

## Technical Data Sheet

**CirculenRecover EP PA6 GF50 H**

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: R25 Data Quality Level according to DIN SPEC 91446:2021-12: DQL4 Data Quality Level according to VDA 284: DQL Automotive

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

Typical Properties	Nominal Value	Units	Test Method
<b>Physical</b>			
Density, (Method A)	1.57	g/cm <sup>3</sup>	ISO 1183
Apparent (Bulk) Density	0.60 to 0.80	g/cm <sup>3</sup>	ISO 60
Viscosity Number	130	cm <sup>3</sup> /g	ISO 307
<b>Mechanical</b>			
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
<b>Impact</b>			
Charpy Impact Strength - Notched			
(23 °C, Type 1, Edgewise, Notch A)	13	kJ/m <sup>2</sup>	ISO 179
(-30 °C, Type 1, Edgewise, Notch A)	9.0	kJ/m <sup>2</sup>	ISO 179
(23 °C, Type 1, Edgewise, Notch A) - Conditioned	17	kJ/m <sup>2</sup>	ISO 179
Charpy Impact Strength - Unnotched			
(23 °C, Type 1, Edgewise)	65	kJ/m <sup>2</sup>	ISO 179
(-30 °C, Type 1, Edgewise)	60	kJ/m <sup>2</sup>	ISO 179
(23 °C, Type 1, Edgewise) - Conditioned	60	kJ/m <sup>2</sup>	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
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**UL Information**

Flame Rating	HB	UL 94
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<b>Injection Parameters</b>	<b>Nominal Value</b>	<b>Units</b>
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