Stabilizing an unstable world!

PRS NEOLOY® GEOCELLS – CATEGORY D
(Cellular Confinement System)
SPECIFICATIONS

SYSTEM PHYSICAL PROPERTIES			
PROPERTIES	**DESCRIPTION**		
Material	**Neoloy® polymeric nano-composite alloy** Composite alloy of polyester/polyamide nano-fibers dispersed in polyethylene matrix		
Coefficient of Soil-Cell Friction Efficiency (±5%)	0.95	ASTM D5321	
Cell Wall Surface Texture	Textured and perforated for internal friction efficiency		
Cell Wall Height (±5%)	**50, 75, 100, 120, 150, 200 mm** (2, 3, 4, 4.7, 6, 8 in)		
Distance between Weld Seams (±2.5%)	**330, 356, 445, 660, 712 mm** (13, 14, 17.5, 26, 28 in)		
Traceability	Each section marked for full detailed traceability		
DIMENSIONAL STABILITY (±5%)			
DESCRIPTION	**VALUE**	**UNITS**	**TEST METHOD**
Cell Dimensional Stability by Coefficient of Thermal Expansion (CTE)	**≤ 135**	ppm/1°C	ISO 11359-2 (TMA) ASTM E831
SEAM WELD PROPERTIES (±7%)			
Seam Weld Strength – Weld Splitting	**> 22**	kN/m (lb/ft)	ISO-13426-1 Part 1 Method C *(1)*
(1) Adjusted to simulate optimum open cell size			
TENSILE PROPERTIES (±7%)			
Strength at Yield – non-perforated (Wide-width)	**> 25**	kN/m	ISO 10319 *(2)*
Strength at Yield – perforated (Wide-width)	**> 22**	kN/m	ISO 10319 *(2)*
(2) Standard ISO 10319 test modified to achieve more accurate results by using more representative test sample size; strip is cut adjacent to 2 seams and clamped so distance between clamps is 1/2 of cell height; test direction is perpendicular to seams. Test sample measured at strain rate 100 mm (4 in) /min at 23°C. Test of perforated tensile strength is conducted on the sample area with the densest perforations.			
PHOTOCHEMICAL & OXIDATION DURABILITY			
Resistance to UV Degradation (UV and Oxidation Resistance) *(3)* *(3) Effective design life at least 75 years*	**≥ 1600**	Minutes	ASTM D5885 (HPOIT @ 150°C) Testing per GRI GM13
LONG-TERM PLASTIC DEFORMATION (±10%)			
Cumulative Permanent Deformation (Creep Resistance) Stepped Isothermal Method (SIM): Step 1 at 44°C Step 2 at 51°C Step 3 at 58°C Step 4 at 65°C (up to 75 years)	**≤ 3.0**	% Cumulative Deformation	ASTM D-6992 (SIM) *(4)*
4) Sample size – wide-width strip with perforation pattern at fixed load of 6.1 kN/m			
DYNAMIC (ELASTIC STIFFNESS) MODULUS			
Dynamic (Elastic Stiffness) Modulus at sample elevated temperature: +30° C +45° C +60° C	 **> 800** **> 700** **> 650**	MPa	ISO 6721-1 ASTM E2254 (DMA)
Brittle Temperature:	**≤ Minus 70**	°C	

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DATA SHEET

PRODUCT PART NO.

Example: **PRS- Neoloy-445- 106-76-P-G-D**

			50- (2)				
		330- (13)	75- (3)	*(1)*	*(2)*	*(3)*	
		356- (14)	100- (4)	up to	P-		
PRS-	Neoloy-	445- (17.5)	120- (4.7)	106-	X-	G-	D
		660- (26)	150- (6)				
		712- (28)	200- (8)				
		Weld Spacing Distance Mm (in)	Cell Height mm (in)	No. of Strips / Section	P-Perforated X-Non-perforated	Color G-Gray	Category

(1) No. of Strips *– customized by project from 4 to 106 strips; different heights available upon special order*
(2) Perforations *– from ~6-22% of cell wall area of variable dimensions and shapes*
(3) Colors *– additional colors available upon request*

CELL & SECTION NOMINAL DIMENSIONS

PROPERTIES	NOMINAL	DESCRIPTION	DESCRIPTION	DESCRIPTION	DESCRIPTION	DESCRIPTION
Distance between Weld Seams	**±2.5%**	**330 mm** (13 in)	**356 mm** (14 in)	**445 mm** (17.5 in)	**660 mm** (26 in)	**712 mm** (28 in)
Cell Wall Heights	**±5%**	**50, 75, 100, 120, 150, 200 mm** (2, 3, 4, 4.7, 6, 8 in)				
Cell Dimension (Optimal opening)	**±3%**	**245 x 210 mm** (9.65 x 8.27 in)	**260 x 224 mm** (10.24 x 8.82 in)	**340 x 290 mm** (13.39 x 11.42 in)	**490 x 421 mm** (19.29 x 16.53 in)	**520 x 448 mm** (20.40 x 17.64 in)
No. of Cells/m²	**±3%**	**40** (32)	**35** (27)	**22** (18)	**10** (8)	**8** (6)
Standard Section Size*(4)* (Expanded)	**±3%**	**2.5 x 8.0 m** (8.20 x 26.25 ft)	**2.7 x 7.4 m** (8.86 x 24.28 ft)	**2.8 x 10.7 m** (9.19 x 35.10 ft)	**2.5 x 16.0 m** (8.20 x 52.49 ft)	**2.7 x 14.8 m** (8.86 x 48.56 ft)
Standard Section Area (Expanded)	**±3%**	**20 m²** (215.28 ft²)	**20 m²** (215.28 ft²)	**30 m²** (322.92 ft²)	**40 m²** (430.56 ft²)	**40 m²** (430.56 ft²)

(4) Section Sizes *– customized size sections available upon request*

SHIPPING DATA

The following data will be made available per order:

Neoloy Series + Configuration: • Height (mm/in) • No. of strips per section	**Section – Weight** • Weight per section (kg/lb)	**Pallet :** • No. of sections • Area per pallet (m²/ft²) • Gross weight (kg/lb)	**Quantity (m²/ft²):** • Per 20′ Container • Per 40′ Container

CERTIFICATIONS and ACCREDITATIONS

DESCRIPTION	ISSUED BY	CERTIFICATE NUMBER
Quality Management System Certification – ISO-9001:2008	Ronet (ANAB accredited)	Q3600
Environmental Management System Certification – ISO-14001:2004	Ronet (ANAB accredited)	E3600
Occupational Health & Safety Management Certification – ISO-18000	Ronet	O3600
EC Certificate for Factory Product Control	ITB, Building Research Institute, EU	1488-CPR-0099/Z