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TOWNSVILLE

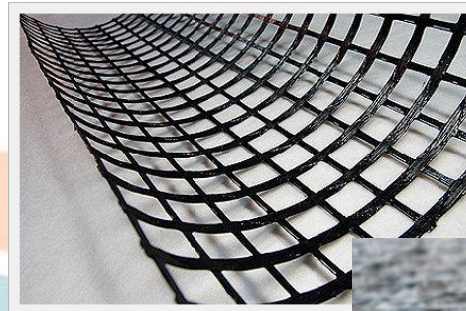
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GEOGRIDS

Geogrids consist of a geosynthetic polymer that is mechanically altered to form a sheet of apertures that interlock with the material placed over them, forming a specialized fortification used for earth retaining wall stabilization and basal and bank reinforcements.

Geogrids are available in three different forms, are either biaxial or uniaxial in their qualities, and are categorized based on their tensile strengths and method of production.

ACEGRID – Acegrid is a high tenacity, woven geogrid, featuring woven polyester yarns knotted together to form flexible junctions, and is then additionally coated with a polyester polymer providing high resistance to possible degradation due to an alkaline soil environment, and additional UV and mechanical damage. Acegrid works in a uniaxial manner, with their primary strength working in the single direction, and are suitable for use behind retaining walls and slopes as a method of reinforcement.



PROGRID – Progrid provides a much more rigid form of Geogrid, consisting of high-density polypropylene stretched with holes punched into it, forming uniform openings. It works as a high-strength reinforcing layer by absorbing the lateral forces exerted on the reinforcement from implied loads in a biaxial manner, and is used as a sub base reinforcement, soil reinforcement and in raft reinforcement construction.

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SECUGRID - Also working in a biaxial strength, Securgrid provides strength transfer in all directions with low strain development, making it ideal for use in base stabilization applications. Securgrid promotes a higher strength than most other geogrids, created with a manufacturing process that welds together a series of flat polyester or polypropylene bars in cross directions. This procedure creates a very stiff form of Geogrid, having the ability to hold it's shape and therefore more viable in supporting low load bearing subgrades in pavement applications.



COMBIGRID - An efficient combination of non-woven geotextile, securely bonded between the reinforcement bars of Securgrid Geogrid, to provide a quick & easy purpose effective for applications requiring soil reinforcement, separation, drainage & filtration all in one. Combigrid can save the need for extra fill via improving the stiffness and load distribution capacity of the base course. Using a geogrid-geotextile composite can save installation costs with a less need for fill and less time consumption in applying two different products separately. Commonly used in applications where high strength is required at low elongation. basal

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ACEGRID				
Physical Properties	Unit	GG40	GG60	GG80
Material	High Tenacity Polyester Yarn with Polymeric Coating			
Mechanical Properties				
Tensile Strength	kN/m	45	70	90
Strain at Maximum Load	%			
Long Term Design Properties & Strengths				
Creep Reduction Factor, RF	(CR 60yrs)	1.41	1.41	1.41
Installation Damage Reduction Factor	(ID sand, silt clay)	1.05	1.05	1.05
Installation Damage Reduction Factor	(ID, Sandy Gravel)	1.12	1.10	1.08
Environmental Durability Reduction Factor	0-60yrs design	1.05	1.05	1.05
LTDS (120yrs), T	Allowable in Sand, Silt, Clay – kN/m	27.2	42.4	54.5
LTDS (120 yrs), T	Allowable in Sandy Gravel – kN/m	25.5	40.5	53.0
Roll Sizes				
Length	M	50	50	50
Width	M	4	4	4
Nominal Weight of Roll	Kg	55	60	65

PROGRID							
Grade	Unit	20/20		30/30		40/40	
Index Properties		MD	XD	MD	XD	MD	XD
Aperture Dimension	Mm	38	43	34	41	37	43
Minimum Rib Thickness	Mm	1.8	1.5	2.5	1.7	3.3	1.9
Load Capacity							
Tensile Strength @ 2% strain	kN/m	7	7	11	11	14	14
Tensile Strength @ 5% strain	kN/m	14	14	22	22	28	28
Ultimate Tensile Strength	kN/m	20	20	30	30	40	40
Structural Integrity							
Junction Efficiency	%	100		100		100	
Flexural Stiffness	Mg-cm	780,000		900,000		120,000	
Physical Properties							
Resistance to Long Term Degradation	%	100		100		100	
Roll Dimensions	M	3.9 x 50		3.9 x 50		3.9 x 50	

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SECUGRID				
Property	Test Method	Unit	30/30 QI	40/40 QI
Polymer Polypropylene (PP) White				
Ultimate Tensile Strength MD/CD	EN ISO 10319	kN/m	≥30/≥30	≥40/≥40
Elongation at Ultimate Strength, MD/CD	EN 10319	%	≥8/≥8	≥8/≥8
Tensile Strength at 2% elongation MD/CD	EN 10319	kN/m	12/12	16/16
Aperture size, MD X CD		Mm X mm	Approx. 32 x 32	Approx 31 x 31
UV resistance	ASTMD 4355 (900 hrs)	%	>90	>94
Roll Dimensions		M x m	4.75 x 100	4.75 x 100

COMBIRGRID				
Property	Test Method*	Unit	30/30	40/40
Geogrid				
Raw Material Polypropylene (PP) white				
Mass per unit area	EN ISO 9864	g/m ²	200	
Max. Tensile strength, md/cmd**	EN ISO 10319	kN/m	≥30 / ≥30	≥40 / ≥40
Elongation at nominal strength, md/cmd**	EN ISO 10319	%	≤ 8 / ≤ 8	≤ 8 / ≤ 8
Tensile strength at 2% elongation, md/cmd**	EN ISO 10319	kN/m	12 / 12	16 / 16
Tensile Strength at 5% elongation, md/cmd**	EN ISO 10319	kN/m	24 / 24	32 / 32
Aperture size, md x cmd		Mm x mm	Approx. 32 x 32	Approx. 31 x 31
Product specific elongation		%	0	0
Geotextile				
Raw Material Polypropylene (PP) White				
Mass per unit area	EN ISO 9864	g/m ²	150	150
Mass tensile strength, md/cmd**	EN ISO 10319	kN/m	6.0 / 10.0	6.0 / 10.0
Elongation at max. tensile strength, md/cmd	EN ISO 10319	%	60 / 40	60 / 40
Puncture force	EN ISO 12236	N	1,670	1,670
Displacement at static puncture strength	EN ISO 12236	Mm	30	35
Characteristic opening size	EN ISO 12956	Mm	0.13	0.13
Water permeability	EN ISO 11058			
- Vih50 Index		m/s	1.1 x 10 ⁻¹	1.1 x 10 ⁻¹
- Flow rate H50		l/sm ²	110	110
Detector Tested			Yes	Yes
Roll dimensions, width x length		M x m	4.75 x 100	4.75 x 100