Technical Data Sheet

Schuladur PCR GF45 BLK968001

Polybutylene Terephthalate + PET

Product Description

45% glass fibre reinforced PBT/PET compound based on mechanical recycled sourcing. Standard color is black, color matching for dark colors possible. Automotive structural applications are possible.According to ISO 14021:2016 Schuladur PCR GF45 is a compound containing 15% of recycled material.Recycled content according to DIN SPEC 91446:2021-12: R15Data Quality Level according to DIN SPEC 91446:2021-12: DQL4Data Quality Level according to VDA 284: DQL Automotive

Processing Method	Injection Molding
Filler/Reinforcement	Glass Fiber, 45%
Resin ID	(PBT+PET)-GF45

Typical Properties	Nominal Value	Units	Test Method
Physical			
Melt Volume Flow Rate			
(260 °C/5.0 kg)	19	cm³/10 min	ISO 1133
(260 °C/2.16 kg)	11	cm³/10 min	ISO 1133
Density, (Method A)	1.68	g/cm³	ISO 1183
Apparent (Bulk) Density	0.60 to 0.80	g/cm³	ISO 60
Mechanical			
Tensile Strain at Break, (Type 1A, 5 mm/min)	1.7	%	ISO 527-2
Flexural Modulus, (2.0 mm/min)	16000	MPa	ISO 178
Tensile Stress at Break, (Type 1A, 5 mm/min)	160	MPa	ISO 527-2
Tensile Modulus, (1 mm/min, Type 1A)	15500	MPa	ISO 527-1
Flexural Stress, (2.0 mm/min)	250	MPa	ISO 178
Impact			
Charpy Impact Strength - Notched			
(23 °C, Type 1, Edgewise, Notch A)	8.0	kJ/m²	ISO 179
(-30 °C, Type 1, Edgewise, Notch A)	8.0	kJ/m²	ISO 179
Charpy Impact Strength - Unnotched			
(23 °C, Type 1, Edgewise)	50	kJ/m²	ISO 179
(-30 °C, Type 1, Edgewise)	50	kJ/m²	ISO 179
Hardness			
Ball Indentation Hardness, (H 961/30)	300	MPa	ISO 2039-1
Ball Pressure Test, (200 °C)	Pass		IEC 60695-10-2
Thermal			

Vicat Softening Temperature			
(B (50N), 50 °C/h)	200	°C	ISO 306
(A (10N), 50 °C/h)	216	°C	ISO 306
Deflection Temperature Under Load Unannealed (0.45 MPa), (Flatwise)	225	°C	ISO 75-2/B
Deflection Temperature Under Load Unannealed (1.80 MPa), (Flatwise)	208	°C	ISO 75-2/A
Flammable			
Burning Rate			
(2.00 mm)	25	mm/min	FMVSS 302
(2.00 mm)	25	mm/min	ISO 3795
Glow Wire Flammability Index			
(1.5 mm)	700	°C	IEC 60695-2-12
(3.0 mm)	800	°C	IEC 60695-2-12
Glow Wire Ignition Temperature			
(1.5 mm, Passes)	825	°C	IEC 60695-2-13
(3.0 mm, Passes)	800	°C	IEC 60695-2-13
Additional Information			
Water Absorption 23C/50RH	0.25	%	ISO 62
UL Information			
Flammability Classification			
(1.6 mm)	HB		IEC 60695-11-10, -20
(3.2 mm)	HB		IEC 60695-11-10, -20

Injection Parameters	Nominal Value	Units
Drying Time	4.0 to 6.0	hr
Drying Temperature	120	°C
Suggested Max Moisture	<0.020	%
Processing (Melt) Temp	260 to 280	°C
Mold Temperature	80 to 110	°C