

TECHNICAL DATA SHEET

Geocell (GCE) AT CELL COMFORT 010.100

DESCRIPTION:

Geocells AT CELL COMFORT are composed of textured and perforated plastic tapes made of high density polyethylene (HDPE). A set of tapes with a specific height connected by ultrasonic welding makes up the system similar to a structure of „honeycomb“, which improves the mechanical parameters of soil after filling and compacting the aggregate. The three-dimensional structure is designed to optimize forces transmission, reduction of pressure and minimize of outlays in order to obtain the appropriate ground parameters on geotechnically difficult substrates or at unregulated ground and water relations. Geocells AT CELL COMFORT are manufactured as sections with dimensions adjusted to the type of implementation.

APPLICATION:

An application of geocells system AT CELL COMFORT allows to reduce the roads substructure layers and allows to preservation as well as stabilization of slopes and embankments. The soil or aggregate filling the cells is blocked by the system walls, whereby gaining better compactness. Furthermore ensues the process of mutual wedging of aggregate which positively influences on the inner friction of filler. Appropriately compacted filler together with geocells system AT CELL COMFORT prevents from the irregular settling and reduces the vertical forces. As a result, the thickness of substructure constructional layer is appropriately modified. Moreover application of geocells system AT CELL COMFORT allows to reduce of aggregate's washout, what relevantly influences on the stabilization and anti – erosive properties of slopes and embankments.

TECHNICAL PARAMETERS:

AT CELL COMFORT 010.100	Value
Raw material	polyethylene HDPE
Colour	black
*Density [g/cm ³]	0,935 ÷ 0,965
*Tensile strength of the material [kN/m ²]	≥ 21 000
*Environmental stress cracking resistance (ESCR) [hours]	≥ 2 000
Type of tape	textured, perforated
Common name of the geocell	large cell
Thickness of tape [mm]	1,50 (±0,2)
Height of tape [mm]	100 (±5)
Distance between welds at folded position [mm]	740
Cell size at open position (side x side) [mm]	370 x 370
Diagonals dimensions of geocell [mm]	500,0 x 521,2
Cell's area [cm ²]	1303,10
Quantity of cells per 1m ² [pcs./m ²]	7
Standard section dimensions [m]	3,50 x 6,78
Standard section's area [m ²]	23,72
Tensile strength of tape in the longitudinal direction [kN] Perforated tape (perforation ≤16%) has lower tensile strength; at least 60% of given value is required	2,00
Elongation at maximum load in the longitudinal direction [%]	15 (±8)
Tensile shear test (Method A) [kN]	2,10
Peeling test (Method B) [kN]	1,10
Splitting test (Method C) [kN]	2,00
Microbiological resistance	no changes in physical properties were found in accordance with PN-EN 12225

Dimension's tolerances of section: ±2% / Tolerance of strength parameters: -0,2kN

*Values in compliance with the raw material specification

DURABILITY:

Predicted to be durable for a minimum 100 years in natural soils with 4<pH<9 and soil temperature ≤ 25°C in compliance with the PN-EN ISO 13438 standard.

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