

Technical Data Sheet

# Ferro Pp TPP20AC17BK

Polypropylene Homopolymer  
 LyondellBasell Industries  
 Engineering Plastics

**Product Description**

Meets/Exceeds Ford Engineering Specification ESH-M4D293-B.  
 Primary end use is for AC/heater ducts and similar components.

**General**

Filler / Reinforcement	• Talc, 20% Filler by Weight
Additive	• Heat Stabilizer
Features	• General Purpose • Heat Stabilized • Homopolymer
Automotive Specifications	• ASTM D5857 PP212 T20 Z1 • CHRYSLER MS-DB-500 CPN2347 Color: Black • FORD ESH-M4D293-B • CALSONIC KANSEI EMS# 4540-10057 • FORD ESA-M4D293-A
Appearance	• Black
Forms	• Pellets
Processing Method	• Injection Molding

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density / Specific Gravity	1.06	1.06 g/cm <sup>3</sup>	ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/2.16 Kg)	6.2 g/10 min	6.2 g/10 min	ASTM D1238
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength (73°F (23°C))	4450 psi	30.7 MPa	ASTM D638
Tensile Elongation (Break)	20 %	20 %	ASTM D638
Flexural Modulus	348000 psi	2400 MPa	ASTM D790
Flexural Strength (Yield)	7500 psi	51.7 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
Unnotched Izod Impact (73°F (23°C))	9.5 ft·lb/in	510 J/m	ASTM D4812
Gardner Impact	6.00 in·lb	0.678 J	ASTM D3029
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Rockwell Hardness (R-scale)	100	100	ASTM D785
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			ASTM D648
66 Psi (0.45 Mpa), Unannealed	248 °F	120 °C	
264 Psi (1.8 Mpa), Unannealed	156 °F	69.0 °C	

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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.