910	gr/m <sup>2</sup>	150	200	250	
	Thickness	ASTM D 1777	mm	0.50	0.80	1.10	
	Colour	----	----	Black	Black	Black	
MECHANICAL & HYDRAULIC	Strip Tensile Strength	ASTM D 1682	kN/m	Wrap	25	40	55
				Weft	25	40	55
	Elongation at Maximum Load	ASTM D 1682	%	20	20	24	
	Trapezoidal Tear Strength	ASTM D 4533	N	550	700	900	
	Puncture Resistance	ASTM D 4833	N	225	350	450	
	Water Permeability at 100 mm Waterhead	BS 6906	l/m <sup>2</sup> /sec	24	23	21	
	Effective Opening Size (O <sub>90</sub> )	NEN 5168	µm	280	280	270	
BIOLOGICAL & CHEMICAL	Bacteria and Other Biological Effect	----	----	nil	nil	nil	
	Soil Acidity Effect	----	----	nil	nil	nil	
	Soil Alkalinity Effect	----	----	nil	nil	nil	
	U.V. Light Effect	----	----	U.V. Stabilized	U.V. Stabilized	U.V. Stabilized	
PACKAGING	Roll Width	----	m	3.80	3.80	3.80	
	Roll Length	----	m	200	200	200	
	Area	----	m <sup>2</sup>	760	760	760	
	Roll Diameter (approx.)	----	m	0.40	0.45	0.50	
	Roll Weight (approx.)	----	kg	117	155	195	

# UnggulTex

POLYPROPYLENE WOVEN GEOTEXTILES

## TECHNICAL SPESIFICATIONS

PROPERTIES	UNIT	TEST METHOD	UW - 150	UW - 200	UW - 250
<b>Physical Properties</b>					
Mass	g/m <sup>2</sup>	ASTM D 5261-92	150	200	250
Thickness	mm	ASTM D 5199-91	0.5	0.6	0.7
Colour	-	-	Black	Black	Black
<b>Mechanical Properties</b>					
Strip Tensile Strength (Wrab/Weft)	kN/m	ASTM D 4595-94	37/35	42/39	52/52
Elongation at Max. Load (Wrab/Weft)	%	ASTM D 4595-94	19/18	20/20	20/20
Grap Tensile Strength (Wrab/Weft)	N	ASTM D 4632-91	1210/1200	1600/1600	1750/1750
Elongation at Max. Load (Wrab/Weft)	%	ASTM D 4632-91	14/13	22/22	22/22
Trapezoidal Tear Strength (Wrab/Weft)	N	ASTM D 4533-91	615/615	700/700	800/800
<b>Hydraulic Properties</b>					
Pore Size O <sub>95</sub>	µm	ASTM D 4751-95	320	275	250
Water Permeability	l/m <sup>2</sup> /sec	100 mm water head	28	16	7.5
<b>Environmental Properties</b>					
Effect of soil Alkalinity	-	-	nil	nil	nil
Effect of soil Acidity	-	-	nil	nil	nil
Effect of Bacteria	-	-	nil	nil	nil
Effect of U.V. Light	-	-	Stabilized	Stabilized	Stabilized
<b>Packaging</b>					
Roll Length	m	-	150 - 200	150 - 200	150 - 200
Roll Width	m	-	3 - 4	3 - 4	3 - 4
Roll Area	m <sup>2</sup>	-	640 - 760	640 - 760	640 - 760
Roll Diameter (Approx)	m	-	0.4 - 0.5	0.4 - 0.5	0.4 - 0.5
Roll Weight (Approx)	kg	-	96 - 114	128 - 152	160 - 190

All information, illustration and specification are based on the latest product information available at the time of printing. The right is reserved to make changes at any time without notice.

