

CHECKMATE FLEXGRID™ UX PET

Checkmate Flexgrid UX series is specifically designed for improved performance in soil reinforcement applications where strength develops uni-axially. Flexgrids are manufactured with high molecular weight, high tenacity polyester yarns by precision knitting process. Flexgrid is dimensionally stable with uniform network of apertures providing significant tensile reinforcement capacity in two principal directions. The Flexgrid is engineered to be mechanically and chemically stable, in both harsh construction installation phases and in aggressive soil environments (pH level 2.0 – 12.0). Flexgrids are biologically unaffected by soil micro-organisms. A black PVC saturation coating provides further chemical, mechanical, and ultraviolet protection.

TENSILE PROPERTIES	TEST METHOD	UNIT	UX10PET	UX20PET	UX35PET	UX50PET
Ultimate Tensile Strength ⁽¹⁾	ASTM D 6637	Lb/ft /kN/m	2173 / 31.7	3396 / 49.54	5050 / 73.68	7027 / 102.52
Tension at 5% Strain ⁽¹⁾	ASTM D 6637	Lb/ft /kN/m	967/14.1	1472/ 21.47	2044/ 29.82	2781 / 40.58
Strain at Ultimate ⁽²⁾	ASTM D 6637	%	10.5	10.7	10.4	10.5
Creep Reduced Strength ⁽¹⁾	ASTM D 5262	Lb/ft /kN/m	1375 / 20.06	2149/ 31.35	3196/ 46.63	4447 / 64.9
Long-Term Design Strength (LTDS) in (sand, silt, and clay)	GRI-GG4b	Lb/ft /kN/m	1190 / 17.36	1861/ 27.14	2767/ 40.37	3850 / 56.17
Coefficient of Direct Sliding – Cds (silty & concrete sand)	ASTM D 5321		0.85	0.85	0.85	0.85
Coefficient of Interaction – Ci (silty & concrete sand)	ASTM D 6706		0.90	0.90	0.90	0.90
PHYSICAL PROPERTIES						
Weight ⁽³⁾	Minimum	Kg / lbs	22/ 48.50	28/ 61.72	40/ 88.19	44.81 / 98.79
Roll Length ⁽³⁾	Minimum	ft/m	164.04/ 50.0	164.04/ 50.0	164.04/ 50.0	164.04 / 50.0
Roll Width ⁽³⁾	Minimum	ft/m	8.2/ 2.5	8.2/ 2.5	8.2/ 2.5	8.2 / 2.5

NOTE: (1) Marv (Minimum Average Roll Values) determined in accordance with ASTM D 4759 Values; (2) average (3) typical. Standard roll lengths are shown; the products may be fabricated to custom lengths to suit the contractor's requirements.

NOTE: This specification sheet supersedes all prior specifications for FLEXGRID and is not applicable to any product shipped prior to April 1, 2008.

CHECKMATE FLEXGRID™ UX PET Typical Applications:

- Steep slope reinforcement
- Reinforced soil retaining walls and bridge abutments
- Gabion retaining walls
- Vegetated retaining walls
- Ecoscape Wall Systems
- Landfill expansion projects
- Railway embankments
- Veneer reinforcement
- Earth bunds around oil tanks

Disclaimer: Checkmate reserves the right to change these specifications without notice and at its sole discretion. The user of this specification sheet is required to obtain formal confirmation from Checkmate of the current specification of the product it intends to use.



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TENSILE PROPERTIES	TEST METHOD	UNIT	UX70PET	UX90PET	UX100PET	UX150PET
Ultimate Tensile Strength ⁽¹⁾	ASTM D 6637	Lb/ft /kN/m	7834 / 114.30	9075 / 132.40	10884 / 158.80	13948 / 203.50
Tension at 5% Strain ⁽¹⁾	ASTM D 6637	Lb/ft /kN/m	3134 / 45.72	3601 / 52.54	4031 / 58.80	4810 / 70.17
Strain at Ultimate ⁽²⁾	ASTM D 6637	%	10.7	10.5	10.7	10.8
Creep Reduced Strength ⁽¹⁾	ASTM D 5262	Lb/ft /kN/m	4958 / 72.34	5743 / 83.79	6889 / 100.50	8828 / 128.79
Long-Term Design Strength (LTDS) in (sand, silt, and clay)	GRI-GG4b	Lb/ft /kN/m	4293 / 62.63	4972 / 72.54	5963 / 87.0	7642 / 111.5
Coefficient of Direct Sliding – Cds (silty & concrete sand)	ASTM D 5321		0.85	0.85	0.85	0.85
Coefficient of Interaction – Ci (silty & concrete sand)	ASTM D 6706		0.90	0.90	0.90	0.90
PHYSICAL PROPERTIES						
Weight ⁽³⁾	Minimum	Kg / lbs	56.23 / 123.98	59.00 / 130.07	72.22 / 159.21	86 / 189.59
Roll Length ⁽³⁾	Minimum	ft/m	164.04 / 50.0	164.04/ 50.0	164.04/ 50.0	164.04 / 50.0
Roll Width ⁽³⁾	Minimum	ft/m	8.2/ 2.5	8.2/ 2.5	8.2/ 2.5	8.2 / 2.5

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