

## Borealis Beta-PPR™ RA7050-GN Polypropylene-Random-Copolymer for Pressure Pipe Systems

Category : Polymer , Thermoplastic , Polypropylene (PP) , Polypropylene, Extrusion Grade

### Material Notes:

Beta-PPR RA7050-GN is a PP-RCT, a Polypropylene-Random-Copolymer with an enhanced Crystalline structure brought about by a special  $\beta$ -nucleation and with an improved Temperature resistance. Proof of the excellent performance characteristics of Beta-PPR RA7050-GN is, for example, a categorized 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 color of Beta-PPR RA7050 is steel grey similar to RAL7042. In general Beta-PPR 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. Information provided by the Manufacturer.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Borealis-Beta-PPR-RA7050-GN-Polypropylene-Random-Copolymer-for-Pressure-Pipe-Systems.php](http://www.lookpolymers.com/polymer_Borealis-Beta-PPR-RA7050-GN-Polypropylene-Random-Copolymer-for-Pressure-Pipe-Systems.php)

| Physical Properties | Metric                               | English                              | Comments |
|---------------------|--------------------------------------|--------------------------------------|----------|
| Density             | 0.905 g/cc                           | 0.0327 lb/in <sup>3</sup>            | ISO 1183 |
| Melt Flow           | 0.30 g/10 min                        | 0.30 g/10 min                        | ISO 1133 |
|                     | @Load 2.16 kg,<br>Temperature 230 °C | @Load 4.76 lb,<br>Temperature 446 °F |          |

| Mechanical Properties   | Metric                  | English                     | Comments                |
|-------------------------|-------------------------|-----------------------------|-------------------------|
| Tensile Strength, Yield | 25.00 MPa               | 3626 psi                    | At 50 mm/min; ISO 527-2 |
| Elongation at Yield     | 10 %                    | 10 %                        | At 50 mm/min; ISO 527-2 |
| Modulus of Elasticity   | 0.900 GPa               | 131 ksi                     | 1 mm/min; ISO 527       |
| Charpy Impact, Notched  | 4.00 J/cm <sup>2</sup>  | 19.0 ft-lb/in <sup>2</sup>  | ISO 179/1eA             |
|                         | 0.200 J/cm <sup>2</sup> | 0.952 ft-lb/in <sup>2</sup> | ISO 179/1eA             |
|                         | @Temperature -20.0 °C   | @Temperature -4.00 °F       |                         |
|                         | 0.400 J/cm <sup>2</sup> | 1.90 ft-lb/in <sup>2</sup>  | ISO 179/1eA             |
|                         | @Temperature 0.000 °C   | @Temperature 32.0 °F        |                         |

| Thermal Properties   | Metric                          | English                            | Comments         |
|----------------------|---------------------------------|------------------------------------|------------------|
| CTE, linear          | 1.50 $\mu$ m/m-°C               | 0.833 $\mu$ in/in-°F               | DIN 53752        |
|                      | @Temperature 0.000 -<br>70.0 °C | @Temperature 32.0 -<br>158 °F      |                  |
| Thermal Conductivity | 0.240 W/m-K                     | 1.67 BTU-in/hr-ft <sup>2</sup> -°F | DIN 52612 Part 1 |

| Electrical Properties | Metric     | English    | Comments                  |
|-----------------------|------------|------------|---------------------------|
| Surface Resistance    | >= 6.0 ohm | >= 6.0 ohm | DIN 53482/VDE 0303 Part 2 |

| Processing Properties    | Metric       | English      | Comments |
|--------------------------|--------------|--------------|----------|
| Front Barrel Temperature | 200 - 220 °C | 392 - 428 °F |          |
| Die Temperature          | 210 - 220 °C | 410 - 428 °F |          |
| Melt Temperature         | 210 - 230 °C | 410 - 446 °F |          |
| Head Temperature         | 210 - 220 °C | 410 - 428 °F |          |

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