

StrataGrid™ uniaxial (SGU) is a polyester (PET) geogrid reinforcement for soil. These high-performance geogrids are constructed of high molecular weight polyester yarns knitted with a proprietary coating. SGU grid is engineered to be mechanically and chemically durable, in both the harsh construction installation phase and in the aggressive soil environments.

		Unit	SGU 35	SGU 40	SGU 55	SGU 55-30	SGU 60	SGU 80	SGU 90	SGU 100	SGU 110	
Mechanical properties												
Characteristic tensile strength (ASTM D6637 / EN ISO 10319) (min.)		MD	kN/m	35	40	55	55	60	80	90	100	110
		CMD	kN/m	20	20	20	30	20	30	30	30	30
Elongation at characteristic strength ⁽¹⁾ (ASTM D6637 / EN ISO 10319)		MD	%	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5
Tensile strength at ⁽²⁾ (ASTM D6637 / EN ISO 10319)	2% strain	MD	kN/m	7	8	11	11	12	16	18	20	22
	3% strain		kN/m	10.5	12	16.5	16.5	18	24	27	30	33
	5% strain		kN/m	17.5	20	27.5	27.5	30	40	45	50	55
Creep reduction factor (at 20°C,120 years design life)		RF _{CR}		1.42	1.42	1.42	1.42	1.42	1.42	1.42	1.42	1.42
Creep limited strength		MD	kN/m	24.6	28.2	38.7	38.7	42.3	56.3	63.4	70.4	77.4
Partial factor – installation damage (ASTM D5818) (In clay, silt or sand)		RF _{ID}		1.10	1.10	1.10	1.10	1.10	1.02	1.02	1.02	1.02
Partial factor - environmental effect (5 ≤ pH ≤ 8)		RF _D		1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
Physical properties												
Roll width			m	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
Roll length			m	100	100	100	100	100	100	100	100	100
Roll Weight (±5%)			kg	125	128	140	153	154	188	210	216	226
Molecular properties												
Molecular weight (ASTM D4603)			g/mol	min. 25,000								
Carboxyl end group(CEG) (ASTM D7409)			mmol/kg	max. 30								

Notes

- The above properties might change at the time of the manufacturing, storing, handling or shipping. The values are subject to change as per the discretion of the company.
- Varying roll widths can be provided on order - 1.9m / 3.8m / 5m.
- Customised rolls with varying lengths or master rolls can be manufactured on order.
- Tested in GAI-LAP and NABL accredited laboratories. ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 Certified Organisation.

⁽¹⁾Tolerance for elongation is ±2.5%.

⁽²⁾Tensile strength in terms of characteristics (90th percentile) values, which are statistically safe values.

Reference: SGIPL-2526-TD-TDS-SGU-D2R2-02

Last updated - 01st September 2025

www.strataglobal.com | technical@strataindia.com | +91 22 4063 5100



GAI-LAP | C E

StrataGrid™ uniaxial (SGU) is a polyester (PET) geogrid reinforcement for soil. These high-performance geogrids are constructed of high molecular weight polyester yarns knitted with a proprietary coating. SGU grid is engineered to be mechanically and chemically durable, in both the harsh construction installation phase and in the aggressive soil environments.

		Unit	SGU 120	SGU 150	SGU 180	SGU 200	SGU 250	SGU 300	SGU 350	SGU 400	SGU 450	
Mechanical properties												
Characteristic tensile strength (ASTM D6637 / EN ISO 10319) (min.)		MD	kN/m	120	150	180	200	250	300	350	400	450
		CMD	kN/m	30	30	30	30	30	30	30	30	30
Elongation at characteristic strength ⁽¹⁾ (ASTM D6637 / EN ISO 10319)		MD	%	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5
Tensile strength at ⁽²⁾ (ASTM D6637 / EN ISO 10319)	2% strain	MD	kN/m	24	30	36	40	50	60	70	80	90
	3% strain		kN/m	36	45	54	60	75	90	105	120	135
	5% strain		kN/m	60	75	90	100	125	150	175	200	225
Creep reduction factor (at 20°C,120 years design life)		RF _{CR}		1.42	1.42	1.42	1.42	1.42	1.42	1.42	1.42	1.42
Creep limited strength		MD	kN/m	84.5	105.6	126.8	140.8	176.1	211.3	246.5	281.7	316.9
Partial factor – installation damage (ASTM D5818) (In clay, silt or sand)		RF _{ID}		1.02	1.02	1.02	1.06	1.06	1.06	1.06	1.06	1.06
Partial factor - environmental effect (5 ≤ pH ≤ 8)		RF _D		1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
Physical properties												
Roll width			m	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
Roll length			m	100	100	100	100	100	100	100	100	100
Roll Weight (±5%)			kg	234	271	299	318	367	437	481	578	649
Molecular properties												
Molecular weight (ASTM D4603)			g/mol	min. 25,000								
Carboxyl end group(CEG) (ASTM D7409)			mmol/kg	max. 30								

- Notes**
- The above properties might change at the time of the manufacturing, storing, handling or shipping. The values are subject to change as per the discretion of the company.
 - Varying roll widths can be provided on order - 1.9m / 3.8m / 5m.
 - Customised rolls with varying lengths or master rolls can be manufactured on order.
 - Tested in GAI-LAP and NABL accredited laboratories. ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 Certified Organisation.
- ⁽¹⁾Tolerance for elongation is ±2.5%.
⁽²⁾Tensile strength in terms of characteristics (90th percentile) values, which are statistically safe values.