

## RAUGRID™ 3X3N 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 and for base reinforcement.

*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™ 3X3N Geogrid

CE Roll Marking is White + Yellow

| PROPERTY                                  | UNIT               | TEST METHOD          | VALUE                    |
|---|--------------------|----------------------|--------------------------|
| WEIGHT (Typical)                          | oz/yd <sup>2</sup> | ASTM D-5261          | 6.3                      |
| APERTURE SIZE (Grid)<br>(Typical)         | in                 | Measured w/ calipers | 0.8 (MD)<br>0.8 (TD)     |
| PERCENT OPEN AREA (Grid only)             | %                  | COE method           | 75+                      |
| WIDE WIDTH TENSILE STRENGTH<br>@ ULTIMATE | lb/ft              | ASTM D-6637-01       | 2055 (MD)<br>2055 (TD)   |
| ELONGATION AT BREAK (Typical)             | %                  | ASTM D-6637-01       | 12 (MD) ±3<br>13 (TD) ±3 |
| LONG TERM DESIGN STRENGTH<br>(LTDS)       | lb/ft              | FHWA NHI-00-043      | 1067 (MD)<br>1067 (TD)   |
| ROLL DIMENSIONS<br>( Width x Length)      | ft                 | —                    | 8.2 x 164                |
| ROLL AREA                                 | yd <sup>2</sup>    | —                    | 149.5                    |
| ROLL WEIGHT (Typical)                     | lb                 | —                    | 64                       |

- 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.

$$LTDS = \frac{T_{ULTIMATE}}{RF_{CR} \cdot RF_{ID} \cdot RF_D} = \frac{2055 \text{ (MD) or } 2055 \text{ (TD)}}{1.55 \times 1.08 \times 1.15} = \frac{1067 \text{ (MD) or } 1067 \text{ (TD)}}{\text{lb/ft}}$$

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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