



PEEK Sheet - Technical Data Sheet

High-Performance Engineering Plastic

Product Overview

PEEKAX™ PEEK (Polyether Ether Ketone) is a high-performance thermoplastic engineered for demanding applications requiring exceptional mechanical strength, thermal stability, and chemical resistance.

It maintains excellent dielectric properties at temperatures up to 260°C and offers outstanding resistance to radiation. The material complies with EU and FDA requirements for food contact applications and provides excellent biocompatibility.

Key Advantages

- Exceptional high temperature resistance (continuous use up to 250°C)
 - ممتاز chemical and hydrolysis resistance
 - High mechanical strength and stiffness
 - Excellent wear and self-lubricating properties
 - Outstanding dimensional stability
 - Flame retardant (UL94 V-0)
 - Excellent electrical insulation performance
 - Radiation resistant
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Typical Applications

- Aerospace structural components
 - Automotive high-performance parts
 - Medical and pharmaceutical devices
 - Food processing equipment
 - Semiconductor manufacturing
 - Precision electronic components
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Available Colors

- Natural
- Black

Standard Dimensions

Sheets:

Thickness: 6–100 mm

Width: 610 mm

Length: 1220 mm

Technical Data

Mechanical Properties

Property	Standard	Unit	Value
Density	ASTM D792	g/cm ³	1.31
Tensile Strength (Yield)	ASTM D638	MPa	95
Elongation at Break	ASTM D638	%	5
Flexural Strength	ASTM D790	MPa	150
Flexural Modulus	ASTM D790	MPa	4100
Shore Hardness	ASTM D2240	D	99
Impact Strength	ASTM D256	J/m	165

Thermal Properties

Property	Standard	Unit	Value
Melting Point	DSC	° C	343
Heat Deflection Temperature	ASTM D648	° C	152
Continuous Service Temperature	—	° C	250
Short-Term Temperature	—	° C	310

Property	Standard	Unit	Value
Thermal Conductivity	DIN 52612-1	W/(m • K)	0.25
Linear Thermal Expansion	ASTM D696	10 ⁻⁵ /K	5

Electrical Properties

Property	Standard	Unit	Value
Dielectric Strength	ASTM D150	kV/mm	24
Dielectric Loss Factor	ASTM D150	—	0.009
Volume Resistivity	ASTM D257	Ω • cm	10 ¹⁵
Surface Resistivity	ASTM D257	Ω	10 ¹⁶
Dielectric Constant	ASTM D149	—	3.2

Chemical Resistance

Property	Condition	Result
Water Absorption	23° C / 60% RH	0.1%
Acid Resistance	—	Excellent
Alkali Resistance	—	Excellent
Hydrolysis Resistance	—	Excellent
Chlorinated Chemicals	—	Excellent
Aromatic Compounds	—	Excellent
Ketones	23° C / 60% RH	Excellent
Hot Water Resistance	23° C / 60% RH	Excellent

Other Properties

Property	Standard	Value
Flammability	UL94	V-0
Adhesion	—	Good
Food Contact Compliance	EEC 90/128, FDA	Yes

Notes



- Data are typical values obtained from raw material testing and should not be used as guaranteed specifications.
 - Final product performance may vary depending on processing conditions and design.
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Manufacturer Information

Brand: PEEKAX™

Company: PEEKAX Advanced Materials Co., Ltd.

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