Competitive Green Technologies
7 Seneca Road, Leamington ON
N8H 5P2, Canada
Phone: + 1 519 329 BLAK (2525)

World-leading biomaterials technology

TECHNICAL DATA SHEET

Product Name: CGTECH-BCR-HMS20/30/40

Product Description: The properties below are typical of CGTech bio-carbon reinforced hi flex hi stiffness polypropylene bio-composite compounded resin that **substitutes 20, 30 & 40% Talc Filled Polypropylene.**

Physical Properties	Typical Values*	Test Method
Melt Flow	10 g/min@230°C,2.16Kg	ISO 1133-1
Bio-content	20%	C-14 new carbon
Density	1.02 g/cm^3	ISO 1183
Notched Izod Impact @ 23°C	30 J/m	ISO 180
Tensile Strength @ Yield	35 MPa	ISO 527-1
Tensile Modulus	3.0 GPa	ISO 527-1
Flexural Modulus	3.2 GPa	ISO 178
Heat Deflection Temperature (°C)	140	ASTM D*648*
Moisture Content (%)	≤1	ASTM D6980
Mold Shrinkage	0.014-0.016 cm/cm	ASTM D955

Notes: *Values provided are typical and should not be interpreted as product specification.

The results reported are typical with the caveat that due to variable processing methods and conditions, no guarantees or warranties are expressed or implied, including expressions of fitness for purpose or merchantability.

This is a patent pending formulation.

Competitive Green Technologies
7 Seneca Road, Leamington ON
N8H 5P2, Canada
Phone: + 1 519 329 BLAK (2525)

World-leading biomaterials technology

Suggested Processing Guidelines

Drying of Resin:

Dry down to 0.1% at 90˚C in desiccant dryer using -40°C dew point of air possible for three to four hours based on our supplied resin at moisture content of 0.5%. (Please check incoming moisture to verify).

Processing:

Barrel temperature: 160°C at hopper going up to 175˚C (please don't exceed 185°C at injection tip point).

Injection tip temperature: 185˚C (maximum)

Hot Runner: max 185˚C +/- 2˚C. Injection speed range: 0.5 – 1 mm/sec.

Back pressure: 10%

***Notes**: May find cooling time is less than fossil polymer - around 1.5-2 seconds.*
Keep B side (moving side) at approximately 100°F (38°C).

Caution:

Resin should not sit in the manifold or the barrel for more than three minutes at elevated temperatures. If any resin has sat for more than this time, please purge.

Because of resin shrinkage, being 0.13%, molding should be done in molds specifically made using the mold flow analysis (MFA) of our resin and the .UDB file. Using a mold intended for higher shrinkage resin like fossil polymer polypropylene for example, can result in an oversized part, and could pose ejection related issues.

Cooling cycle reduction advantage may not be realized when using our resin in a mold not designed with MFA.