Circo® PP-CF 20-HB-4015B

Post-consumer recycled (PCR) polypropylene reinforced with cellulose fibres from sustainably grown forests with good flow properties and fire retardancy of UL-94 HB

Product Description

Circo® PP-CF 20-HB-4015B is a flame retardant compound made from recycled polypropylene reinforced with cellulose fibre for injection moulded applications. The compound is supplied in pellet form. The grade is available in natural grey colour or with the colour master batch of your choice.

Sustainability

Compound contains post-consumer recycled (PCR) 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 material is recyclable. For further information, please contact NG Nordic representative.

Typical Properties

	Nominal Value	Units	Test Method
Mechanical			
Tensile Modulus	2400	MPa	ISO 527
Tensile Strength at Yield	31	MPa	ISO 527
Tensile Elongation at Break	2,4	%	ISO 527
Flexural Modulus	2400	MPa	ISO 178
Flexural Strength	50	MPa	ISO 178
Charpy Impact Strength (A notched) +23°C	7,1	kJ/m2	ISO 179
Charpy Impact Strength (Unnotched) +23°C	26	kJ/m2	ISO 179
Physical			
Density	1060	kg/m3	ISO 1183
Post-consumer recycled (PCR) content	>40	%	Weight
Filler content	20	%	Weight
Filler type	Cellulose fibre		
Additive	Flame retardant		
Melt flow rate (230°/2,16kg)	14	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

Pre-drying is suggested to 105 °C in a desiccant dryer for a sufficient time, typically 4 hours. Residual moisture is suggested to keep below 0,2%.

NG Nordic Finland Oy
Business ID: 0350017-4

Kuulojankatu 1
11120 Riihimäki
Finland
+358 10 7551 000
www.ngnnordic.com/fi

The suggested injection moulding cylinder temperature is between 160 °C and 200 °C. Temperatures should not exceed 200 °C, as it may cause unwanted colouring and degradation of the material. Mould temperatures can be between 20 °C and 80 °C, depending on the application.

Use relatively high injection speed but avoid high spot temperatures on e.g. the nozzle. Holding pressure is needed and should be matched to the process, although the holding pressure time can be relatively short together with the cooling time. Use modest rpm on plasticization with low back pressure to avoid fibre breakage.

Purge the compound with pure PP for process stop; prolonged residue times may cause unwanted material degradation and should be avoided. Make sure that hot lumps are cooled properly, preferably with water.

For further information of processing Circo PP-CF series materials, please contact NG Nordic.

Features

- Flame rating: UL94-HB
- Excellent stiffness
- Low density vs. stiffness
- Smooth surface
- Fast production cycle time
- Low tool wear vs. glass fibres

Applications

- Automotive
- Consumer goods
- Furniture & décor
- 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 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.

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Company Information

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

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