

TechGrid U series are uniaxial knitted polyester geogrids with a protective proprietary coating engineered for demanding soil reinforcement applications. TechGrid is manufactured from select grades of high tenacity polyester yarn with molecular weight > 25,000 and carboxyl end groups < 30, to ensure high strengths, low creep and excellent durability. The yarns are formed into a dimensionally stable grid structure with uniform apertures, using an advanced weft insertion warp knitting process which is then given a tough and durable polymeric coating to enhance dimensional stability, resistance to installation damage and durability.

TechGrid Uniaxial geogrids conform to the following property values:

Property		Test Method	Unit	TGU 40	TGU 60	TGU 80	TGU 100	TGU 120	TGU 150	TGU 200	TGU 250	TGU 300	TGU 350	TGU 400	TGU 450	TGU 500	TGU 550	TGU 600	
Ultimate tensile strength <sup>1</sup>	MD	EN ISO 10319	kN/m	40	60	80	100	120	150	200	250	300	350	400	450	500	550	600	
	CD			20	20	30	30	30	30	30	30	30	30	30	30	30	30	30	30
Elongation At Nominal Strength	MD	ASTM D 6637	%	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	
	CD			12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
<b>Reduction Factors (RF) and factor of safety (f) for calculation of MD Long-term Design Strength(LTDS)</b>																			
Creep (RF <sub>CR</sub> ) -120 years design life at 20° C temperature				1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	
Installation damage (RF <sub>ID</sub> )	Sand/silt/clay			1.04	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	
	Coarse gravel (37.5 mm)			1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	
Durability (RF <sub>CH</sub> ), 120 years design life				1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	
LTDS – 120 years : Sand/silt/clay pH -4-9				kN/m	24.8	37.9	50.6	63.2	75.8	94.8	126.4	158.0	189.6	221.2	252.8	284.4	315.9	347.5	379.1
<b>Physical properties</b>																			
Aperture size ( Tolerance± 2 mm)			mm	30/25	30/25	30/25	30/23	30/23	30/23	30/23	30/22	30/21	30/20	30/18	30/15	30/15	30/15	30/15	
<b>Roll dimensions</b>																			
Roll length			m	100															
Roll width			m	3.9/5.1/ 5.9															

Reported Ultimate tensile strength<sup>1</sup> are average (typical) Value obtained in accredited testing laboratories MD – Machine Direction CD – Cross Direction.



**TechFab India Industries Limited.**

46/ 47, Maker Chambers VI, Nariman Point, Mumbai – 400021. INDIA. Tel: + 91 22-22876224 / 25, Fax : +91 22-22876218.

Email : [office@techfabindia.com](mailto:office@techfabindia.com) , Website : [www.techfabindia.com](http://www.techfabindia.com)

**Notes-**

Above properties might change at the time of manufacturing, storing, handling or shipping the above values are subjected to change as per description of the company

Customized rolls with varying lengths or master rolls can be manufactured.

Tested in GAI LAP / NABL accredited Laboratories

This product specification supersedes, all prior specification of product described. This information has been carefully compiled by TechFab India Industries Limited and to the best of our knowledge is accurate

Final determination of the suitability of any information or material is the sole responsibility of the user. Structural design shall be performed by a licensed design professional. **Date - 07.02.2022**