POLYMAG® 6475

Polybutylene Terephthalate

A. Schulman Europe

Message:

Magnetisable, thermoplastic injection molding compound based on PBT, filled with 75 wt% low coercive, isotropic Nd-Fe powder

General Information			
Filler / Reinforcement	Nd-Fe Powder, 75% filler by weight		
Features	Magnetizable		
Processing Method	Injection molding		
Physical	**Nominal Value**	**Unit**	**Test Method**
Density	3.24	g/cm³	ISO 1183/A
Melt Volume-Flow Rate (MVR) (260°C/10.0 kg)	18.0	cm³/10min	ISO 1133
1% weight loss (TGA) (120°C)	228	mT	
Coercivity of Magnetic Flux Density			
21°C	203	kA/m	
60°C	191	kA/m	
80°C	183	kA/m	
120°C	165	kA/m	
Coercivity of Magnetic Polarization			
21°C	825	kA/m	
60°C	691	kA/m	
80°C	635	kA/m	
120°C	540	kA/m	
Maximum Energy Product			
21°C	0.0140	J/cm³	
60°C	0.0120	J/cm³	
80°C	0.0110	J/cm³	
120°C	0.00950	J/cm³	
Residual Flux Density			
21°C	271	mT	
60°C	257	mT	
80°C	248	mT	
120°C	228	mT	
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness (Shore A, 3 sec)	78		ISO 868
Ball Indentation Hardness (H 358/30)	147	MPa	ISO 2039-1
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	9100	MPa	ISO 527-2/1A/1

Tensile Stress (Break)	45.0	MPa	ISO 527-2/1A/5
Tensile Strain (Break)	1.2	%	ISO 527-2/1A/5
Flexural Modulus [1]	8300	MPa	ISO 178
Flexural Stress [2] (1.7% strain)	68.0	MPa	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	4.7	kJ/m²	ISO 179/1eA
23°C	5.5	kJ/m²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	16	kJ/m²	ISO 179/1eU
23°C	15	kJ/m²	ISO 179/1eU
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature			
0.45 MPa, not annealed	195	°C	ISO 75-2/Bf
1.8 MPa, not annealed	146	°C	ISO 75-2/Af
Thermal Conductivity	0.76	W/m/K	ISO 22007-2
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity	< 1.7E+6	ohms	IEC 60093
Volume Resistivity	< 3.2E+6	ohms·cm	IEC 60093
Additional Information	**Nominal Value**	**Unit**	
1.) Not for use in food contact applications2.) Not for use in medical or pharmaceutical applications			
Injection	**Nominal Value**	**Unit**	
Processing (Melt) Temp	230 - 260	°C	
Mold Temperature	60.0 - 90.0	°C	
NOTE			
1.	2.0 mm/min		
2.	2.0 mm/min		

Recommended distributors for this material

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