

TECHNICAL DATASHEET

ZOLTEK™ PXFT CARBON FELTS

DESCRIPTION & TYPICAL PROPERTIES

ZOLTEK PXFT carbonized felts are produced from 100% ZOLTEK OX felts; that are continuously carbonized and supplied in roll form. ZOLTEK PXFT carbon felts can be used in many applications, including: stationary energy storage batteries, high temperature furnace linings, acid gas mist eliminators and as a carbon composite materials. Customers can apply their own post treatments and the felt is easy to process into customer specific designs.



MATERIAL OVERVIEW	PXFT FT-1750		PX35 FT1035-100		PXFT FT-540		PXFT FT-450		PXFT FT-305		PXFT FT-50	
	SI	US	SI	US	SI	US	SI	US	SI	US	SI	US
Fiber Precursor Type	PAN											
Areal Weight	1733 g/m ²	51.1 oz/yd ²	1055 g/m ²	31.1 oz/yd ²	538 g/m ²	15.9 oz/yd ²	446 g/m ²	13.2 oz/yd ²	301 g/m ²	8.88 oz/yd ²	50 g/m ²	1.47 oz/yd ²
Thickness at 0.02 MPa Compression	14.4 mm	0.57 in	9.0 mm	0.36 in	4.7 mm	0.18 in	3.5 mm	0.14 in	2.71 mm	0.11 in	0.52 mm	0.021 in
Felt Bulk Density	0.12 g/cc	0.0043 lb/in ³	0.12 g/cc	0.0043 lb/in ³	0.12 g/cc	0.0043 lb/in ³	0.13 g/cc	0.0047 lb/in ³	0.11 g/cc	0.0040 lb/in ³	0.10 g/cc	0.0036 lb/in ³
Roll Width	98 cm	39 in	98 cm	39 in	98 cm	39 in	98 cm	39 in	98 cm	39 in	80 cm	31.5 in
Roll Length ¹	45 m	50 yds	45 m	50 yds	45 m	50 yds	45 m	50 yds	80 m	87 yds	250 m	275 yds
Fiber Diameter	7 - 9 μm											
Fiber Density	~1.78 g/cc (0.064 lb/in ³)											
Carbon Content	~95%											
Electrical Resistivity ²	2.2 Ω mm		6.3 Ω mm		4.0 Ω mm		4.2 Ω mm		6.3 Ω mm		86 Ω mm	
BET Surface Area	~1 m ² /g											
Open Porosity ³	93%		93%		94%		93%		94%		95%	
Tensile Strength in MD / XMD direction ⁴	0.30 MPa / 0.30 MPa		0.19 MPa / 0.34 MPa		0.43 MPa / 0.41 MPa		0.28 MPa / 0.48 MPa		0.67 MPa / 0.36 MPa		1.47 MPa / 0.51 MPa	
Elongation in MD / XMD Direction ⁴	18.6%/26.0%		41.5%/39.5%		19.3%/18.1%		18.5% / 18.3%		13.2% / 16.0%		7.9% / 25.5%	
Trace Metals	Fe < 20 ppm, Na < 30 ppm, Ca < 20 ppm											

*All data provided are typical properties and are not to be considered specification values.



TECHNICAL DATASHEET

ZOLTEK™ PXET CARBON FELTS

- 1 - Due to the manufacturing process, individual roll lengths will vary.
- 2 - Z-direction electrical resistivity was measured at 1 A current for 30x30 mm sample, 20% compression, thickness direction.
- 3 - Open porosity is calculated as $1 - \frac{w_a}{d * \rho_c}$ where w_a is felt areal weight, d is felt thickness and ρ_c is the fiber density.
- 4 - Tensile and Elongation properties are tested according to ASTM D 5035-06.

The properties listed in this datasheet do not constitute any warranty or guarantee of values. This information should only be used for the purposes of material selection. Please contact us for more details.



TYPICAL PACKAGING

Wound on cardboard cone, sealed in polyethylene bag, and placed in cardboard box.

SAFETY

Obtain, read, and understand the Material Safety Data Sheet (SDS) before use of this or any other ZOLTEK product.

**All data provided are typical properties and are not to be considered specification values.*

