

# NorGeoSpec 2012 Product Certificate



Certificate no.: NGS-50002  
Date: 31.01.2016  
Valid until: 30.01.2018

Manufacturer: TenCate Geosynthetics  
Product: GEOLON PET 400/50  
Product Type: GTX-W

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

## Quality Product Certification Reinforcement

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Characteristic	Standard	Unit	Declared value	Max. tolerance	Certification value	
Mass per unit	EN ISO 9864	g/m <sup>2</sup>	720.00	± 72	648 - 792	
<b>Dimension</b>	NorGeoSpec 2012					
Grid openings production width			n/a			
Grid apertures	MD	mm	n/a			
	CMD	mm	n/a			
<b>Mechanical tests</b>						
Tensile strength	MD	EN ISO 10319	kN/m	400.00	0.00	400.00
	CMD	EN ISO 10319	KN/m	n/a	-	-
Strain at nominal strength	MD	EN ISO 10319	%	9.0	-1.8/+1.0	7.2 - 10.0
	CMD	EN ISO 10319	%	n/a	-	-
Strength at 2% elongation	MD	EN ISO 10319	kN/m	80.00	- 16.00	64.00
	CMD	EN ISO 10319	kN/m	n/a	-	
Strength at 5% elongation	MD	EN ISO 10319	kN/m	200.00	- 5.00	195.00
	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	12.000	- 1.200	10.800	
Dynamic perforation resistance	EN ISO 13433		7	+ 2	9	
<b>Hydraulic tests</b>						
Velocity index	EN ISO 11058	m/s	0.005	- 0.002	0.003	
Characteristic opening size	EN ISO 12956	µm	55	± 17	39 - 72	
<b>Durability (Declared value)</b>	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: 31.01.2016

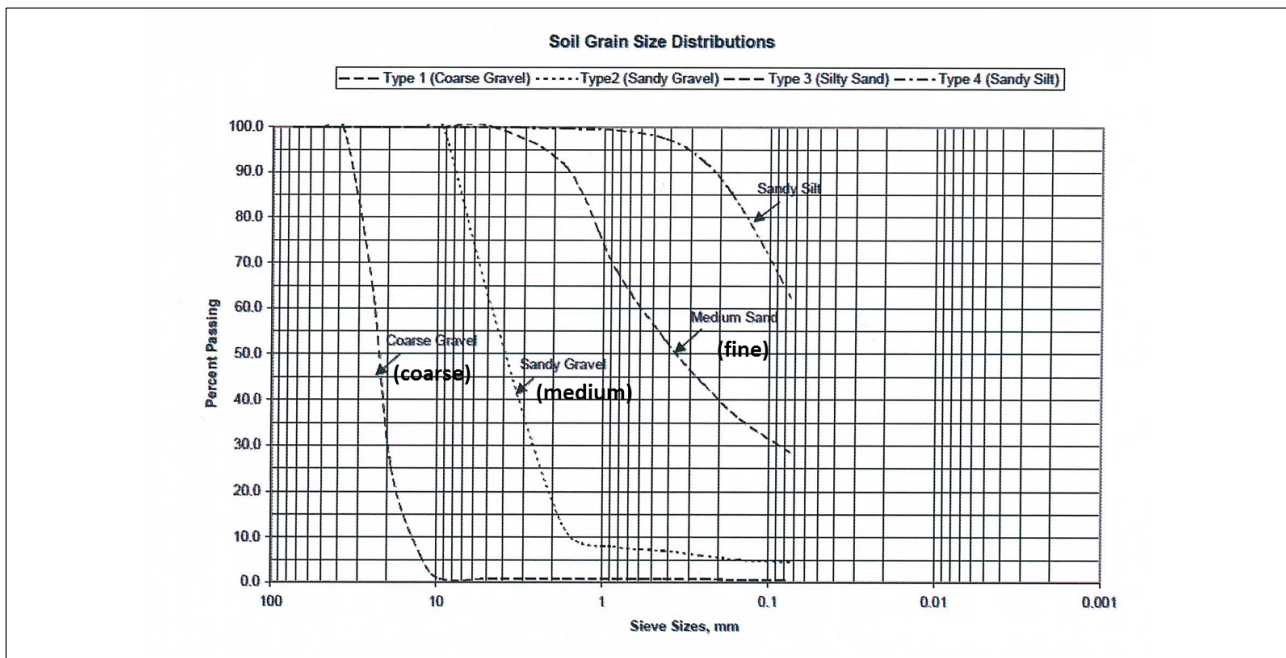
# Declared values Reinforcement

Declared values						
Reduction factor for creep rupture <sup>1)2)</sup>	RF <sub>CR</sub>	1.43	Remarks: KIWA test report No.: 1.6/22320/0026.1.5-2005e (Edition 27.03.2014)			
Reduction factor for enviromenatl effects	RF <sub>CH</sub>		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		1.04	Reduction factor for a service life of 100 years (pH 4.0 to 9.0) at 20°C, SKZ test report 89363/09-III			
Reduction factor for weathering	RF <sub>W</sub>	-	Remarks:			
Or max. exposure time						
1 month		X				
2 weeks						
1 day						
Reduction factor for installing damage	RF <sub>ID, fine</sub>	1.07	RF <sub>ID, medium</sub>	1.13	RF <sub>ID, coarse</sub>	1.28
Used test method	TRI's "Procedure for Installation Damage Test for BBA Assessments (CERC.SOIL:TM028, June 1997), Test report TRI Oct. 2004,					

**Compaction:**

Ride-on steel-wheeled roller (4550 kg) + vibratory capability, 4 passes, 1st soil layer 20 cm – geosynthetic - 2nd soil layer 20 cm; compaction ~90 % modified proctor

**Particle size distribution:**



<sup>1)</sup>producte range

<sup>2)</sup> not required if used as base course layers

n.r. = not required

n/a = not applicable