

## ACEGrid<sup>®</sup> Specification Uniaxial Geogrid<sup>1</sup>

ACEGrid<sup>®</sup> GG-Series is woven by high-tenacity, multifilament polyester yarns and coated with durable polymer which can provide best resistance of UV and durability. ACE provides wide strength range of ACEGrid<sup>®</sup> GG-Series with high quality advantages - high tensile modulus and low creep behaviors..., etc. ACEGrid<sup>®</sup> GG-Series successfully offer the stability to earth structures, such as Reinforced Retaining Wall or Steep Slope, Road, Bridge or Pavement Construction.

### Product Properties

Physical Properties	Units	GG30-I	GG40-I	GG60-I	GG80-I	GG100-I	GG150-I	Test Method
Material		High Tenacity Polyester Yarn Coated with Durable Polymer						
Aperture Size - MD ± 20%	mm	25	25	24	23	21	20	
Aperture Size - CD ± 20%	mm	28	28	28	28	28	28	
<b>PET Yarn Properties</b>								
Carboxyl End Group(CEG)	mmol/kg	<30	<30	<30	<30	<30	<30	GRI GG7
Molecular Weight	Mn	>25000	>25000	>25000	>25000	>25000	>25000	GRI GG8
<b>Mechanical Index Properties</b>								
Tensile Strength ,T <sub>ult</sub> - MD min	kN/m	30	40	60	80	100	150	ASTM D6637
Tensile Strength ,T <sub>ult</sub> - CD min	kN/m	30	30	30	30	30	30	ASTM D6637
Elongation - MD	%	10	10	10	10	10	10	ASTM D6637
Tensile Strength at 2% Strain- MD min	kN/m	8	10	15	20	25	38	ASTM D6637
Tensile Strength at 5% Strain- MD min	kN/m	15	20	30	40	50	75	ASTM D6637
Long Term Design Strength, T <sub>al</sub> <sup>2</sup>	kN/m	17	23	35	47	59	88	
<b>Dimensional Characteristics</b>								
Length	m	50 / 100	50 / 100	50 / 100	50 / 100	50 / 100	50 / 100	
Width <sup>3</sup>	m	3.9	3.9	3.9	3.9	3.9	3.9	
Area	m <sup>2</sup>	195 / 390	195 / 390	195 / 390	195 / 390	195 / 390	195 / 390	

### Notes:

1. Tensile strength of uniaxial ACEGrid<sup>®</sup>, ranging from 20 kN/m to 900 kN/m, can be customized according to client's requirement.
2. LTDS (Long-Term Design Strength) of ACEGrid<sup>®</sup> is calculated base on FHWA-NHI-00-043. The long-term design strength value has been compounded by reduction factors, such as installation damage (RF<sub>ID</sub>), creep (RF<sub>CR</sub>), durability(RF<sub>D</sub>).
3. The maximum width of above items can reach 5m to meet the client's requirement.
4. The values given are indicative and correspond to MARV obtained in ACE laboratory. The right is reserved to make changes without notice.
5. Information contained in this publication is accurate to the best of the knowledge of ACE Geosynthetics. Any information or advice obtained from ACE Geosynthetics otherwise than by means of this publication and weather relating to ACE Geosynthetics materials or other materials, is also given in good faith. However, it remains at all times, the responsibility of the customer to ensure that ACE Geosynthetics material suitable for the particular purpose intended. Insofar as materials not manufactured or supplied by ACE Geosynthetics are used in conjunction with or instead of ACE Geosynthetics materials, the customer should ensure that he has received from the manufacture or supplier all the technical data and other information relating to such supplied, the application or processing of the products described herein, the use of other materials in lieu of ACE Geosynthetics materials in conjunction with such other materials.



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TEL: 886-4-26595926 FAX: 886-4-26595935

E-mail: [sales@geoace.com](mailto:sales@geoace.com)

<http://www.geoace.com>

# ACEGrid® Specification

## Uniaxial Geogrid<sup>1</sup>

ACEGrid® GG-Series is woven by high-tenacity, multifilament polyester yarns and coated with durable polymer which can provide best resistance of UV and durability. ACE provides wide strength range of ACEGrid® GG-Series with high quality advantages - high tensile modulus and low creep behaviors..., etc. ACEGrid® GG-Series successfully offer the stability to earth structures, such as Reinforced Retaining Wall or Steep Slope, Road, Bridge or Pavement Construction.

### Product Properties

Physical Properties	Units	GG200-I	GG300-I	GG400-I	GG600-I	GG800-I	Test Method
Material		High Tenacity Polyester Yarn Coated with Durable Polymer					
Aperture Size - MD ± 20%	mm	19	26	23	40	18	
Aperture Size - CD ± 20%	mm	28	26	26	15	24	
<b>PET Yarn Properties</b>							
Carboxyl End Group(CEG)	mmol/kg	<30	<30	<30	<30	<30	GRI GG7
Molecular Weight	Mn	>25000	>25000	>25000	>25000	>25000	GRI GG8
<b>Mechanical Index Properties</b>							
Tensile Strength ,T <sub>ult</sub> - MD min	kN/m	200	300	400	600	800	ASTM D6637
Tensile Strength ,T <sub>ult</sub> - CD min	kN/m	40	40	50	100	100	ASTM D6637
Elongation - MD	%	10	11	11	12	13	ASTM D6637
Tensile Strength at 2% Strain- MD min	kN/m	50	60	80	90	160	ASTM D6637
Tensile Strength at 5% Strain- MD min	kN/m	100	120	160	180	240	ASTM D6637
Long Term Design Strength, T <sub>al</sub> <sup>2</sup>	kN/m	118	177	227	340	473	
<b>Dimensional Characteristics</b>							
Length	m	50 / 100	50	50	50	50	
Width <sup>3</sup>	m	3.9	3.9	3.9	3.9	3.9	
Area	m <sup>2</sup>	195 / 390	195	195	195	195	

### Notes:

1. Tensile strength of uniaxial ACEGrid®, ranging from 20 kN/m to 900 kN/m, can be customized according to client's requirement.
2. LTDS (Long-Term Design Strength) of ACEGrid® is calculated base on FHWA-NHI-00-043. The long-term design strength value has been compounded by reduction factors, such as installation damage (RF<sub>ID</sub>), creep (RF<sub>CR</sub>), durability(RF<sub>D</sub>).
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