## 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.

Certificate no.:	NGS-50203
Date:	04.03.2020
Valid until:	04.03.2022
Manufacturer:	TenCate Geosynthetics
Product:	TS09(5.01)
Product Type:	GTX-N
Raw material:	РР
Function:	Separation and Filtration

Issued by

Clash- lech

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: 04.03.2020

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Characteristic		Standard	Unit	Declared value	Max. tolerance	Certification value
Mass per unit area		EN ISO 9864	g/m²	90	± 9	81 - 99
Mechanical tests						
Tensile strength	MD	EN ISO 10319	kN/m	5.75	- 0.58	
	CMD	EN ISO 10319	kN/m	7.65	- 0.77	6.04
Tensile strain at tensile strength	MD	EN ISO 10319	%	90.0	- 18.00	
	CMD	EN ISO 10319	%	45.0	- 9.00	54.0
Static puncture test		EN ISO 12236	KN	1.000	- 0.10	0.900
Dynamic perforation resistance		EN ISO 13433	mm	32	+ 8.0	37
Energy index		NorGeoSpec 2012	kN/m	1.2	0.0	1.2
Hydraulic tests			1	1	1	1
Permeability normal to the plane without load		EN ISO 11058	m/s	0.140	- 0.042	0.098
Characteristic opening size		EN ISO 12956	μm	155	+ 45/ - 46.5	109 - 200
Durability (Declared value)		1	1		1	
Service life			years	25	50	100

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Application profile:

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