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IESI / Progressive Waste Solutions

1099 Miller Drive

Altamonte Springs, FL 32701

Ref : IESI JED Landfill Cell 10

PO : JED Cell 10

Dear Sir/Madam:

This is to certify that SKAPS GE180 is a high quality needle-punched nonwoven geotextile made of 100% polypropylene staple fibers, randomly networked to form a high strength dimensionally stable fabric. SKAPS GE180 resists ultraviolet deterioration, rotting, biological degradation. The fabric is inert to commonly encountered soil chemicals. Polypropylene is stable within a pH range of 2 to 13. SKAPS GE180 conforms to the property values listed below:

PROPERTY	TEST METHOD	UNITS	M.A.R.V. Minimum Average Roll Value
Weight	ASTM D 5261	oz/sy (g/m ²)	8.00 (271)
Thickness*	ASTM D 5199	mils (mm)	100 (2.54)
Grab Tensile	ASTM D 4632	lbs (kN)	225 (1.00)
Grab Elongation	ASTM D 4632	%	50
Trapezoidal Tear	ASTM D 4533	lbs (kN)	90 (0.40)
Puncture Resistance	ASTM D 4833	lbs (kN)	130 (0.58)
Mullen Burst Strength	ASTM D 3786	psi (kPa)	425 (2930)
Permittivity*	ASTM D 4491	sec ⁻¹	1.26
Permeability*	ASTM D 4491	cm/sec	0.30
Water Flow*	ASTM D 4491	gpm/ft ² (l/min/m ²)	100 (4074)
AOS*	ASTM D 4751	US Sieve (mm)	80 (0.18)
UV Resistance	ASTM D 4355	%/hrs	70/500

Notes:

* At the time of manufacturing. Handling may change these properties.

PALAK PATEL

QUALITY CONTROL MANAGER

Product : GE180-180

ROLL # ASTM METHOD UNITS TARGET	WEIGHT D5261 oz/sq yd 8.00	THICKNESS D5199 (mils) 100	MD TENSILE D4632 lbs. 225	MD ELONG D4632 % 50	XMD TENSILE D4632 lbs 225	XMD ELONG D4632 % 50	MD TRAP D4533 lbs. 90	XMD TRAP D4533 lbs 90	PUNCTURE D4833 lbs. 130	MULLEN D3786 psi 425	AOS D4751 US Sieve 80	WATER FLOW D4491 gpm/ft ² 100	PERMEABILITY D4491 cm/sec 0.30	PERMITTIVITY D4491 sec ⁻¹ 1.26
33309.01	8.57	123	231	72	241	82	103	118	136	431	80	103	0.43	1.37
33309.02	8.57	123	231	72	241	82	103	118	136	431	80	103	0.43	1.37
33309.03	8.57	123	231	72	241	82	103	118	136	431	80	103	0.43	1.37
33309.04	8.57	123	231	72	241	82	103	118	136	431	80	103	0.43	1.37
33309.05	8.14	121	227	69	232	76	103	118	136	431	80	103	0.43	1.37
33309.06	8.14	121	227	69	232	76	103	118	136	431	80	103	0.43	1.37

*All Values are MARV.