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## LAMPIRAN II

### SPESIFIKASI NONWOVEN GEOTEKSTIL

<b>BIMA Geoteks®</b>		<b>TEST STANDARD</b>	<b>UNIT</b>	<b>BnW 210</b>	<b>BnW 260</b>	<b>BnW 310</b>	<b>BnW 410</b>	<b>BnW 510</b>
<b>PHYSICAL</b>	Weight	ASTM D 3776	gr/m <sup>2</sup>	210	260	310	410	510
	Thickness	ASTM D 3777	mm	1.00	1.25	1.50	2.00	2.50
	Colour	---	---	White	White	White	White	White
<b>MECHANICAL &amp; HYDRAULIC</b>	Strip Tensile Strength	ASTM D 5035	kN/m	12.0	16.0	17.0	21.0	28.0
	Elongation at Maximum Load	ASTM D 5035	%	> 65	> 65	> 65	> 65	> 65
	Coef. Of. Permeability	BS. 6906	l/m <sup>2</sup> /sec	100	65	45	45	45
	Trapezoidal Tear Strength	ASTM D 4533	N	180	320	350	530	600
	Puncture Resistance	ASTM D 4833	N	280	460	470	590	770
	Effective Opening Size (O100)	ASTM D 4751	µm	75	75	75	75	75
<b>BIOLOGICAL &amp; CHEMICAL</b>	Bacteria and Other Biological Effect	---	---	nil	nil	nil	nil	nil
	Soil Acidity Effect	---	---	nil	nil	nil	nil	nil
	Soil Alkalinity Effect	---	---	nil	nil	nil	nil	nil
	U.V. Light Effect	---	---	U.V. Stabilized				
<b>PACKAGING</b>	Roll Width	---	m	2.3 / 4.0	2.3 / 4.0	2.3 / 4.0	2.3 / 4.0	2.3 / 4.0
	Roll Length	---	m	100	100	100	100	100
	Area	---	m <sup>2</sup>	230/400	230/400	230/400	230/400	230/400
	Roll Diameter (approx.)	---	m	0.50	0.55	0.55	0.60	0.65
	Roll Weight (approx.)	---	kg	48 / 84	59.5 / 104	71 / 124	94 / 164	112.5 / 196

PROPERTIES	TEST METHOD	UNIT	UNW-150	UNW-200	UNW-250	UNW-300	UNW-350	UNW-400	UNW-450	UNW-500	UNW-600
<b>Physical</b>											
Thickness	ASTM D 1777	mm	1.0	1.2	1.5	1.7	2.0	2.3	2.6	3.0	4.0
Polymer	-	-	PET	PET	PET	PET	PET	PET	PET	PET	PET
Mass Per Unit Area	-	g/m <sup>2</sup>	150	200	250	300	350	400	450	500	600
Colour	-	-	White	White	White	White	White	White	White	White	White
<b>Mechanical</b>											
Tensile Strength	ASTM D 4595	kN/m	12.0	15.3	19.3	21.0	24.5	28.3	31.7	36.5	45.0
Elongation at Break	ASTM D 4595	%	40	40	40	40	40	40	40	40	40
Grab Strength	ASTM D 4632	N	695	932	1180	1330	1525	1800	1895	1960	2150
Elongation at Break	ASTM D 4632	%	40	40	40	40	40	40	40	40	40
Tear Strength	ASTM D 4633	N	275	360	480	545	595	630	671	710	845
Puncture Strength	ASTM D 4833	N	400	482	635	730	800	820	852	885	930
CBR Puncture Strength	DIN 54307	N	1794	2365	3142	3687	4120	4429	4895	5429	6568
<b>Hydraulic</b>											
Permeability (5 cm of water head)	ASTM D 4491	lm <sup>2</sup> /s	71	65	55	45	42	40	38	37	35
Opening Size	ASTM D 4751	mm	0.24	0.21	0.19	0.17	0.15	0.13	0.09	0.07	0.06
<b>Environmental</b>											
Effect of Soil Alkalinity	-	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Effect of Soil Acidity	-	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Effect of UV light	-	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
<b>Dimension</b>											
Roll Width	-	m	4	4	4	4	4	4	4	4	4
Roll Length	-	m	100	100	100	100	100	100	100	100	100
Roll Diameter	-	m	0.4	0.45	0.5	0.55	0.60	0.65	0.7	0.8	0.85

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