

Technical Data Sheet



CirculenRecover EP PA66 SHI H BLACK

Polyamide 66
LyondellBasell Industries
Engineering Plastics

Product Description

High impact modified, heat stabilized Polyamide 66 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 PA66 MV SHI H BLACK contains 80% of recycled material that is fully based on pre-consumer waste.

Recycled content according to DIN SPEC 91446:2021-12: R80

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
Recycled Content	• Post-Industrial (PIR)/Pre-Consumer, 80%
Features	• Heat Stabilized • Impact Modified • Medium Viscosity
Processing Method	• Injection Molding
Resin ID (ISO 1043)	• PA66-I

Physical	Dry	Conditioned	Unit	Test Method
Density	1.09	--	g/cm ³	ISO 1183/A
Apparent (Bulk) Density	0.60 to 0.80	--	g/cm ³	ISO 60
Water Absorption (Saturation, 73°F (23°C))	--	2.2	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	290000 (2000)	123000 (850)	psi (MPa)	ISO 527-1/1A/1
Tensile Stress (Yield)	7980 (55.0)	5510 (38.0)	psi (MPa)	ISO 527-2/1A/50
Tensile Strain (Yield)	5.0	30	%	ISO 527-2/1A/50
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-22°F (-30°C)	5.7 (12)	--	ft-lb/in ² (kJ/m ²)	
73°F (23°C)	26 ft-lb/in ² (55 kJ/m ²)	No Break	(kJ/m ²)	
Charpy Unnotched Impact Strength				ISO 179/1eU
-22°F (-30°C)	No Break	--		
73°F (23°C)	No Break	No Break		
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load				
66 psi (0.45 MPa), Unannealed	329 (165)	--	°F (°C)	ISO 75-2/Bf
264 psi (1.8 MPa), Unannealed	136 (58.0)	--	°F (°C)	ISO 75-2/ Af
Flammability	Dry	Conditioned	Unit	Test Method
Burning Rate	< 3.9 (< 100)	--	in/min (mm/min)	FMVSS 302
Flame Rating	HB	--		UL 94

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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	518 to 554 °F	270 to 290 °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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