

# NorGeoSpec 2012 Product Certificate

## Quality Product Certification Separation and Filtration

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

<b>Certificate no.:</b>	NGS-50119
<b>Date:</b>	01.05.2018
<b>Valid until:</b>	30.04.2020
<b>Manufacturer:</b>	TenCate Geosynthetics
<b>Product:</b>	TS50N(4)
<b>Product Type:</b>	GTX-N
<b>Raw material:</b>	PP
<b>Function:</b>	Separation and Filtration

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: 01.05.2018

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.

Certificate no.: NGS-50119

## Quality Product Certification Separation and Filtration

Characteristic	Standard	Unit	Declared value	Max. tolerance	Certification value	
Mass per unit area	EN ISO 9864	g/m <sup>2</sup>	210	± 21	<b>189 - 231</b>	
<b>Mechanical tests</b>						
Tensile strength	MD	EN ISO 10319	kN/m	16.50	- 1.50	<b>15.00</b>
	CMD	EN ISO 10319	kN/m	16.50	- 1.50	
Tensile strain at tensile strength	MD	EN ISO 10319	%	90.0	- 18.0	<b>50.8</b>
	CMD	EN ISO 10319	%	37.0	- 7.4	
Static puncture test	EN ISO 12236	KN	2.300	- 0.230	<b>2.070</b>	
Dynamic perforation resistance	EN ISO 13433	mm	23	5	<b>28</b>	
Energy index	NorGeoSpec 2012	kN/m	3.2	0.0	<b>3.2</b>	
<b>Hydraulic tests</b>						
Permeability normal to the plane without load	EN ISO 11058	m/s	0.050	- 0.010	<b>0.040</b>	
Characteristic opening size	EN ISO 12956	µm	100	± 30	<b>70- 130</b>	
<b>Durability (Declared value)</b>						
Service life		years	<input type="checkbox"/> 25	<input type="checkbox"/> 50	<input type="checkbox"/> 100	

Quality Product Certification: Separation and Filtration

Application profile: **3**