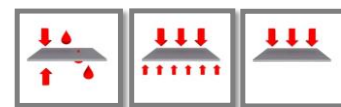


## SNW

### Superior Needle Punched Nonwoven Geotextiles



### Technical Data Sheet 1/2

Date: 12-2-2013 rev 18

Mechanical Properties	Test	Units	14	17	25	31	40 UV	46	50 SP	55
Tensile Strength - MD	EN ISO 10319	kN/m	8,0	10,3	14,0	17,8	22,0	27,0	30,0	33,5
Tensile Strength - XD	EN ISO 10319	kN/m	8,0	10,3	14,0	17,8	22,0	27,0	30,0	33,5
Elongation at break - MD	EN ISO 10319	%	40,0	45,0	45,0	50,0	50,0	50,0	50,0	55,0
Elongation at break - XD	EN ISO 10319	%	55,0	55,0	55,0	55,0	55,0	55,0	55,0	60,0
CBR Puncture Resistance	EN ISO 12236	N	1400	1700	2500	3100	4000	4600	5000	5500
Dynamic Cone Drop	EN ISO 13433	mm	28	22	18	13	12	10	9	7
Pyramid Puncture	EN 14574	N	85,0	120,0	200,0	275,0	385,0	440,0	500,0	550,0

Hydraulic Properties										
Permeability	EN ISO 11058	m/s	110x10 <sup>-3</sup>	100x10 <sup>-3</sup>	80x10 <sup>-3</sup>	70x10 <sup>-3</sup>	60x10 <sup>-3</sup>	65x10 <sup>-3</sup>	50x10 <sup>-3</sup>	45x10 <sup>-3</sup>
Waterflow normal to the plane	EN ISO 11058	l/m <sup>2</sup> .s	110	100	80	70	60	55	50	45
Waterflow in the plane-20kPa	EN ISO 12958	m <sup>2</sup> /s	1x10 <sup>-7</sup>	1x10 <sup>-7</sup>	1x10 <sup>-6</sup>	2x10 <sup>-6</sup>	3x10 <sup>-6</sup>	5x10 <sup>-6</sup>	1x10 <sup>-5</sup>	6x10 <sup>-6</sup>
Characteristic Opening Size	EN ISO 12956	µm	120,0	110,0	100,0	95,0	90,0	85,0	80,0	75,0

Physical Properties										
Thickness under 2 kPa	EN ISO 9863-1	mm	1,2	1,5	1,8	2,2	2,4	2,8	3	3,2
Weight	EN ISO 9864	g/m <sup>2</sup>	120	150	200	250	300	370	400	450
Roll width		cm	525	525	500	525	525	525	525	525
Roll length		m	100	100	100	100	100	100/50	50	75
Full truck load volume (+/- 10%)		m <sup>2</sup>	57 750	44 625	34 125	27 200	22 500	18 000	17 325	14 700
Roll diameter (+/- 10%)		cm	35	38	45	49	54	60/42	44	58

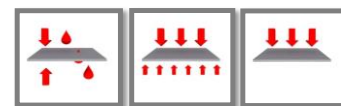
Durability			Product Description	
Natural UV light	ASTM 4533	100%	Polymer	100% Polypropylene
Chemical Resistance	EN 14030	100%	Density	0,91 kg/dm <sup>3</sup>
Oxidation Resistance	EN ISO 13438	>90%	Melting Point	165°C
Microbiological Resistance	EN 12225	100%	Fiber bonding	Mechanical/Thermal
Hydrolysis	EN 12447	100%		



Bonar reserves the right to alter product specifications without prior notice. It is the responsibility of all users to satisfy themselves that the above data is current. The above figures are average values obtained from testing to current EN ISO geotextile test standards. All these products need to be covered within 2 weeks.

## SNW

### Superior Needle Punched Nonwoven Geotextiles



### Technical Data Sheet 2/2

Date: 3-12-2012 rev 15

Mechanical Properties	Test	Units	62	70	75	80	85	90	100	120	140
Tensile Strength - MD	EN ISO 10319	kN/m	37,0	42,0	43,0	45,0	50,0	54,0	58,0	70,0	84,0
Tensile Strength - XD	EN ISO 10319	kN/m	37,0	42,0	43,0	45,0	50,0	54,0	58,0	70,0	84,0
Elongation at break - MD	EN ISO 10319	%	60,0	60,0	60,0	65,0	70,0	70,0	70,0	70,0	70,0
Elongation at break - XD	EN ISO 10319	%	65,0	65,0	65,0	70,0	70,0	70,0	70,0	70,0	70,0
CBR Puncture Resistance	EN ISO 12236	N	6200	7000	7400	8000	8500	9000	10000	11500	14000
Dynamic Cone Drop	EN ISO 13433	mm	5	4	3	2	2	1	1	0	0
Pyramid Puncture	EN 14574	N	600,0	705,0	750,0	810,0	850,0	900,0	1000,0	1250,0	1700,0

Hydraulic Properties											
Permeability	EN ISO 11058	m/s	40x10 <sup>-3</sup>	35x10 <sup>-3</sup>	33x10 <sup>-3</sup>	30x10 <sup>-3</sup>	29x10 <sup>-3</sup>	28x10 <sup>-3</sup>	28x10 <sup>-3</sup>	20x10 <sup>-3</sup>	15x10 <sup>-3</sup>
Waterflow normal to the plane	EN ISO 11058	l/m <sup>2</sup> .s	40	35	33	30	29	28	28	20	15
Waterflow in the plane-20kPa	EN ISO 12958	m <sup>2</sup> /s	6,5x10 <sup>-6</sup>	7x10 <sup>-6</sup>	7x10 <sup>-6</sup>	6x10 <sup>-6</sup>	8,5x10 <sup>-6</sup>	7x10 <sup>-6</sup>	8x10 <sup>-6</sup>	8,5x10 <sup>-6</sup>	9x10 <sup>-6</sup>
Characteristic Opening Size	EN ISO 12956	µm	72,0	70,0	68,0	65,0	63,0	60,0	58,0	55,0	49,0

Physical Properties											
Thickness under 2 kPa	EN ISO 9863-1	mm	3,5	3,8	4	4,4	4,6	4,7	5,0	6,0	7,0
Weight	EN ISO 9864	g/m <sup>2</sup>	500	565	600	650	700	750	800	1000	1200
Roll width		cm	525	525	525	525	525	525	525	525	525
Roll length		m	50	60	55	55	50	50	50	35	35
Full truck load volume (+/- 10%)		m <sup>2</sup>	14 700	13 860	12 994	12 416	10 500	10 500	10 500	8 085	6 614
Roll diameter (+/- 10%)		cm	48	56	55	57	58	58	60	57	62

Durability		
Natural UV light	ASTM 4533	100%
Chemical Resistance	EN 14030	100%
Oxidation Resistance	EN ISO 13438	>90%
Microbiological Resistance	EN 12225	100%
Hydrolysis	EN 12447	100%

Product Description	
Polymer	100% Polypropylene
Density	0,91 kg/dm <sup>3</sup>
Melting Point	165°C
Fiber bonding	Mechanical/Thermal



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