

Technical Data Sheet



CirculenRecover EP PA6 GF50 H BLACK

Polyamide 6
LyondellBasell Industries
Engineering Plastics

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

General

Material Status	• Commercial: Active
Availability	• Europe
Filler / Reinforcement	• Glass Fiber, 50% Filler by Weight
Recycled Content	• Post-Industrial (PIR)/Pre-Consumer, 25%
Features	• Heat Stabilized • Medium Viscosity
Processing Method	• Injection Molding
Resin ID (ISO 1043)	• PA6 GF50

Physical	Dry	Conditioned	Unit	Test Method
Density	1.57	--	g/cm ³	ISO 1183/A
Apparent (Bulk) Density	0.60 to 0.80	--	g/cm ³	ISO 60
Viscosity Number	130	--	cm ³ /g	ISO 307
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	2.32E+6 (16000)	1.52E+6 (10500)	psi (MPa)	ISO 527-1/1A/1
Tensile Stress (Break)	26100 (180)	17400 (120)	psi (MPa)	ISO 527-2/1A/5
Tensile Strain (Break)	2.0	3.1	%	ISO 527-2/1A/5
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-22°F (-30°C)	4.3 (9.0)	--	ft·lb/in ² (kJ/m ²)	
73°F (23°C)	6.2 (13)	8.1 (17)	ft·lb/in ² (kJ/m ²)	
Charpy Unnotched Impact Strength				ISO 179/1eU
-22°F (-30°C)	29 (60)	--	ft·lb/in ² (kJ/m ²)	
73°F (23°C)	31 (65)	29 (60)	ft·lb/in ² (kJ/m ²)	
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load				
66 psi (0.45 MPa), Unannealed	437 (225)	--	°F (°C)	ISO 75-2/Bf
264 psi (1.8 MPa), Unannealed	419 (215)	--	°F (°C)	ISO 75-2/Af

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Flammability	Dry	Conditioned	Unit	Test Method
Burning Rate	< 3.9 (< 100)	--	in/min (mm/min)	FMVSS 302
Flame Rating	HB	--		UL 94

Additional Information

- 1.) Not for use in food contact applications
- 2.) Not for use in medical or pharmaceutical applications

A Certificate of Analysis (CoA) is provided with every lot. DSC data is available on request. Content of not intentionally added other plastics is below 1%.

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Injection	Dry (English)	Dry (SI)
Drying Temperature	176 °F	80 °C
Drying Time	3.0 to 4.0 hr	3.0 to 4.0 hr
Suggested Max Moisture	0.04 to 0.10 %	0.04 to 0.10 %
Processing (Melt) Temp	482 to 536 °F	250 to 280 °C
Mold Temperature	140 to 212 °F	60 to 100 °C

Notes

These are typical property values not to be construed as specification limits.

Processing Techniques

Specific recommendations for resin type and processing conditions can only be made when the end use, required properties and fabrication equipment are known.

Product Storage and Handling

- Product should be stored in dry conditions at temperatures below 50°C and protected from UV-light
- Improper storage may bring damage to the packaging and can negatively affects on the quality of this product
- Keep material completely dry for good processing

Company Information

For further information regarding the LyondellBasell company, please visit <http://www.lyb.com/>.

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