

Technical Data Sheet

CEBICO rPP20 22RID052



Description

CEBICO rPP20 22RID052 is a natural fibre composite, primarily consisting of recycled polypropylene mixed with TMP, or thermo-mechanical pulp. The composite is balanced out with additives to enhance key properties for improved mechanical performance, thermal stability and moldability. The composite is natural dark grey/black and has moderate-high number of visible agglomerates.

Other product names/terms

Bio Composite (BC), Natural Fibre Composite (NFC)

Key features

High strength, high stiffness, low shrinkage, very low carbon footprint, recycled, high melt flow.

Typical characteristics

Physical properties	Value	Unit	Test method
Specific density	970	kg/m ³	ISO 1183
Shrinkage	0.8	%	ISO 294
Moisture content	< 0.2	%	Saugbrugs
Fibre content	20	%	Saugbrugs
Melt flow rate	14	g/10 min	ISO 1133, 5 kg @190 °C
Oxidation induction time	5	min	ISO 11357-7, 200 °C

Mechanical property	Value	Unit	Test method
Tensile modulus	1850	MPa	ISO 527-2
Tensile stress at yield	22	MPa	ISO 527-2
Tensile strain at yield	1.2	%	ISO 527-2
Tensile stress at break	31	MPa	ISO 527-2
Tensile strain at break	3.1	%	ISO 527-2
Flexural modulus	2000	MPa	ISO 178
Flexural strength	46	MPa	ISO 178
Charpy impact strength	3.5	kJ/m ²	ISO 179-2, 1eA @ 23 °C

Processing

It is recommended to process the material at 190 °C or lower. It is important that the composite is not processed at temperatures above 190 °C. Injection speed and pressure should be at a moderate level to minimize generated shear heat in the material to maintain correct melt temperature. Processing above recommended temperature will affect negatively on mechanical properties and colour.

Chemical composition

Primary component in CEBICO rPP20 22RID052 is post-consumer recycled polypropylene, where 20% of the total weight is substituted with thermo-mechanical pulp. Dispersed into the plastic polymer, the TMP reinforces the polymer matrix for improved mechanical properties.

Packaging

Big bags (< 1% m.c) or 25 kg bags (< 1% m.c), or in bulk.

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Recycling

CEBICO rPP20 22RID052 can be grinded, melted and remoulded like standard polypropylene.

Environment

Comparing CEBICO rPP20 22RID052 to average virgin material, the carbon footprint is reduced by up to 20%. CEBICO can replace normal plastic and glass fibre reinforced plastic as a more environmentally friendly alternative. The TMP fibres are produced from renewable and certificated raw materials and has very low carbon footprint additional to being processed using clean electric energy.

Contact us for more in-depth information about environmental impact of CEBICO natural fibre composites.

Storage

Avoid prolonged exposure to UV-light, extreme temperatures and high humidity. Store in ambient room temperature. Improper storage can have negative effects on physical, visual and mechanical properties.

Shelf life

Follow CEBICO storage instructions will maximize the shelf life of the material, maintain optimal properties and minimize degradation.

Disclaimer

The information in this document is provided in good faith and to the best of our knowledge accurate and reliable as of the date of publication. We do not assume any liability, direct or indirect with respect to shelf life, performance, suitability or fitness for intended use in any application. Each customer must determine the suitability of the material for their particular use through appropriate testing and analysis. The customer is responsible for the appropriate, safe and legal use, processing and handling of our products.

Contact:

For any inquires, technical or sales, please contact by sending email to cebico@norskeskog.com

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