

Technical Data Sheet

# Ferro Pp TPP13AC03BK

Polypropylene Homopolymer  
 LyondellBasell Industries  
 Engineering Plastics

**Product Description**

Meets/Exceeds Ford Engineering Specification ESB-M4D606-A.  
 Primary end use is for armrest inserts and visor panel cores.

**General**

Filler / Reinforcement	• Talc, 13% Filler by Weight
Additive	• Heat Stabilizer
Features	• Heat Stabilized • Homopolymer
Automotive Specifications	• GM GMP.PP.065 Color: Black
Appearance	• Black
Forms	• Pellets
Processing Method	• Injection Molding

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density / Specific Gravity			
--	1.01	1.01 g/cm <sup>3</sup>	ASTM D792
--	1.01 g/cm <sup>3</sup>	1.01 g/cm <sup>3</sup>	ISO 1183/A

Melt Mass-Flow Rate (MFR)			
230°c/2.16 Kg	7.0 g/10 min	7.0 g/10 min	ASTM D1238
230°c/2.16 Kg	6.0 g/10 min	6.0 g/10 min	ISO 1133

Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength			
Yield	5100 psi	35.2 MPa	ASTM D638
Yield, 73°f (23°c)	4760 psi	32.8 MPa	ISO 527-2
Tensile Elongation (Break)	26 %	26 %	ASTM D638
Flexural Modulus			
--	280000 psi	1930 MPa	ASTM D790
--	339000 psi	2340 MPa	ISO 178
Flexural Strength (Yield)	7300 psi	50.3 MPa	ASTM D790

Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact			
73°f (23°c)	0.60 ft·lb/in	32 J/m	ASTM D256
-40°f (-40°c)	1.1 ft·lb/in <sup>2</sup>	2.3 kJ/m <sup>2</sup>	ISO 180
73°f (23°c)	1.3 ft·lb/in <sup>2</sup>	2.7 kJ/m <sup>2</sup>	ISO 180
Unnotched Izod Impact (73°f (23°c))	12 ft·lb/in	640 J/m	ASTM D4812
Gardner Impact	10.0 in·lb	1.13 J	ASTM D3029

Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Durometer Hardness (Shore D)	73	73	ASTM D2240

Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			
66 Psi (0.45 Mpa), Unannealed	241 °F	116 °C	ASTM D648
66 Psi (0.45 Mpa), Unannealed	235 °F	113 °C	ISO 75-2/B
264 Psi (1.8 Mpa), Unannealed	150 °F	65.6 °C	ASTM D648
264 Psi (1.8 Mpa), Unannealed	147 °F	64.0 °C	ISO 75-2/A

**Additional Information**

Tensile/Izod Change, ISO 188, 1000 hours, 140°C: +2%/-4%

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Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	176 °F	80 °C
Drying Time	2.0 to 3.0 hr	2.0 to 3.0 hr
Rear Temperature	400 to 410 °F	204 to 210 °C
Middle Temperature	410 to 415 °F	210 to 213 °C
Front Temperature	415 to 420 °F	213 to 216 °C
Nozzle Temperature	420 to 425 °F	216 to 218 °C
Processing (Melt) Temp	428 to 500 °F	220 to 260 °C
Mold Temperature	86 to 140 °F	30 to 60 °C
Back Pressure	20.0 to 50.0 psi	0.138 to 0.345 MPa
Screw Speed	100 to 150 rpm	100 to 150 rpm
Clamp Tonnage	2.0 to 3.0 tons/in <sup>2</sup>	2.8 to 4.1 kN/cm <sup>2</sup>
Screw L/D Ratio	20.0:1.0	20.0:1.0
Screw Compression Ratio	2.0:1.0	2.0:1.0

**Notes**

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