

Borealis HF700SA Polypropylene

Category : Polymer , Thermoplastic , Polypropylene (PP)

Material Notes:

HF700SA is a polypropylene homopolymer intended for injection molding. This material has excellent balanced mechanical properties and is easy to process. Applications: household applications. Information provided by Borealis AG

Order this product through the following link:

http://www.lookpolymers.com/polymer_Borealis-HF700SA-Polypropylene.php

Physical Properties	Metric	English	Comments
Bulk Density	0.500 - 0.600 g/cc	0.0181 - 0.0217 lb/in ³	
Density	0.905 g/cc	0.0327 lb/in ³	ISO 1183
Linear Mold Shrinkage	0.015 cm/cm	0.015 in/in	mold average; Borealis Method
Melt Flow	21 g/10 min @Load 2.16 kg, Temperature 230 °C	21 g/10 min @Load 4.76 lb, Temperature 446 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	102	102	ISO 2039-2
Ball Indentation Hardness	70.0 MPa	10200 psi	358 N/30 s; ISO 2039
Tensile Strength, Yield	34.0 MPa	4930 psi	50mm/min; ISO 527-2
Elongation at Yield	8.0 %	8.0 %	50mm/min; ISO 527-2
Tensile Modulus	1.50 GPa	218 ksi	1mm/min; ISO 527-2
Charpy Impact Unnotched	1.50 J/cm ² @Temperature -20.0 °C	7.14 ft-lb/in ² @Temperature -4.00 °F	ISO 179/1eA
	8.00 J/cm ² @Temperature 23.0 °C	38.1 ft-lb/in ² @Temperature 73.4 °F	ISO 179/1eA
Charpy Impact, Notched	0.350 J/cm ² @Temperature 23.0 °C	1.67 ft-lb/in ² @Temperature 73.4 °F	ISO 179/1eA

Thermal Properties	Metric	English	Comments
Hot Ball Pressure Test	125 °C @Thickness 2.00 mm	257 °F @Thickness 0.0787 in	EN 60695-10-2
Deflection Temperature at 0.46 MPa	94.0 °C	201 °F	

Thermal Properties	Metric	English	ISO 75-2 Comments
Deflection Temperature at 1.8 MPa (264 psi)	53.0 °C	127 °F	ISO 75-2
Vicat Softening Point	90.0 °C	194 °F	ISO 306
	@Load 5.10 kg	@Load 11.2 lb	
	153 °C	307 °F	ISO 306
	@Load 1.02 kg	@Load 2.25 lb	
UL RTI, Electrical	120 °C	248 °F	UL 746B
UL RTI, Mechanical with Impact	120 °C	248 °F	UL 746B
UL RTI, Mechanical without Impact	120 °C	248 °F	UL 746B
Flammability, UL94	HB	HB	
	@Thickness 0.800 mm	@Thickness 0.0315 in	
	HB	HB	
	@Thickness 3.00 mm	@Thickness 0.118 in	

Optical Properties	Metric	English	Comments
Gloss	70 %	70 %	2mm plaque; DIN 67530

Processing Properties	Metric	English	Comments
Processing Temperature	220 - 260 °C	428 - 500 °F	mass temperature
Feed Temperature	40.0 - 80.0 °C	104 - 176 °F	
Mold Temperature	30.0 - 50.0 °C	86.0 - 122 °F	
Injection Velocity	100 - 200 mm/sec	3.94 - 7.87 in/sec	
Hold Pressure	30.0 - 60.0 MPa	4350 - 8700 psi	

Descriptive Properties	Value	Comments
Back Pressure	low to medium	
Screw Speed	low to medium	

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