Natural fiber and wood plastic composites
technical tip
Eastman G™ polymer—coupling agents

Introduction

Polar natural fibers and nonpolar polyolefins have negligible attraction. The result is encapsulation of wood fibers in the polyolefin with little or no interaction. Coupling agents help overcome the polarity disparity to increase composite strength and moisture resistance.

Figure 1 Polar—cellulose

Figure 2 Nonpolar polyolefin

Figure 3 Maleated polyolefin

Polypropylene (PP)—flax and jute
Incorporating 3% of Eastman G™ 3015 polymer into a 30% agrifiber/PP composite resulted in more than a 60% increase in the flexural and tensile strengths. For more comprehensive information, see Eastman publication WA-114, Maleated Coupling Agents for Natural Fibre Composites* in its entirety.

Polyethylene (PE)—wood
The Eastman G series product line includes a variety of coupling agents that are useful in natural fiber and wood plastic composites. View product technical data sheets at www.eastman.com/EASTMAN-G.

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