

DSM 3.7.4

PEEK_ESD (Black)

Extrusion

General:

Polyether ether ketone (**PEEK**) a high-temperature, high-performance semi-crystalline thermoplastic with tight electrostatic control (**ESD**) including 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:

- Applications in the semi-conductor industry where **ESD** is essential.

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- ESD	---	125 MPa	11.5 GPa	0.39	1650 Kg/m³

Alternatives:

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

Issue	01	02	03	04	05	06	07	08	09
DCR	42905	44832							

