Maxxam™ PP5120R B2

Polypropylene Homopolymer

Key Characteristics

Product Description			
PolyOne's Maxxam™ family of polypropylene- and polyethylene-based products covers a wide range of applications, markets and performance requirements. Standard grades are compounded with calcium carbonate, glass and talc to provide a desired balance of properties including stiffness, durability, impact resistance and heat resistance. Custom grades are available with features such as UV stabilizers, heat stabilizers, custom color, high impact, etc.			
General			
Material Status	• Commercial: Active		
Regional Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Filler / Reinforcement	• Talc		
Features	• General Purpose	• Heat Stabilized	• Homopolymer
Uses	• Automotive Applications • Construction Applications	• Consumer Applications • General Purpose	• Industrial Applications
Forms	• Pellets		
Processing Method	• Injection Molding		

Technical Properties [1]

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density / Specific Gravity	1.06	1.06	ISO 1183
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	12 to 22 g/10 min	12 to 22 g/10 min	ISO 1133
Molding Shrinkage (0.126 in (3.20 mm))	1.0 %	1.0 %	ISO 294-4
Mechanical	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Tensile Stress [2] (Yield)	3920 psi	27.0 MPa	ISO 527
Tensile Strain (Break)	16 %	16 %	ISO 527-2
Flexural Modulus [3]	319000 psi	2200 MPa	ISO 178
Impact	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Notched Izod Impact Strength			ISO 180
-40°F (-40°C)	0.57 ft·lb/in²	1.2 kJ/m²	
73°F (23°C)	0.95 ft·lb/in²	2.0 kJ/m²	
Thermal	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Heat Deflection Temperature			ISO 75-2/B
66 psi (0.45 MPa), Unannealed	230 °F	110 °C	
Heat Deflection Temperature			ISO 75-2/A
264 psi (1.8 MPa), Unannealed	145 °F	63.0 °C	
Flammability	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Burning Rate	< 3.9 in/min	< 100 mm/min	ISO 3795
Flame Rating (0.06 in (1.5 mm))	HB	HB	UL 94

Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Drying Temperature	176 °F	80 °C
Drying Time	1.0 hr	1.0 hr
Rear Temperature	365 to 392 °F	185 to 200 °C
Middle Temperature	392 to 419 °F	200 to 215 °C

Injection	Typical Value (English)	Typical Value (SI)
Front Temperature	401 to 428 °F	205 to 220 °C
Nozzle Temperature	401 to 428 °F	205 to 220 °C
Mold Temperature	104 °F	40 °C
Injection Rate	Moderate	Moderate
Back Pressure	1160 psi	8.00 MPa

Notes

[1] Typical values are not to be construed as specifications.

[2] 2.0 in/min (50 mm/min)

[3] 0.079 in/min (2.0 mm/min)

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