Borealis PP RA7050-GN

Polypropylene Random Copolymer

Borealis AG

Message:

PP-RCT (PolyPropylene-Random Crystallinity Temperature) is a material classification defined in ISO 1043-1:2001 to describe the second-generation class of PP-R materials. This pipe class, PP-RCT, has recently been included in EN ISO 15874, the global standard for plastics piping systems for Hot and Cold Water pipe installations and enable increased performance and competitiveness for pipe producers.
RA7050-GN is a PP-RCT polypropylene-random-copolymer with a special crystallinity brought about by a special beta-nucleation which exhibits an improved pressure resistance, especially at elevated temperatures. PP-RCT materials such as RA7050-GN are designed to fulfil the PP-RCT pipe class as described in the EN ISO 15874 standard, e.g. 50 years service life at 70°C at 5 MPa, compared to 3.2 MPa for standard PP-R materials when tested according to the ISO 9080 pipe pressure tests.
RA7050-GN is ready compounded for maximum quality control. The colour of RA7050-GN is green similar to RAL 6024.
Applications
In general RA7050-GN 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	Green
Processing Method	Pipeline extrusion molding Extrusion Injection molding

Physical	Nominal Value	Unit	Test Method
Density	0.905	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	0.25	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/m²	ISO 179/1eA
0°C, injection molding	4.0	kJ/m²	ISO 179/1eA
23°C, injection molding	40	kJ/m²	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
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

Recommended distributors for this material

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