

RAUGRID™ 15X3N geogrid

LUCKENHAUS RAUGRID™ geogrids, for soil and aggregate reinforcement, are manufactured of high tenacity, high molecular weight, polyester yarns, woven into a stable interlocking grid and then PVC coated to provide damage protection during installation. They are developed for the reinforcement of steepened slopes and segmental retaining walls.

RAUGRID™ geogrids are:

- Biologically inert, resistant to most naturally encountered chemicals, alkalis, and acids
- Resistant to ultra violet exposure and installation damage
- Resistant to long-term creep
- Flexible for easy installation

Physical Properties of RAUGRID™ 15X3N Geogrid

CE Roll Marking is Orange + Brown

PROPERTY	UNIT	TEST METHOD	VALUE
WEIGHT (Typical)	oz/yd ²	ASTM D-5261	20.6
APERTURE SIZE (Grid) (Typical)	in	Measured w/ calipers	0.8 (MD) 0.8 (TD)
PERCENT OPEN AREA (Grid only)	%	COE method	75+
WIDE WIDTH TENSILE STRENGTH @ ULTIMATE	lb/ft	ASTM D-6637-01	10,279 (MD)
ELONGATION AT BREAK (Typical)	%	ASTM D-6637-01	12 (MD) ±3
LONG TERM DESIGN STRENGTH (LTDS)	lb/ft	FHWA NHI-00-043	5544 (MD)
ROLL DIMENSIONS (Width x Length)	ft	—	8.2 x 164
ROLL AREA	yd ²	—	149.5
ROLL WEIGHT (Typical)	lb	—	200

- All values stated here are Minimum Average Roll Values and are based on a 95% confidence level.
- MD-Machine Direction; TD-Transverse Direction (also called Cross Direction)
- RAUGRID™ is manufactured from polyester with a molecular weight (M_n) > 25,000 grams/mole and Carboxyl End Groups (CEG's) < 30 mmol/kg.

$$LTDS = \frac{T_{ULTIMATE}}{RF_{CR} \cdot RF_{ID} \cdot RF_D} = \frac{10,279 \text{ (MD)}}{1.55 \times 1.04 \times 1.15} = 5544 \text{ (MD) lb/ft}$$

Partial Reduction Factors: RF_{CR} = for creep deformation for 75 year life
 RF_{ID} = for installation damage in silty sand
 RF_D = for biological and chemical degradation (based on FHWA default value = 1.15)

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