Technical Data Sheet

*Circulen*Recover EP PA6 GF50 H BLK968001

Polyamide 6

Product Description

50% glass fiber reinforced, heat stabilized Polyamide 6 formulated on mechanical recycled sourcing. Standard color is black, color matching for dark colors possible. Automotive structural applications are possible.Sustainability:According with the requirements of Standard ISO 14021:2016, Circulen Recover EP PA6 GF50 H BLACK contains 25% of recycled material that is fully based on pre-consumer waste.Recycled content according to DIN SPEC 91446:2021-12: R25Data Quality Level according to DIN SPEC 91446:2021-12: DQL4Data Quality Level according to VDA 284: DQL Automotive

Processing Method	Injection Molding
Attribute	Heat Stabilized; Medium Viscosity
Filler/Reinforcement	Glass Fiber, 50%
Resin ID	PA6 GF50

Typical Properties	Nominal Value	Units	Test Method
Physical			
Density, (Method A)	1.57	g/cm³	ISO 1183
Apparent (Bulk) Density	0.60 to 0.80	g/cm³	ISO 60
Viscosity Number	130	cm³/g	ISO 307
Mechanical			
Tensile Strain at Break			
(Type 1A, 5 mm/min)	2.0	%	ISO 527-2
(Type 1A, 5 mm/min) - Conditioned	3.1	%	ISO 527-2
Tensile Stress at Break			
(Type 1A, 5 mm/min)	180	MPa	ISO 527-2
(Type 1A, 5 mm/min) - Conditioned	120	MPa	ISO 527-2
Tensile Modulus			
(1 mm/min, Type 1A)	16000	MPa	ISO 527-1
(1 mm/min, Type 1A) - Conditioned	10500	MPa	ISO 527-1
Impact			
Charpy Impact Strength - Notched			
(23 °C, Type 1, Edgewise, Notch A)	13	kJ/m²	ISO 179
(-30 °C, Type 1, Edgewise, Notch A)	9.0	kJ/m²	ISO 179
(23 °C, Type 1, Edgewise, Notch A) - Conditioned	17	kJ/m²	ISO 179
Charpy Impact Strength - Unnotched			
(23 °C, Type 1, Edgewise)	65	kJ/m²	ISO 179
(-30 °C, Type 1, Edgewise)	60	kJ/m²	ISO 179
(23 °C, Type 1, Edgewise) - Conditioned	60	kJ/m²	ISO 179

Thermal			
Deflection Temperature Under Load Unannealed (0.45 MPa), (Flatwise)	225	°C	ISO 75-2/B
Deflection Temperature Under Load Unannealed (1.80 MPa), (Flatwise)	215	°C	ISO 75-2/A
Flammable			
Burning Rate, (FMVSS 302)	<100	mm/min	FMVSS 302
UL Information			
Flame Rating	HB		UL 94

Injection Parameters	Nominal Value	Units
Drying Time	3.0 to 4.0	hr
Drying Temperature	80	°C
Suggested Max Moisture	0.040 to 0.10	%
Processing (Melt) Temp	250 to 280	°C
Mold Temperature	60 to 100	°C