VESTAKEEP® Care M40G

Polyetheretherketone

Evonik Industries AG

Message:

The good biocompatibility, processability and the option to pigment make the VESTAKEEP® Care-Grades an ideal material for the fabrication of medical devices with short time contact to human blood, tissue or bone for up to 30 days.
Because of their combination of outstanding mechanical properties and their excellent resistance to common cleaning and sterilizing processes, VESTAKEEP® Care polymers are designed to develop your next generation medical devices. Key properties are
Excellent biocompatibility
Outstanding biostability
Good resistance to commonly used sterilization methods like autoclaving and others
Resistance to high-energy radiation such as gamma rays or X-rays
X-ray transparency, no metal-typical shadows or artefacts in radiographs.
Good combination of mechanical strength, wear resistance and impact resistance makes PEEK a good choice for high strength medical devices
Good dimensional stability allows for manufacturing of high-precision parts
Good electrical properties, especially electrical insulation, is important for medical equipment - for example HF endoscopes

General Information	
Features	Biocompatible
	Good Dimensional Stability
	Good Electrical Properties
	Good Impact Resistance
	Good Processability
	Good Sterilizability
	Good Strength
	Good Wear Resistance
	Radiation (Gamma) Resistant
	X-Ray Transparent
Uses	Medical/Healthcare Applications
Agency Ratings	ASTM F 756-08
	ISO 10993 Part 10
	ISO 10993 Part 11
	ISO 10993 Part 5
	USP Class VI
Forms	Pellets
	Rod
Processing Method	Compression Molding
	Extrusion
	Injection Molding

Physical	Nominal Value	Unit	Test Method

Density (23°C)	1.30	g/cm³	ISO 1183
Melt Volume-Flow Rate (MVR) (380°C/5.0 kg)	11.0	cm³/10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	1.1	%	
Flow	0.90	%	
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	3500	MPa	ISO 527-2
Tensile Stress (Yield)	96.0	MPa	ISO 527-2
Tensile Strain			ISO 527-2
Yield	5.0	%	
Break	> 20	%	
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
-30°C, Complete Break	6.0	kJ/m²	
23°C, Complete Break	7.0	kJ/m²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	No Break		
23°C	No Break		
Thermal	**Nominal Value**	**Unit**	**Test Method**
Vicat Softening Temperature			
--	335	°C	ISO 306/A
--	305	°C	ISO 306/B
Melting Temperature [1]	340	°C	ISO 11357-3
CLTE - Flow (23 to 55°C)	6.0E-5	cm/cm/°C	ISO 11359-2
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity	1.0E+14	ohms	IEC 60093
Volume Resistivity	1.0E+15	ohms·cm	IEC 60093
Electric Strength	16	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
50 Hz	2.80		
1 MHz	2.80		
Comparative Tracking Index			IEC 60112
-- [2]	175	V	
Solution A	200	V	
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating (3.20 mm)	V-0		UL 94
NOTE			
1.	2nd Heating		
2.	100 drops value		

Recommended distributors for this material

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