

Technical Data Sheet

**CirculenRecover EP PA66MKF4015HBLK968001**



Polyamide 66

**Product Description**

40% glass fiber and mineral reinforced, 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 MKF4015 H BLACK contains 55% of recycled material that is fully based on pre-consumer waste. Recycled content according to DIN SPEC 91446:2021-12: R55 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\Mineral, 40%
<b>Resin ID</b>	PA66

Typical Properties	Nominal Value	Units	Test Method
<b>Physical</b>			
Density, (Method A)	1.44	g/cm <sup>3</sup>	ISO 1183
Apparent (Bulk) Density	0.60 to 0.80	g/cm <sup>3</sup>	ISO 60
Viscosity Number	140	cm <sup>3</sup> /g	ISO 307
<b>Mechanical</b>			
Tensile Stress at Yield	120	MPa	ISO 527-2
- Conditioned	75	MPa	ISO 527-2
Tensile Strain at Break			
(Type 1A, 5 mm/min)	2.5	%	ISO 527-2
(Type 1A, 5 mm/min) - Conditioned	7.0	%	ISO 527-2
Tensile Strain at Yield	2.5	%	ISO 527-2
- Conditioned	5	%	ISO 527-2
Tensile Stress at Break			
(Type 1A, 5 mm/min)	120	MPa	ISO 527-2
(Type 1A, 5 mm/min) - Conditioned	70.0	MPa	ISO 527-2
Tensile Modulus			
(1 mm/min, Type 1A)	8300	MPa	ISO 527-1
(1 mm/min, Type 1A) - Conditioned	4700	MPa	ISO 527-1
<b>Impact</b>			
Charpy Impact Strength - Notched			
(23 °C, Type 1, Edgewise, Notch A)	4.0	kJ/m <sup>2</sup>	ISO 179
(-30 °C, Type 1, Edgewise, Notch A)	3.5	kJ/m <sup>2</sup>	ISO 179
(23 °C, Type 1, Edgewise, Notch A) - Conditioned	6.0	kJ/m <sup>2</sup>	ISO 179

<b>Charpy Impact Strength - Unnotched</b>		
(23 °C, Type 1, Edgewise)	45 kJ/m <sup>2</sup>	ISO 179
(-30 °C, Type 1, Edgewise)	40 kJ/m <sup>2</sup>	ISO 179
(23 °C, Type 1, Edgewise) - Conditioned	65 kJ/m <sup>2</sup>	ISO 179
<b>Thermal</b>		
Deflection Temperature Under Load Unannealed (0.45 MPa), (Flatwise)	>250 °C	ISO 75-2/B
Deflection Temperature Under Load Unannealed (1.80 MPa), (Flatwise)	220 °C	ISO 75-2/A
<b>Flammable</b>		
Burning Rate, (FMVSS 302)	<100 mm/min	FMVSS 302
<b>Additional Information</b>		
Water Absorption Sat/23C, - Conditioned	1.5 %	ISO 62
<b>UL Information</b>		
Flame Rating	HB	UL 94

<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	280 to 300	°C
Mold Temperature	60 to 120	°C