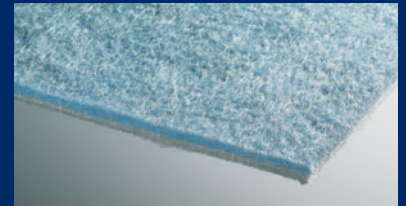


F - Filtration Geotextiles

Technical Data



TenCate Polyfelt® F

TenCate Polyfelt® F is a two-layer continuous filament nonwoven, one layer designed as filter, the other layer as protection against damage of the filter. This construction allows an optimum number of constrictions in the filter layer, resulting in an extremely low clogging risk and high soil retention security.

Properties <small>[Standard]</small>	Unit	F 60	F 70	F 80
Type of product	-	Two-layer mechanically bonded PP continuous filament nonwoven		
Raw material	-	100 % UV stabilized polypropylene		
Hydraulic Properties				
Number of Constrictions <small>[ASTM D 7178-06, XPG 3803D - see overleaf]</small>	-	25 - 40	25 - 40	25 - 40
Opening size O_{90} <small>[EN ISO 12956]</small>	μm	80	80	80
Permeability normal to the plane <small>[EN ISO 11058]</small>	$\text{l/m}^2\text{s (mm/s)}$	60	45	30
Flow rate in the plane <small>[EN ISO 12958]</small>	20 / 100 kPa $10^{-6} \text{ m}^2/\text{s}$	4.0 / 1.1	8 / 3	12 / 4.5
Mechanical properties				
Elongation at max. load <small>[EN ISO 10319]</small>	MD/CD %	90 / 75	90 / 80	85 / 80
Maximum absorbed energy * <small>[EN ISO 10319]</small>	kJ/m	12.4	13.6	14.4
Tensile strength <small>[EN ISO 10319]</small>	MD/CD kN/m	30 / 30	32 / 32	35 / 35
Cone drop test <small>[EN ISO 13433]</small>	mm	11	8,5	7
CBR puncture resistance <small>[EN ISO 12236]</small>	N	4600	4800	6500
Durability Properties				
UV resistance - strength retained <small>[EN 12 224]</small>	%	> 80	> 80	> 80
Chemical / biological resistance	-	resistant against all chemical agents and microorganisms usually occurring in seas or rivers		
Identification Properties				
Thickness <small>[EN ISO 9863]</small>	2 kPa mm	3.5	5.0	6.5
Mass per unit area <small>[EN ISO 9864]</small>	g/m^2	400	600	800

The values given are average values obtained in our laboratories and in testing institutes. The right is reserved to make changes without notice at any time.

*) Area of the triangle beneath the stress-strain curve.

TenCate Polyfelt® F - Constriction Concept, Forms of Supply

Constriction concept

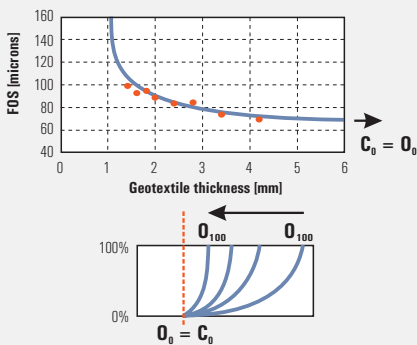
The number of constrictions “m” is a dimensionless parameter which combines the structural characteristics of the nonwoven (thickness, porosity, fibre size).

A filtration geotextile works sufficient with m = 25 to m = 40 constrictions.

$$m = \sqrt{(1 - \text{Porosity})} \times \frac{\text{Thickness}}{\text{Fibre Size}}$$

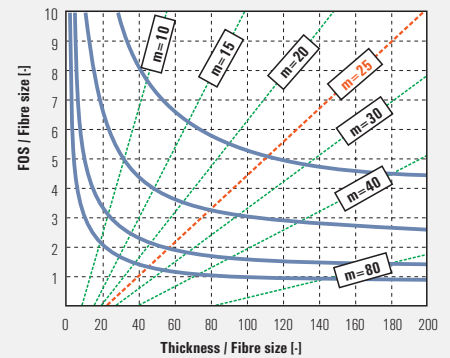
After Dr. J.P. Giroud, International Conference Geofilter'96 Montréal

1. Filter homogeneity - $m \geq 25$



Experimental (left figure): The nonwoven is homogeneous from a given thickness. This optimum thickness depends on its internal structure (density, fibre size).

Theoretical (right figure): The nonwoven is homogeneous if its number of constrictions $m \geq 25$ (for all nonwovens).

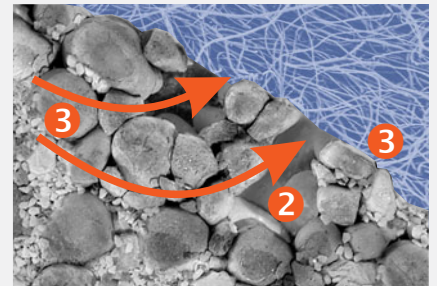


2. Soil stability (no risk of internal clogging) - $m \leq 40$

The functions of a geotextile filtration system are (see figure to the right):

- (1) Maintain the soil skeleton in place
- (2) Let fine instable particles pass
- (3) Allow a free long-term water flow

To stabilise the soil, the skeleton particles should be maintained near the interface soil/geotextile. A stable filtration is guaranteed when the maximum number of constrictions does not exceed a certain value: $m \leq 40$



Forms of Supply	Unit	F 60	F 70	F 80
Length x Width	m x m	100 x 6	60 x 6	40 x 6
Area	m ²	600	360	240
Weight of roll	kg	252	228	204

The information given in this brochure is to the best of our knowledge true and correct, however new research results and practical experience can make revisions necessary. No guarantee or liability can be drawn from the information mentioned herein. Furthermore, it is not our intention to violate any patents or licences.

TENCATE GEOSYNTHETICS AUSTRIA GMBH

Schachermayerstr. 18
A-4021 Linz, Austria
Tel. + 43 732 6983 0, Fax + 43 732 6983 5353
service.at@tencate.com, www.tencategeosynthetics.com

BeNeLux
Tel. + 31 546 544 811 service.nl@tencate.com
Central Eastern Europe
Tel. + 43 732 6983 0 service.at@tencate.com
Czech Republic
Tel. + 420 2 2425 1843 service.cz@tencate.com
France / Africa
Tel. + 33 1 34 23 53 63 service.fr@tencate.com
Germany
Tel. + 49 6074 37 51 61 service.de@tencate.com
Italy
Tel. + 39 0362 34 58 11 service.it@tencate.com
Near Middle East
Tel. + 971 481 03295 service.nme@tencate.com

Poland
Tel. + 48 12 268 8375 service.pl@tencate.com
Romania
Tel. + 40 21 322 06 08 service.ro@tencate.com
Russia / CIS
Tel. + 43 732 6983 0 service.rut@tencate.com
Scandinavia / Baltics
Tel. + 45 4485 7474 service.dk@tencate.com
Spain / Portugal
Tel. + 34 607 499 962 service.es@tencate.com
Switzerland (FR)
Tel. + 33 1 34 23 53 63 service.fr@tencate.com
Switzerland (GER)
Tel. + 43 732 6983 0 service.ch@tencate.com
UK / Ireland
Tel. + 44 1952 588 066 service.uk@tencate.com



502 042 | 092011