



**Propel™** is a renewable and natural composite material that combines high quality cellulose with virgin or recycled plastics. It's the most highly filled and dispersed biocomposite masterbatch technology in the marketplace.

This material has an 85% cellulose fill level and blends West Fraser's high-quality cellulose into a polymer matrix. Made with either polyolefin or PVC resins, **Propel™** meets customer application requirements in a range of markets and industries.

## Why choose Propel™?

- **Sustainable, renewable material**
- **Competitively priced** compared to glass-filled, and other high-performance composites
- **85% cellulose-filled masterbatch** requires less material, thereby more efficient and economical
- **Light AND strong** 10% – 15% lighter weight while maintaining high strength, stiffness, and impact resistance.
- **High-Performance Mix** Improved distributive and dispersive mixing when masterbatch is let down into finished compounds
- **Lower Energy Requirements** in compounding or injection molding processes. **Propel™** requires less energy to produce parts than other formulations
- **Faster Speedier cycle times** improves quality, reduces distortion when ejecting molded parts





## Comparative Properties

Physical Properties	Method	Units	WF HDPE30% Cellulose	Thrive™ 30% Cellulose	Glass Fiber 30%	Talc 30%	CaCO3 30%	100% PP Homopolymer
Specific Gravity	ASTM D792		1.01	1.03	1.12	1.13	1.12	0.90
Physical Properties	Method	Units	WF HDPE30% Cellulose	Thrive™ 30% Cellulose	Glass Fiber 30%	Talc 30%	CaCO3 30%	100% PP Homopolymer
<b>Tensile:</b>								
Modulus	ASTM D638	psi	535,000	490,000	900,000	550,000	380,000	250,000
Strength	ASTM D638	psi	7,400	5,500	11,000	4,500	3,700	5,100
Elongation @Yield	ASTM D638	%	5.0	3.0	4.0	>10.0	>10.0	>10.0
<b>Flexural:</b>								
Modulus	ASTM D6790	psi	465,000	422,000	700,000	460,000	350,000	220,000
Strength	ASTM D6790	psi	11,700	9,500	16,200	7,600	6,300	6,900
<b>IZOD Impact:</b>								
Notched	ASTM 5260	ft-lbs/in	0.5	0.7	0.7	0.4	1.0	0.3
Unnotched	ASTM D6791	ft-lbs/in	6.0	4.9	3.0	3.5	n/a	12.2

### About West Fraser

West Fraser is a diversified forest products company operating in Canada and the USA. We're focused on lumber, pulp, energy, biomaterials, and engineered panels (MDF, Plywood, LVL).

Managing our sustainable forest resource, we look for new opportunities to build value for our customers and create low carbon alternatives to petroleum-based products. That includes our biomaterials, Propel™ and Amallin™.



### Contact Us

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