Fortum Circo® PP 11-1001 Grey

Post-consumer recycled (PCR) polypropylene

Product Description

Fortum Circo® PP is post-consumer recycled polypropylene for injection moulding applications with low CO2 emissions. The material is supplied in pellet form. The grade is available in grey colour.

Sustainability

Fortum Circo PP 11-1001 Grey contains 98 % of Post-Consumer recycled material which is separately collected plastic packaging from households in accordance with EN ISO 14021:2016. The quality and traceability of recycled content is certified by EuCertPlast.

The total cradle-to-gate carbon footprint of product (GWP total), is ca. 450 kg CO2 eq per 1000kg of the packed granulates.

The material is 100% recyclable. For further information, please contact Fortum representative.

Typical Properties

	Nominal Value	Units	Test Method
Mechanical			
Tensile Modulus	1250	MPa	ISO 527
Tensile Strength at Yield	26	MPa	ISO 527
Tensile Elongation at Break	9	%	ISO 527
Flexural Modulus	1200	MPa	ISO 178
Flexural Strength	33	MPa	ISO 178
Charpy Impact Strength (A notched) +23ºC	5,2	kJ/m2	ISO 179
Charpy Impact Strength (Unnotched) +23ºC	44	kJ/m2	ISO 179
Physical			
Density	930	kg/m3	ISO 1183
Post-consumer recycled (PCR) content	100	%	Weight
Melt flow rate (230ºC/2,16 kg)	10	g/10min	ISO 1133
Ash content	1,1	%	ISO 3451-1
Colour	Grey		
Filtration	110	µm	
Mold shrinkage	1,7	%	Internal
Antioxidant package	Included		

These are typical property values not to be construed as specification limits.

Processing: Injection moulding

No pre-drying is needed when stored properly.

The injection moulding cylinder temperature range is typically, but not limited to, above 200 ºC and under 260 ºC. The cylinder temperature profile should be adjusted, with the hopper section typically being 20 ºC to 30 ºC lower than the nozzle area. The optimum temperature profile should be determined by the specific needs of the application. Mould temperatures should also be matched to the application, typically between 15 ºC and 65 ºC.

Injection pressure depends on the application. Pressures are usually between 50 bar to 150 bar; the best results are typically achieved with relatively high pressures. Injection speed should be matched to the design, relatively fast injection speed is recommended. Holding pressure should be tested with the design;

the level of typical packing pressure is about 75% of maximum injection pressure. The pressure should be held until the gate is frozen.

Allow the material to cool until the in-mould temperature is about 75 ºC degrees or lower. Plasticization speed can be quite fast and back pressure should be matched per case. During the production pause, lower the melt temperatures; after reheating, purge sufficiently when starting the operation again.

Features

- Light weight
- Low friction
- Good chemical resistance
- Good impact strength
- Good electrical insulation properties
- Wide process window in injection moulding applications

Applications

- Automotive
- Consumer goods
- Furniture & décor
- Home electronics
- Construction materials

Further Information

Certificates

Quality Management System	ISO 9001:2015 No. 1111-16
Environmental Management System	ISO 14001:2015 No. 1110-17
Occupational Health and Safety System	ISO 45001:2018 No. 5051-11

EuCertPlast

Health and Safety

Material is based on post-consumer recycled plastic. Please verify that use of PCR based materials is permitted in your products.

For further information about safety in handling and processing please refer to the Safety Data Sheet.

Storage

The granulate is packed in big bags or bulk containers.

Material should be stored in dry conditions at normal temperatures and protected from UV-light. If it is stored under certain conditions, i. e. if there are large fluctuations in ambient temperature and the atmospheric humidity is high, moisture may condense inside the packaging. Under these circumstances, it is recommended to dry the resin before use.

Disclaimer

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.

The suitability of the material for the planned use should be always verified by the customer. Fortum is reporting these values and guidelines based on its own knowledge; updates may occur without notice. Please verify data accuracy with Fortum.

Company Information

For further information, please visit: www. fortum.com/circo

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