

Beta (β)-PPR™ RA7050

Polypropylene Random Copolymer

Borealis AG

Message:

Beta-PPR™ RA7050 is a PP-RCT(1), a Polypropylene-Random-Copolymer with an enhanced Crystalline structure brought about by a special β-nucleation and with an improved Temperature resistance. Proof of the excellent performance characteristics of Beta-PPR™ RA7050 is, for example, a categorised required strength (CRS) of 5 MPa at 70°C and 50 years in comparison to a value of 3.21 MPa for standard PP-R.

The colour of Beta-PPR™ RA7050 is steel grey similar to RAL 7042.

In general Beta-PPR™ RA7050 is intended to be used in applications for plumbing and heating, such as in-house hot and cold water pipes and fittings, floor and wall heating systems and radiator connections.

General Information			
Additive	Nucleating agent		
Features	Nucleated		
	Heat resistance, medium		
	Random copolymer		
Uses	Pipe components		
	Piping system		
	Accessories		
Appearance	Grey		
Forms	Particle		
Processing Method	Pipeline extrusion molding		
	Extrusion		
	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density	0.905	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	0.30	g/10 min	ISO 1133
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (Injection Molded)	900	MPa	ISO 527-2/1
Tensile Stress (Yield, Injection Molded)	25.0	MPa	ISO 527-2/50
Tensile Strain (Yield, Injection Molded)	10	%	ISO 527-2/50
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-20°C, injection molding	2.0	kJ/m ²	ISO 179/1eA
0°C, injection molding	4.0	kJ/m ²	ISO 179/1eA
23°C, injection molding	40	kJ/m ²	ISO 179/1eA
Thermal	Nominal Value	Unit	Test Method
CLTE - Flow (0 to 70°C)	1.5E-4	cm/cm/°C	DIN 53752

Thermal Conductivity	0.24	W/m/K	DIN 52612
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+12	ohms	DIN 53482/VDE 0303
Injection	Nominal Value	Unit	
Hopper Temperature	200	°C	
Nozzle Temperature	220 - 250	°C	
Processing (Melt) Temp	< 250	°C	
Extrusion	Nominal Value	Unit	
Cylinder Zone 1 Temp.	215 - 230	°C	
Cylinder Zone 2 Temp.	215 - 230	°C	
Cylinder Zone 3 Temp.	215 - 230	°C	
Cylinder Zone 4 Temp.	215 - 230	°C	
Cylinder Zone 5 Temp.	215 - 230	°C	
Adapter Temperature	220 - 230	°C	
Melt Temperature	220 - 230	°C	
Die Temperature	220 - 230	°C	
Extrusion instructions			

Screen pack: Sieve 60 to 100 mesh

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