

NorGeoSpec 2012 Product Certificate



Certificate no.: 3001-QC-1455
Date: 01.02.2015
Valid until: 30.01.2017

Manufacturer: Huesker Synthetic GmbH
Product: Stablenka 1000/100
Product Type: GTX-K

Raw material: PET
Function: Reinforcement
(Main function)
Separation and Filtration
(Additional functions)

Quality Product Certification Reinforcement

page 1 of 2

Characteristic	Standard	Unit	Declared value	Max. tolerance	Certification value	
Mass per unit	EN ISO 9864	g/m ²	1800	± 180	1620 - 1980	
Dimension	NorGeoSpec 2012					
Grid openings production width			n/a			
Grid apertures	MD	mm	n/a			
	CMD	mm	n/a			
Mechanical tests						
Tensile strength	MD	EN ISO 10319	kN/m	1000.00	- 0.00	1000.00
	CMD	EN ISO 10319	KN/m	n/a	-	-
Strain at nominal strength	MD	EN ISO 10319	%	9.0	± 1.8	7.2 - 10.8
	CMD	EN ISO 10319	%	n/a	-	-
Strength at 2% elongation	MD	EN ISO 10319	kN/m	150.00	- 0.00	150.00
	CMD	EN ISO 10319	kN/m	n/a	-	
Strength at 5% elongation	MD	EN ISO 10319	kN/m	500.00	- 0.00	500.00
	CMD	EN ISO 10319	kN/m	n/a	-	
Strength at 10% elongation	MD	EN ISO 10319	kN/m	-	-	-
	CMD	EN ISO 10319	kN/m	-	-	-
Static puncture test	EN ISO 12236	kN	21.000	- 2.100	18.900	
Dynamic perforation resistance	EN ISO 13433		14	+ 4	18	
Hydraulic tests						
Velocity index	EN ISO 11058	m/s	0.009	- 0.003	0.006	
Characteristic opening size	EN ISO 12956	µm	120	± 36	84 - 156	
Durability (Declared value)	Service live	years	<input type="checkbox"/> 25	<input type="checkbox"/> 50	<input type="checkbox"/> 100	

Information about reduction factors are given on page 2 of this certificate.

Issued by

Christian Recker, NorGeoSpec project manager

Approved by

Arnstein Watn, Head of the Technical committee



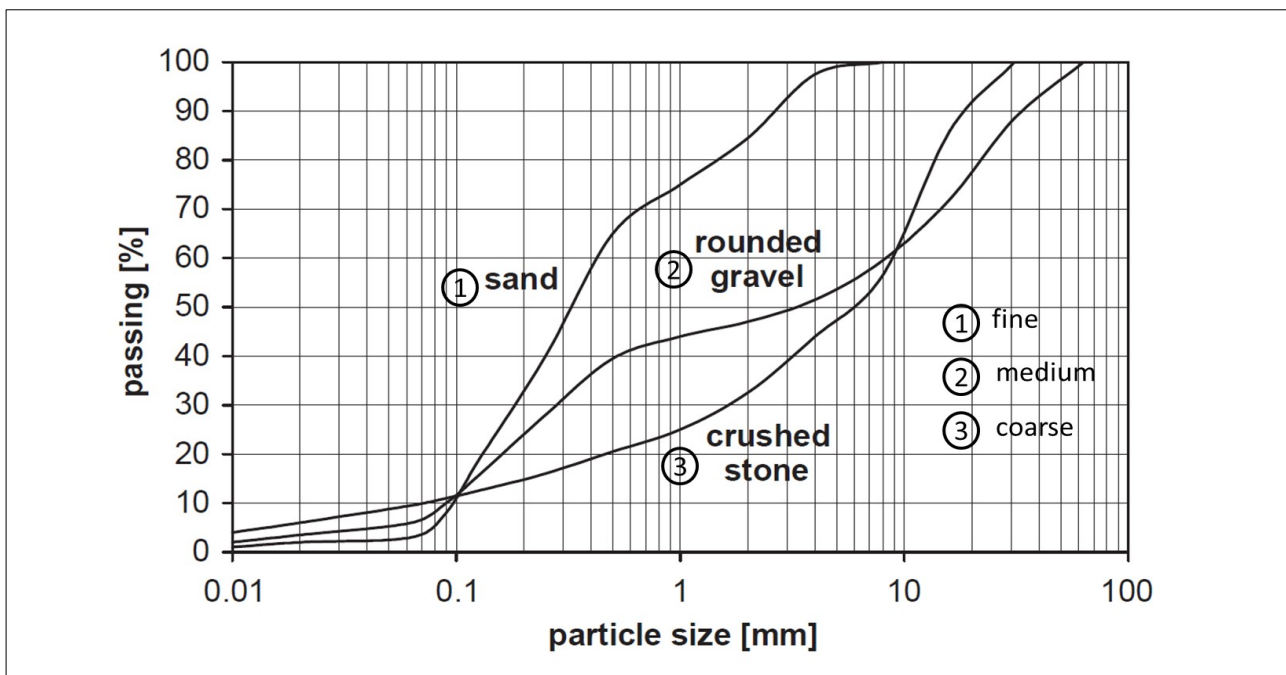
The products are regularly audited and tested to verify that the characteristics fulfil the NorGeoSpec requirements.
Approved by the NorGeoSpec Technical committee: 01.02.2015

Declared values Reinforcement

Declared values						
Reduction factor for creep rupture ¹⁾²⁾	RF _{CR}	1.52	Remarks: 120 years, BBA Certificate 13/4979 Product sheet 1			
Reduction factor for enviromenatl effects	RF _{CH}		Remarks:			
Chemical		-	Application in natural soils at a pH-value between 4 and 9 and a soil temperature of <25°C			
Oxidation		-	n.r.			
Hydrolysis		1.03	Expertice Dr. Retzlaff; GSY001-14g01 120 years, pH-value 4<pH<9 and a soil temperature of 20°C			
Reduction factor for weathering	RF _W	-	Remarks:			
Or max. exposure time						
1 month						
2 weeks						
1 day		X				
Reduction factor for installing damage	RF _{ID, fine}	1.12	RF _{ID, medium}	1.09	RF _{ID, coarse}	1.06
Used test method	Test report EMPA No. 201666-E25					

Compaction:
 Ride-on steel-wheeled roller (9500kg) + vibratory capability
 M_{E1} - value gound level 90 MN/m²; 1st layer 12 cm – geosynthetic – 2nd layer 23cm

Particle size distribution:



¹⁾producte range
²⁾ not required if used as base course layers
 n.r. = not required
 n/a = not applicable