Technical Data Sheet

Ferro Pp TPP40AC38WH

Polypropylene Homopolymer
LyondellBasell Industries
Engineering Plastics

Product Description
Meets/Exceeds Ford Engineering Specification WSK-M4D644-A4. Primary end use is for instrument clusters.

General		
Filler / Reinforcement	• Talc, 43% Filler by Weight	
Additive	• Heat Stabilizer	
Features	• Heat Stabilized	• Homopolymer
Automotive Specifications	• FORD WSK-M4D644-A4	
Appearance	• White	
Forms	• Pellets	
Processing Method	• Injection Molding	

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density / Specific Gravity			
--	1.32	1.32 g/cm³	ASTM D792
--	1.30 g/cm³	1.30 g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR)			
230°c/2.16 Kg	5.7 g/10 min	5.7 g/10 min	ASTM D1238
230°c/2.16 Kg	5.2 g/10 min	5.2 g/10 min	ISO 1133
Mechanical	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Tensile Strength			
Yield	4200 psi	29.0 MPa	ASTM D638
Yield, 73°f (23°c)	4000 psi	27.6 MPa	ISO 527-2
Tensile Elongation (Break)	11 %	11 %	ASTM D638
Flexural Modulus			
--	420000 psi	2900 MPa	ASTM D790
--	551000 psi	3800 MPa	ISO 178
Flexural Strength (Yield)	7000 psi	48.3 MPa	ASTM D790
Impact	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Notched Izod Impact			
73°f (23°c)	0.50 ft·lb/in	27 J/m	ASTM D256
-40°f (-40°c)	0.81 ft·lb/in²	1.7 kJ/m²	ISO 180
73°f (23°c)	0.95 ft·lb/in²	2.0 kJ/m²	ISO 180
Unnotched Izod Impact (73°f (23°c))	5.0 ft·lb/in	270 J/m	ASTM D4812
Gardner Impact	9.00 in·lb	1.02 J	ASTM D3029
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			
66 Psi (0.45 Mpa), Unannealed	265 °F	129 °C	ASTM D648
66 Psi (0.45 Mpa), Unannealed	266 °F	130 °C	ISO 75-2/B
264 Psi (1.8 Mpa), Unannealed	180 °F	82.2 °C	ASTM D648 ISO 75-2/A

Additional Information
Tensile/Izod Change, ISO 188, 2000 hours, 150°C: +11%/-8%

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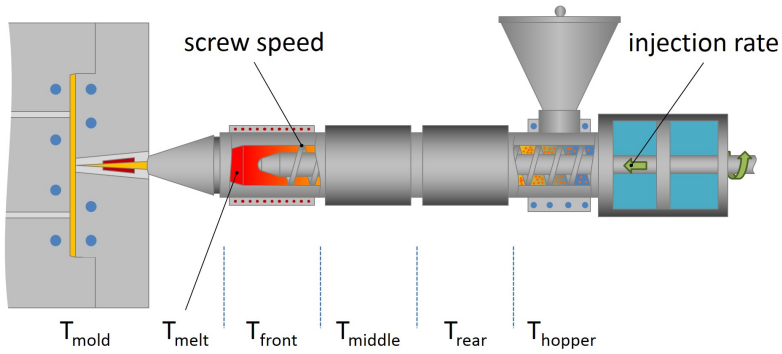

Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	176 °F	80 °C
Drying Time	2.0 to 3.0 hr	2.0 to 3.0 hr
Rear Temperature	400 to 410 °F	204 to 210 °C
Middle Temperature	410 to 415 °F	210 to 213 °C
Front Temperature	415 to 420 °F	213 to 216 °C
Nozzle Temperature	420 to 425 °F	216 to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