NorGeoSpec 2012 Product Certificate

Quality Product Certification
Reinforcement

This product has been found to be fit for use in accordance with NorGeoSpec 2012 System for the above given function.

Certificate no.:	NGS-50433
Date:	10.05.2025
Valid until:	09.05.2027
Manufacturer:	HUESKER Synthetic GmbH
Product:	Stabilenka® 1000/100
Product Type:	GTX-K
Raw material:	PET
Function:	Reinforcement (Main function), Separation and Filtration (Additional functions)

Issued by

Christian Recker, SINTEF 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 2012 Rev.: 01/14.12.2016 requirements.
Approved by the NorGeoSpec Technical committee: 03.04.2025

NorGeoSpec Certification body: SINTEF Building and Infrastructure · Forskningsveien 3B · 0373 Oslo

SINTEF is appointed Notified Body by the Norwegian Building Authority, related to Regulation (EU) No. 305/2011 – Construction Products. Notified Body No. 1071.

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Characteristic		Standard	Unit	Declared value	Max. tolerance	Certification value
Mass per unit area		EN ISO 9864	g/m²	1700.0	± 170.0	**1530.0 - 1870.0**
Dimension		NorGeoSpec 2012				
Tensile elements	MD	Annex F	Elements/m	n/a		
	CMD	Annex F	Elements/m	n/a		
Grid apertures	MD	Annex F	mm	n/a		
	CMD	Annex F	mm	n/a		
Mechanical tests						
Nominal tensile strength	MD	EN ISO 10319	kN/m	1000.00	- 0.00	**≥ 1000.00**
	CMD	EN ISO 10319	kN/m			
Tensile strain at nominal strength	MD	EN ISO 10319	%	8.3	± 1.7	**6.6 - 10.0**
	CMD	EN ISO 10319	%			
Tensile stiffness at 2% tensile strain	MD	EN ISO 10319	kN/m	7500	- 0	**≥ 7500**
	CMD	EN ISO 10319	kN/m			
Tensile stiffness at 5% tensile strain	MD	EN ISO 10319	kN/m	10000	- 0	**≥ 10000**
	CMD	EN ISO 10319	kN/m			
Tensile stiffness at 10% tensile strain	MD	EN ISO 10319	kN/m			
	CMD	EN ISO 10319	kN/m			
Static puncture test		EN ISO 12236	KN	15.000	- 0.000	**≥ 15.000**
Dynamic perforation resistance		EN ISO 13433	mm	18.0	+ 4.0	**≤ 22.0**
Hydraulic tests						
Permeability normal to the plane without load (velocity index V_{H50})		EN ISO 11058	l/(m²·s)	10	- 3	**≥ 7**
Characteristic opening size		EN ISO 12956	µm	100.0	± 30.0	**70.0 - 130.0**
Durability (Declared value)						
Service life			years	☐ 25	☐ 50	☒ 100
Information about reduction factors are given on page 3 of this certificate.						

Declared values
Reinforcement

Declared values						
Reduction factor for creep rupture [1) 2)]	RF_{CR}	1.52	Remarks: BBA assessment, Certificate 13/4979, Product sheet 1, 120 years (≤ 20 °C)			
Reduction factor for environmental effects	RF_{CH}		Remarks:			
Chemical			Application in natural soils at a pH-value between 4 and 9 and a soil temperature ≤ 25°C			
Oxidation		n. r.				
Hydrolysis		1.03	BBA assessment, Certificate 13/4979, Product sheet 1, 120 years (≤ 20 °C)			
Reduction factor for weathering	RF_{W}					
Or max. exposure time						
1 month						
2 weeks						
1 day		x				
Reduction factor for installation 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 (9500 kg) + vibratory capability M_{E1} -value ground level 90 MN/m²; 1st layer 12 cm - geosynthetic - 2nd layer 23 cm					
Particle size	$RF_{ID\ fine}$ = sand with D_{90} ≤ 2.6 mm $RF_{ID\ medium}$ = rounded gravel D_{90} ≤ 32 mm $RF_{ID\ coarse}$ = crushed stone D_{90} ≤ 19 mm					

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