

Lushan[®] WR-2A

- **Maleic Anhydride Grafted Polyolefin**

Lushan, one of the most innovative technological enterprises in China, is committing to bonding a more wonderful world with the power of chemistry R&D technology.

Description

Lushan[®] WR-2A is a maleic anhydride modified high density polyethylene (HDPE), and can be applied in wood and bamboo powder or wood fiber composite materials, such as wood plastic composites (WPCs). It makes wood fibers and plastics compatible, improving wood fiber's dispersion in plastics and enhancing the mechanical properties of WPCs.

Technical Properties

Item	Value	Method
Appearance	Natural color or light yellow granule	Visual
Density	0.95 g/cm ³	ASTM D792
MI (190 °C / 2.16 Kg)	1.6 g/10min	ASTM D1238
Melting Point (DSC)	135 °C	ASTM D3418
Grafting Ratio	H*	Lushan Method
Substrate	HDPE	
Application Characteristics	Compatibilizer; Coupling agent; High strength	

**Grafting Ratio: H ≥ 1.0wt%, M ≥ 0.5wt%. These are typical properties and not intended as specification.*

Application

- Compatibilizer for PE matrix resin and wood fiber, such as WPC products, to promote the dispersion of natural fillers in resin substrate and enhance the mechanical properties of the materials.

- For PA / PE or other HDPE base filled compounds.
- Typical dosage is recommended to be 1.5 - 6 wt. % depending on performance requirements.

Features & Performance

Table 1: Improvement of the mechanical properties of WPC with different amounts of WR-2A compared with the blank controls.

Item	Unit	2.0% WR-2A	5.0% WR-2A
Tensile strength	MPa	70 %	130 %
Bending strength	MPa	62 %	87 %
Notch impact strength	kJ/m ²	25 %	38 %

HDPE : Wood powder = 4 : 6 (w/w). The MI of HDPE is 0.1 g/10min (190 °C, 2.16 kg). The size of wood powder is 40 Mesh. These are typical properties and not intended as specification.

Packaging & Storage

- Packed in 25kgs paper-plastic bag lined with polyethylene film bag.
- Store in dry, cool and ventilated environment; avoid exposure to water & strong light.
Securely wrap the unused.
- Shelf Life: one year.