

perfluorence Tribocompound CoPEEK+PTFEcg

Polyetheretherketone + PTFE
perfluorence GmbH

Message:

The chemical compatibilization of polyetheretherketone (PEEK) and polytetrafluoroethylene (PTFE) will result in a semi-crystalline thermoplastic polymer compound with a homogeneous and stable processing morphology. The compound exhibits improved impact strength and excellent tribological properties. The thermal and chemical resistance corresponds to the properties of the PEEK matrix material. The granules can be processed under the processing conditions of the matrix material by extrusion or injection molding.

General Information			
Features	Good Impact Resistance		
	Good Processing Stability		
	Semi Crystalline		
Forms	Granules		
Processing Method	Extrusion		
	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density	1.34	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (380°C/5.0 kg)	37	g/10 min	ISO 1133
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	3200	MPa	ISO 527-2/1A/1
Tensile Stress	78.0	MPa	ISO 527-2/1A/50
Tensile Strain			ISO 527-2/1A/50
Yield	5.0	%	
Break	9.0	%	
Flexural Modulus	3150	MPa	ISO 178
Flexural Stress	123	MPa	ISO 178
Coefficient of Friction ¹	0.18		ISO 7148
Flexural Strain at Flexural Strength	6.4	%	ISO 178
Wear Coefficient ²	2.10E-6	mm ³ /(N·m)	ISO 7148
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	19	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	No Break		ISO 179/1eU
Thermal	Nominal Value	Unit	Test Method
Glass Transition Temperature	152	°C	ISO 11357-2
Melting Temperature			ISO 11357-3
-- ³	325	°C	
-- ⁴	340	°C	
Electrical	Nominal Value		Test Method

Dielectric Constant		IEC 60250
1 kHz	3.10	
1 MHz	3.10	
Dissipation Factor		IEC 60250
1 kHz	1.0E-3	
1 MHz	0.010	

NOTE

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| 1. | Block / ring test: FN = 100 N, v = 0,11 m/s, s = 10.000 m, Counterbody: Steel 100 Cr6, Rz = 3.2 microns, Conditions: technically dry |
| 2. | Block / ring test: FN = 100 N, v = 0,11 m/s, s = 10.000 m, Counterbody: Steel 100 Cr6, Rz = 3.2 microns, Conditions: technically dry |
| 3. | PTFE |
| 4. | PEEK |

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