



Series 5000 Highly Filled Biofiber-based Polymer Masterbatches

Interfacial introduces its novel and proprietary Series 5000 Highly Filled Biofiber Polymer Masterbatches. Based on its patented liquid dispersion technology, these biofiber composites help customers throughout the value chain achieve important sustainability objectives and fulfill green initiatives. When compared to glass-filled, mineral-filled or virgin polymers, compounds letdown from Interfacial's biofiber masterbatches help customers achieve their lightweighting, strength, stiffness, productivity and processing objectives. All the while, insuring that customers deliver superior value while remaining cost-competitive!



Product Descriptions

90% Highly Filled Wood Flour Polymer Masterbatch	90% active wood flour masterbatch in a polyolefin matrix suitable for let down in compounding, molding or extrusion applications.
92% Highly Filled Oat Hull Cellulose Polymer Masterbatch	FDA approved 92% active fine natural fiber masterbatch in a polyolefin matrix suitable for let down in compounding, molding or extrusion applications.

Features	Advantages	Benefits
Lower Cost	Lower cost than glass filled or competing biofiber-based composites.	Makes it more economical to produce finished parts when Interfacial biofiber composites are utilized.
Very Highly Filled	At 90%+ fill levels, masterbatches have higher fill levels than competing biofiber composites.	Increased bulk density means masterbatches stretch further, which increases output of finished compounds.
Lower Density	Lower specific gravity than comparable glass and mineral filled composites.	This means parts have a lower part mass, which means final part weight can be reduced by up to 15%.
High Distributive Dispersion	Masterbatch manufacturing process means polymer completely envelops biofibers in polymer.	Compounders experience improved distributive and dispersive mixing when letting down into compounds.
Sustainable and Renewable	Biofibers used in Interfacial masterbatches are renewable, unlike fillers such as glass.	Helps customers meet sustainable materials sourcing objectives.
Good Mechanical Properties	Higher mechanical properties than PP homopolymer or compounds filled with minerals.	Gives end customers parts with higher strength, stiffness and impact resistance when replacing current materials.
Low Processing Temperatures	Interfacial biofiber masterbatches are highly moldable at significantly lower melt temps.	This requires less energy and provides faster part cooling times, reducing overall part costs.

Biofiber Composites – Comparison on Key Attributes	Highly Dispersed	Strength and Stiffness (Mech. Prop.)	Low Specific Gravity (Lightweight)	Reduced Cycle Times	Low Part Processing Temps	Odor and Color	Low Cost
90% Wood Flour	+++	++	+++	++	++	++	+++
92% Oat Hull Cellulose	+++	++	+++	+++	+++	++	++

Markets/Industries	End-Use Applications
<ul style="list-style-type: none"> • Compounding • Automotive • Building & Construction • Consumer Non-Durables • Consumer Durables • Furniture • Appliances • Household Goods • HVAC • Industrial • Packaging 	<ul style="list-style-type: none"> • Consoles, armrests • Knobs, shifters • Air vent and HVAC parts • Pen grips • Razor grips • Kitchenware and utensils • Power and hand tools • Fan blades • Housings • Composite decking • Windows, doors



Commercially Available Series 5000 Biofiber Polymer Masterbatches

Product	Description
5001	90% Highly Filled Wood Flour Polymer Masterbatch
5002	92% Highly Filled Oat Hull Cellulose Polymer Masterbatch

Need sample material for your development? Order at www.interfacial.tech

About Interfacial: Interfacial, a Nagase Company, is focused on the development and commercialization of technology platforms relating to advanced materials and manufacturing processes for the plastics, building and construction, electronics, automotive, recycling and specialty chemicals markets. Founded in 2015, Interfacial has 3 divisions – Development Services, Specialty Materials and Engineered Substrates – and currently employs a staff of 70. For more information, see www.ifllc.com.