

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/cm ³	ASTM D792
--	1.30 g/cm ³	1.30 g/cm ³	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/in ²	1.7 kJ/m ²	ISO 180
73°F (23°C)	0.95 ft·lb/in ²	2.0 kJ/m ²	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

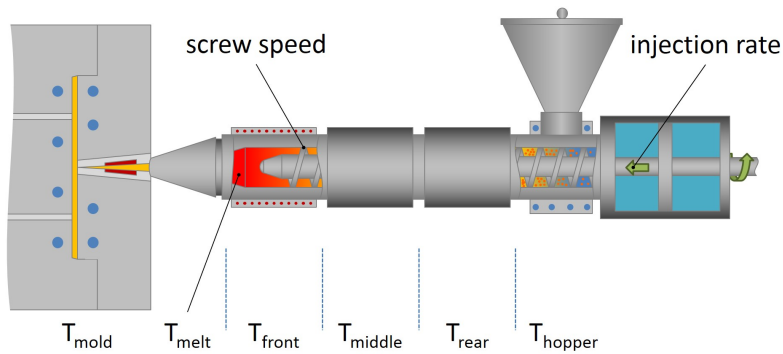
Additional Information

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/in ²	2.8 to 4.1 kN/cm ²
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.