

DSM 3.7.3

PEEK_ (Natural)

Extrusion

General:

Polyether ether ketone (PEEK) a high-temperature, high-performance semi-crystalline thermoplastic with excellent mechanical, abrasion and chemical resistance properties that are retained up to high temperatures. As such it is recognised as being one of the highest performing thermoplastics available.

Benefits:

- Continuous use temperature of 260 °C with short term at 300°C.
- Mechanical properties are comparable with alloys. It is 53% harder than Acetal has 36% greater tensile strength than nylon 6, 6 and is 60% stiffer.
- Self-lubricating: with low coefficient of friction & abrasion.
- PEEK also has excellent machinability, excellent wear and slide properties, and achieves the highest flame retardant standards (UL94:VO).
- PEEK can be exposed for a long period of time to high pressure water and steam without exhibiting any serious degradation.
- Can be bonded with room temperature curing low viscosity epoxies.

Limitations:

- It is attacked by halogens.
- Soluble in concentrated sulphuric or nitric acid at room temperature.
- Expensive – almost four times the cost of PTFE
- High processing temperatures.

ASM (DEK) Applications:

- Non marking substrate handling
- Bearings.

Profiles:

- Sheet: 5 –100 mm thick
- Rod: 6 – 200 mm Diameter

These values are representative. For critical applications, refer to data-sheet.

MECHANICAL PROPERTIES					
MATERIAL DETAILS	HARDNESS Shore A	TENSILE STRENGTH:	YOUNGS MODULUS:	POISSONS RATIO:	DENSITY:
PEEK	---	100 MPa	3.7 GPa	0.39	1300 Kg/m ³

Alternatives:

Alternative polymers are allowed only with the express written permission of ASMPT. Please email details of your request to engineering_enquiries@asmpt.com

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