

Calculation of diameter from titre

Page 1/1

Edition: 14.01.2015/JH

replaces edition: 29.07.2011/JH

The diameter of a fiber can be calculated from the dtex using the following formula:

$$\text{TITRE [dtex]} = r^2 [\text{mm}] \times 3.1415927 \times \text{specific weight } [\gamma] \times 10.000$$

$$\varnothing = \sqrt{\frac{(\text{titre} \times 4)}{(\gamma \times \pi \times 10,000)}}$$

Material	Titre	Diameter	my
Polyamide, $\gamma = 1.14$	0,9 dtex	0,0100249 mm	10
	1,1 dtex	0,0110815 mm	11
	1,7 dtex	0,0137694 mm	14
	3,3 dtex	0,0191996 mm	19
	6,7 dtex	0,0273494 mm	27
	17,0 dtex	0,0379842 mm	38
	22,0 dtex	0,049566 mm	50
	44,0 dtex	0,070 mm	70
Polyester, $\gamma = 1.36-1.38$	1,7 dtex		13
	3,3 dtex	0,0174354 mm	17
Carbon fiber, $\gamma = 1,315$	2,2 dtex	0.014 mm	14
	5,0 dtex	0.022 mm	22

SwissFlock AG

Gerliswilstrasse 25 • 6021 Emmenbrücke • Switzerland
Telefon: + 41 (0) 41 268 63 63 Fax: + 41 (0) 41 268 63 73
info@swissflock.com www.swissflock.com

VRP und GF: Daniel Rütsh