Case Study

DUPONT™

MULTIBASE™ for Wood Plastic Composites

MULTIBASE™ additives help improve the efficiency and quality of wood plastic composite processing to blend the sustainability and elegant look of wood with the functionality of plastic.

Challenges

- Wood plastic composites (WPCs) are appealing for their sustainability, versatility, durability, low cost, and potential recyclability.
- Natural wood fibers can degrade when exposed to high temperatures; therefore, extruding and injection molding WPCs requires lower processing temperatures.
- Natural wood fibers can have uneven dispersion and poor flow, causing residue buildup on tools as well as unsightly scorching, discoloration, and black specs.
- In addition, natural wood fibers can also rough up tools and damage machinery.
- Processing additives are critical to efficient extrusion processing and quality, aesthetically pleasing products.

Solutions

- **Reduced processing temperature:** Adding MULTIBASE™ MB25 235 (1-2% weight) to a WPC allowed the customer to decrease processing temperature by 10°C during injection molding, helping to prevent degradation of the natural wood fibers.
- **Efficient extrusion:** MULTIBASE™ enhanced throughput by lubricating the tool, reducing friction and wear on the machinery to help extend tool lifetime.
- **Improved quality and aesthetics:** By enabling more homogenous fiber dispersion, MULTIBASE™ reduced the occurrence of black specs, improved the surface finish, and enhanced the mechanical properties of the material.
- **Supported sustainability:** MULTIBASE™ helped save energy by reducing processing temperatures and tool buildup.

There are multiple MULTIBASE™ solutions to meet your needs, each requiring only 2% loading for the batch.

Base resin type	MULTIBASE™ Solution
PE based	MB50-002, MB25 235, AMB12 235
PET based	MB50-012

Learn more about MULTIBASE™ Solutions **MB25 235** and **AMB12 235**.

MB25 235

AMB12 235

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