Technical Data Sheet

Ferro Pp TPP40AC45BK

Polypropylene
LyondellBasell Industries
Engineering Plastics

Product Description
Meets/Exceeds Ford Engineering Specification ESA-M4D166-A. Primary end use is for fan shrouds and battery covers.

General		
Filler / Reinforcement	• Talc, 40% Filler by Weight	
Additive	• Heat Stabilizer	
Features	• Heat Stabilized	• Homopolymer
Automotive Specifications	• ASTM D5857 PP212 T40	• CHRYSLER MS-DB-500 CPN3549 Color: Black
Appearance	• Black	
Forms	• Pellets	
Processing Method	• Injection Molding	

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density / Specific Gravity	1.28	1.28 g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (230°c/2.16 Kg)	5.6 g/10 min	5.6 g/10 min	ASTM D1238
Mechanical	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Tensile Strength (73°f (23°c))	4600 psi	31.7 MPa	ASTM D638
Tensile Elongation (Yield)	4.0 %	4.0 %	ASTM D638
Flexural Modulus	551000 psi	3800 MPa	ASTM D790
Flexural Strength (Yield)	7650 psi	52.7 MPa	ASTM D790
Impact	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Notched Izod Impact (73°f (23°c))	0.51 ft·lb/in	27 J/m	ASTM D256
Unnotched Izod Impact (73°f (23°c))	4.5 ft·lb/in	240 J/m	ASTM D4812
Hardness	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Durometer Hardness (Shore D)	74	74	ASTM D2240
Thermal	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Deflection Temperature Under Load			ASTM D648
66 Psi (0.45 Mpa), Unannealed	268 °F	131 °C	
264 Psi (1.8 Mpa), Unannealed	176 °F	80.0 °C	

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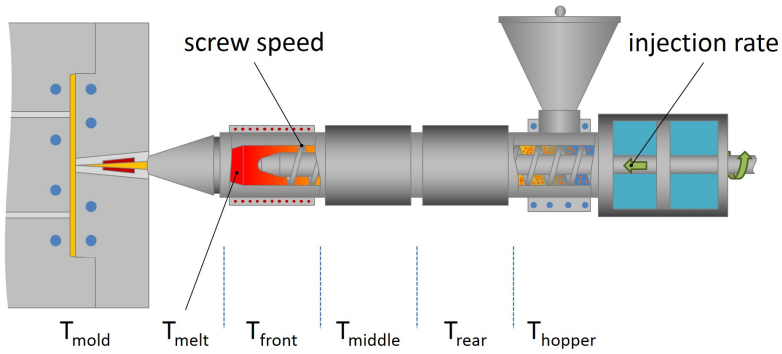

Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	176 °F	80 °C
Drying Time	2.0 to 3.0 hr	2.0 to 3.0 hr
Rear Temperature	400 to 410 °F	204 to 210 °C
Middle Temperature	410 to 415 °F	210 to 213 °C
Front Temperature	415 to 420 °F	213 to 216 °C
Nozzle Temperature	420 to 425 °F	216 to 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/in²	2.8 to 4.1 kN/cm²
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.