Technical Data Sheet

CEBICO PP30 22RID036

CEBICO Polypropylene

Description

CEBICO PP30 22RID036 is a natural fibre composite, based on a polypropylene matrix with TMP, or thermo-mechanical pulp reinforcement. The composite is well processed and balanced with additives to enhance key properties for improved mechanical performance, thermal stability and moldability. The material is natural brown and has low-no visible agglomerates.

Other product names/terms

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

Key features

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

Typical characteristics

Physical properties	***Value***	***Unit***	***Test method***
Specific density	990	kg/m^3	ISO 1183
Moisture content	< 0.1	%	Saugbrugs
Fibre content	30	%	Saugbrugs
Melt flow rate	40	g/10 min	ISO 1133, 5 kg @ 190 °C

Mechanical property	***Value***	***Unit***	***Test method***
Tensile modulus	2500	MPa	ISO 527-2
Tensile stress at yield	32	MPa	ISO 527-2
Tensile strain at yield	1.2	%	ISO 527-2
Tensile stress at break	40	MPa	ISO 527-2
Tensile strain at break	2.4	%	ISO 527-2
Flexural modulus	3050	MPa	ISO 178
Flexural strength	61	MPa	ISO 178
Charpy impact strength	2.7	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. CEBICO is highly shear thinning so processability will improve significantly at higher pressures levels. However, processing above recommended temperature will affect colour, odour and affect negatively on mechanical properties.

Chemical composition

The primary component is polypropylene, where part of the material is substituted with thermo-mechanical pulp. Dispersed into the plastic polymer, the TMP reinforces the polymer matrix to modify and improve mechanical properties. Some additives have been used to create a binding between TMP fibre and polymer.

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Packaging

Big bags, bulk, octabin and 25 kg bags.

Recycling

CEBICO can be grinded, melted and remoulded like standard thermoplastic.

Environment

Comparing CEBICO to standard virgin material, the carbon footprint is reduced by equivalent to the fibre content in the material. 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:

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