

PEEK-OPTIMA® Granular

Polyetheretherketone

Invibio Inc.

Message:

PEEK-OPTIMA® polymer from Invibio® is a high performance biomaterial providing advanced solutions for implant manufacturers. Formulated to meet the most exacting in-vivo criteria, PEEK-OPTIMA is biocompatible, safe and stable.

General Information			
Features	Radiation disinfection		
	High strength		
	Good disinfection		
	Ethylene oxide disinfection		
	Good chemical resistance		
	Good wear resistance		
	Hydrolysis resistance		
	Biocompatibility		
	Disinfect with steam		
Uses	Human implant		
	Medical/nursing supplies		
Agency Ratings	DMF not rated		
	FDA not rated		
	ISO 10993		
	MAF Unspecified Rating		
	USP Class VI		
Appearance	Natural color		
Forms	Particles		
Processing Method	Extrusion		
	Compression molding		
	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.29	g/cm ³	ASTM D792
Molding Shrinkage - Flow (3.00 mm)	1.2	%	ASTM D955
Water Absorption (23°C, 24 hr)	0.50	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	99		ASTM D785
Mechanical	Nominal Value	Unit	Test Method

Tensile Stress (Yield)	100	MPa	ISO 527-2/1B/50
Tensile Strain (Break)	20	%	ISO 527-2/1B/50
Flexural Modulus	4000	MPa	ISO 178
Flexural Stress	170	MPa	ISO 178
Compressive Strength	118	MPa	ASTM D695
Shear Modulus	1300	MPa	ASTM D732
Shear Strength	53.1	MPa	ASTM D732
Poisson's Ratio	0.40		ASTM E132
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact	63	J/m	ASTM D256
Unnotched Izod Impact	No Break		ASTM D256
Thermal	Nominal Value	Unit	Test Method
Melting Temperature	340	°C	DSC
CLTE - Flow			ASTM D696
-- ¹	4.7E-5	cm/cm/°C	ASTM D696
-- ²	1.1E-4	cm/cm/°C	ASTM D696
RTI Elec	260	°C	UL 746
RTI Imp	260	°C	UL 746
RTI	260	°C	UL 746
Additional Information			
Heat Distortion Temperature, ISO 75: 306°F			
Injection	Nominal Value	Unit	
Drying Temperature	150	°C	
Drying Time	3.0	hr	
Suggested Max Moisture	0.10	%	
Suggested Max Regrind	0	%	
Rear Temperature	350 - 355	°C	
Middle Temperature	355 - 365	°C	
Front Temperature	360 - 370	°C	
Nozzle Temperature	365 - 375	°C	
Mold Temperature	160 - 200	°C	
Injection Pressure	7.00 - 14.0	MPa	
Holding Pressure	4.00 - 10.0	MPa	
Back Pressure	0.200 - 5.00	MPa	
Screw Speed	50 - 100	rpm	
Clamp Tonnage	5.0 - 8.0	kN/cm ²	
Screw L/D Ratio	18.0:1.0 - 24.0:1.0		
Screw Compression Ratio	2.0 : 1.0 - 3.0 : 1.0		
NOTE			
1.	Below Tg		
2.	Above Tg		

The information and data on this page are provided by manufacturers and document providers. SHANGHAI SUSHENG assumes no legal liability. It is strongly recommended to verify all technical data with material suppliers before final material selection. All rights belong to the original authors. If any infringement occurs, please contact us immediately.

Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519
Phone: +86 13424755533
Email: sales@su-jiao.com
No. 215, Lianhe North Road, Fengxian District, Shanghai, China

