

# Information Sheet

## ZOLTEK™ PX30

ZOLTEK PX30 carbon fibers are high purity and high-thermal performance materials designed for fuel cells, carbon/carbon composites, and friction applications. These products are PAN based materials that are 99% carbonized. These high-purity products are derived from ZOLTEK's high temperature batch carbonization process. They are most often used in extreme applications that demand resistance to harsh temperature and chemical environments. All ZOLTEK PX30 materials are thermally stable and chemically pure.

ZOLTEK PX30 carbon fibers are available in the following product forms: woven fabrics, scrim fabrics, carbonized yarns, high twist rovings, carbonized felts.

### SPUN YARNS

ZOLTEK PX30 carbon fiber yarns are 99% carbonized and have a density of 1.75 g/cc. These yarns are characterized by their many surface fibrils protruding in various directions, making them ideally suited for high performance applications including carbon/carbon and other refractory composites.

#### APPLICATIONS

- Used for carbon/carbon preforms
- Braided compression packings and seals



DENIER	PLIES	YIELD	
		g/9000 m	m/kg
1700	2	5,755	2,854
2,500	3	3,545	1,758
3,500	4	2,590	1,285
4,400	5	2,050	1,016
5,000	6	1,780	884
6,000	7	1,510	750
8,500	10	1,060	527

*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.*

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### ROVINGS

ZOLTEK PX30 High-Twist Roving is manufactured with high twist to improve its handling characteristics. The roving is widely used as a baseline material for the manufacture of friction clutches and brakes. Thick fabrics woven of ZOLTEK PX30 High-Twist Roving allow for efficient buildup during fabrication of composite substructures.



MATERIAL OVERVIEW	SI	US
Carbon Content	99%	
Density	1.75 g/cc	0.063 lb/in <sup>3</sup>
Yield	2,015 m/kg	1,000 yds/lb
Denier	4,465 g/9,000 m	
Twist Direction	S or Z	

### WOVEN FABRICS

ZOLTEK PX30 woven carbon fiber fabrics are made from spun yarn that is tailored for a variety of finished composite thicknesses. These fabrics have high cross-ply tensile and interlaminar shear strengths in composite materials. Another advantage of these fabrics is their ability to conform without wrinkling. ZOLTEK PX30 fabrics are thermally stable and chemically pure with low oxidation rates.



#### APPLICATIONS

- Aircraft & automotive brakes
- Clutch plates
- Gas diffusion layer for fuel cells

MATERIAL OVERVIEW	SI	US
Carbon Content	99%	
Density	1.75 g/cc	0.063 lb/in <sup>3</sup>
Oxidation Rate	1% per hour at 500 °C	1% per hour at 932 °F

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