

Circo® PP 11-T21

Post-consumer recycled (PCR) polypropylene reinforced with talcum

Product Description

Circo® PP-T is a compound of recycled plastic reinforced with talcum for injection moulded applications with low CO₂e emissions. The compound is supplied in pellet form. The grade is available in grey colour with an option to add colour MB of your choice.

Sustainability

Circo PP 11-T21 contains >75 % 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 RecyClass.

The total cradle-to-gate carbon footprint of product (GWP total), including also biogenic carbon content is 530 kg CO₂ eq per 1000kg of the packed granulates.

The material is recyclable using modern recycling methods. For further information, please contact NG Nordic representative.

Typical Properties

	Nominal Value	Units	Test Method
Mechanical			
Tensile Modulus	1900	MPa	ISO 527
Tensile Strength at Yield	24	MPa	ISO 527
Tensile Elongation at Break	9	%	ISO 527
Flexural Modulus	2400	MPa	ISO 178
Flexural Strength	39	MPa	ISO 178
Charpy Impact Strength (A notched) +23°C	3	kJ/m ²	ISO 179
Charpy Impact Strength (Unnotched) +23°C	44	kJ/m ²	ISO 179
Physical			
Density	1090	kg/m ³	ISO 1183
Post-consumer recycled (PCR) content	>75	%	Weight
Filler content	21	%	Internal
Filler type	Talcum		Internal
Melt flow rate (230°C/2,16kg)	8	g/10min	ISO 1133
Colour	Grey, colour MB optional		
Mold shrinkage	1,3	%	Internal

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 190 °C and under 260 °C. The optimum temperature profile should be determined by the specific needs of the application,

and hopper section is typically 20 °C to 30 °C lower than the nozzle area. Mould temperatures should also be matched to the application, typically between 10 °C and 65 °C.

Injection pressure depends on the application. Injection speed profile should be matched to the design, relatively fast injection is preferred. Holding pressure and cushion 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.

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

- Tough
- High flexural modulus
- Low friction and shrinkage
- Fine aesthetics
- Good chemical resistance
- Good fatigue and heat resistance
- Electrical insulation properties

Applications

- Consumer goods
- Packaging & containers
- Automotive parts
- Electrical & electronic products

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
RecyClass Recycling Process	EN 15343



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. NG Nordic is reporting these values and guidelines based on its own knowledge; updates may occur without notice. Please verify data accuracy with NG Nordic.

Company Information

For further information, please visit: www.circoplastics.com

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