Hanes Geogrid

Geogrid and Direction (MD, CD)	Polymer (PET, HDPE, PP)	Aperture Size (inches)	T_{ult}[1] (lb/ft)	$T_{2\%}$[1] (lb/ft)	$T_{5\%}$[1] (lb/ft)	Xj_{ave}[1] (lb)	J[1] (m-N/deg)	RF_{CR}			RF_D
								3-yr	75-yr	100-yr	
EGRID1616 (MDxCD)	PP	1.6x1.6	1095x1095	395x395	795x795	1040x1040					

Geogrid and Direction (MD, CD)	Borrow ($\phi = 30°$)									
	RF_{ID}	RF			T_{al} (lb/ft)			C_i	F^*	C_{ds}	ρ (deg)
		3-yr	75-yr	100-yr	3-yr	75-yr	100-yr				
EGRID1616 (MDxCD)								0.67	0.38	0.67	21

Geogrid and Direction (MD, CD)	Fine Aggregate ($\phi = 34°$)									
	RF_{ID}	RF			T_{al} (lb/ft)			C_i	F^*	C_{ds}	ρ (deg)
		3-yr	75-yr	100-yr	3-yr	75-yr	100-yr				
EGRID1616 (MDxCD)								0.67	0.45	0.67	24

Geogrid and Direction (MD, CD)	Coarse Aggregate ($\phi = 38°$)									
	RF_{ID}	RF			T_{al} (lb/ft)			C_i	F^*	C_{ds}	ρ (deg)
		3-yr	75-yr	100-yr	3-yr	75-yr	100-yr				
EGRID1616 (MDxCD)								0.67	0.52	0.67	27

[1] "Minimum Average Roll Values" (MARV) in accordance with ASTM D4439

Where,

T_{ult} = wide width tensile strength @ ultimate (lb/ft),
$T_{2\%}$ = wide width tensile strength @ 2% strain (lb/ft),
$T_{5\%}$ = wide width tensile strength @ 5% strain (lb/ft),
Xj_{ave} = average junction strength per rib (lb),
J = aperture stability modulus (m-N/deg),
RF_{CR} = creep reduction factor for 3, 75 and 100-yr design life,
RF_D = durability (degradation) reduction factor,
RF_{ID} = installation damage reduction factor,
RF = ($RF_{CR} \times RF_{ID}$) for 3-yr design life or ($RF_{CR} \times RF_D \times RF_{ID}$) for 75 and 100-yr design life,
T_{al} = short-term design strength for 3-yr design life or LTDS for 75 and 100-yr design life (lb/ft) = T_{ult} / RF,
C_i = coefficient of interaction,
F^* = pullout resistance factor = $C_i \tan \phi$,
C_{ds} = coefficient of direct sliding and
$\tan \rho$ = soil-geogrid friction angle (deg) = $C_{ds} \tan \phi$.