

Polypropylene

RA7050-GF

Polypropylene Glass Fibre Reinforced Compound

Description

RA7050-GF is a 30 % glass fiber reinforced PP random co-polymer, grey in color, intended for use in co-extrusion of of multilayer composite pipes.

RA7050-GF is a ready-made compound for maximal quality consistency and reduced processing complexity with a low melt flow rate, especially designed for the co-extrusion of multilayer composite pipes. The base resin RA7050 has a special beta-nucleated crystallinity that exhibits improved pressure resistance, especially at elevated temperatures, and which fulfills the requirements for PP-RCT according to ISO15874.

Very high balance between stiffness and impact resistance

Excellent mechanical and thermal properties

Applications

RA7050-GF is intended for following applications:

RA7050-GF has been developed for the co-extrusion of PP-RCT multilayer composite pipes intended for hot and cold water installations according to ISO 15874 as well as for industrial applications according to ISO 15494 such as:

- Hot and cold water supply
- Floor and wall heating
- Cooling systems
- Radiator connections
- HVAC systems
- Riser pipes
- Industrial applications

Specifications

ISO15874, ISO15494

Physical properties

Property	Typical value *	Unit	Test method
Melt flow rate (230 °C/2.16 kg)	0,7	g/10min	ISO 1133-1
Tensile modulus (1 mm/min)	5200	MPa	ISO 527-2
Tensile strain at yield (50 mm/min)	4	%	ISO 527-2
Tensile stress at yield (50 mm/min)	70	MPa	ISO 527-2
Charpy impact strength, notched (23 °C)	15	kJ/m ²	ISO 179-1/1eA
Charpy impact strength, notched (0 °C)	9	kJ/m ²	ISO 179-1/1eA

* Data should not be used for specification work

Processing techniques

RA7050-GF is easy to process with standard extrusion machines. The actual conditions will depend on the type of equipment used. To avoid residual humidity from transport or storage, the material should be pre-dried approximately 2 h at 95 - 105 °C. Following parameters should be used as guideline:

Polypropylene

RA7050-GF

Processing setting	Typical value/range
Feeding temperature	40 - 80 °C
Mass temperature	230 - 280 °C
Barrel temperature	230 - 280 °C
Screw speed	low to medium

Packaging and storage

RA7050-GF should be stored in dry conditions at temperatures below 50°C and protected from UV-light. Improper storage can initiate degradation, which can result in odour generation and colour changes and can have negative effects on the physical properties of this product.

Product compliance documents

Latest versions of product safety information sheets (PSIS), product safety data sheets (SDS) and other product liability documents are available in our website www.borealisgroup.com.

Sustainability aspects

Borealis is ever mindful of the impact of our products on the planet. We promote Design for Circularity (DfC) and Design for Recycling (DfR) to conserve natural resources and to reduce the environmental impact of products over their entire lifetime (including production, use phase and after phase). DfR helps ensure that material can be effectively recycled while maximizing the material performance efficiency.

Further information on sustainability and Design for Recycling (DfR) can be found from our websites www.borealisgroup.com and www.borealiseverminds.com.

Disclaimer

The product(s) mentioned herein are not intended to be used for medical, pharmaceutical or healthcare applications and we do not support their use for such applications.

To the best of our knowledge, the information contained herein is accurate and reliable as of the date of publication; however we do not assume any liability whatsoever for the accuracy and completeness of such information.

Borealis makes no warranties which extend beyond the description contained herein. Nothing herein shall constitute any warranty of merchantability or fitness for a particular purpose.

It is the customer's responsibility to inspect and test our products in order to satisfy itself as to the suitability of the products for the customer's particular purpose. The customer is responsible for the appropriate, safe and legal use, processing and handling of our products.

No liability can be accepted in respect of the use of any Borealis product in conjunction with any other products and/or materials. The information contained herein relates exclusively to our products when not used in conjunction with any other material unless as specifically provided for in the test methods stated above.