Synteen Geogrid

Geogrid and Direction (MD, CD)	Polymer (PET, HDPE, PP)	Aperture Size (inches)	T_{ult} (lb/ft)	$T_{2\%}$ (lb/ft)	$T_{5\%}$ (lb/ft)	J_{ave} (lb)	*J* (m-N/ deg)	RF_{CR}			RF_D
								3-yr	75-yr	100-yr	
SF110 (MD)	PET	0.63 x 1.00	10300					1.43	1.51	1.51	1.30

Geogrid and Direction (MD, CD)	Borrow (ϕ = 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				
SF110 (MD)	1.05	1.50	2.06	2.06	6860	4997	4997	0.67	0.39	0.67	21.15

Geogrid and Direction (MD, CD)	Fine Aggregate (ϕ = 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				
SF110 (MD)	1.05	1.50	2.06	2.06	6860	4997	4997	0.67	0.45	0.67	24.32

Geogrid and Direction (MD, CD)	Coarse Aggregate (ϕ = 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				
SF110 (MD)	1.40	2.00	2.75	2.75	5145	3748	3748	0.67	0.52	0.67	27.63

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),
J_{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) = $C_{ds} \tan \phi$.