

# Material Data Sheet PK100-CN

## Polyetheretherketone PK100 – CN (FDA)

### General

PK100-CN is a brown-beige (natural) high-performance thermoplastic commonly referred to as PEEK. The material has excellent physical and chemical properties to serve a wide range of applications at high temperatures where outstanding mechanical stability and rigidity are necessary. PK100-CN has good tribological characteristics and is recommended for precision parts, where close tolerances are required.

PK100-CN – is approved for the use of applications in contact with foodstuff.

### Physical properties

Density:	DIN 53479	g/cm <sup>3</sup>	1,31
Moisture absorption:	23°C / 50% rel. M.	%	0,2
Moisture absorption:	water 23°C	%	0,45
Tensile strength:	DIN 53455	N/mm <sup>2</sup>	115
Elongation at break:	DIN 53455	%	17
Modulus of elasticity:	DIN 53457	N/mm <sup>2</sup>	4300
Ball Hardness H358/3:	DIN 53456	N/mm <sup>2</sup>	190
Coefficient of friction:		μ	< 0,5
Melting temperature:		°C	340
Min. service temperature:		°C	-50
Max. service temperature:		°C	250
Max. service temperature (short periods):		°C	310

### Chemical resistance

Water up to 90°	R	Alcohols	R
HFA, HFB, HFC fluids	R	Ozone (< 80°C)	R
HFD	R	Ozone (> 80°C)	S
Mineral oils	R	Air up to 100°	R
Vegetable oils	R	Air up to 150°	R
Fuels	R		

**Key to chemical resistance: R = resistant S = suitable U = unsuitable**

### Main application

Guide rings, bushings, back-up rings, scrapers, housings, high precision parts.

### Analysis and Evaluation

The properties relate to fundamental values of PEEK. Products values mentioned above are corresponding to ASTM or DIN standard and have been tested on standardized plates in the laboratory.