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GREEN ORGANIC COUPLING AGENT FOR AGRO-WASTE PLASTIC COMPOSITES

PRODUCT DESCRIPTION

Green organic coupling agent is kind of glycidyl fatty acid made from virgin coconut oil. The green coupling agent is highly effective coupling agent for agro-waste plastic composites, instance of expensive synthetic coupling agent which is commonly used. The green coupling agent is inexpensive and made from sustainable resource. The used of green coupling agent will improve the wettability, filler dispersion and interfacial bonding between agro-waste filler and plastic composites.

COMMERCIAL POTENTIAL

The green organic coupling agent is an ideal additive in plastic industry as it used to improve mechanical properties, enhanced filler dispersion, and increased the water resistance of agro-waste plastic composites material. It is a low cost additive.

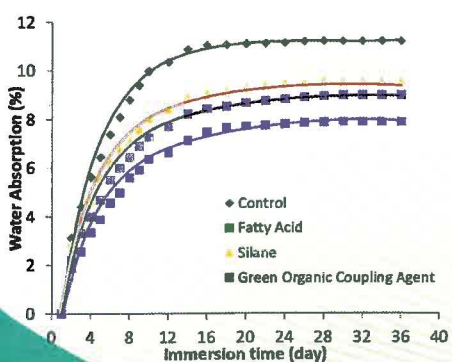
NOVELTIES

- Green Chemical
- Made from sustainable resources
- Low Cost

COST ESTIMATION

Agro-waste Plastic Composites	Estimation Price (Rm/Kg)
With Green Organic Coupling Agent	8.90
With Fatty Acid	9.38
With Silane coupling agent	9.80

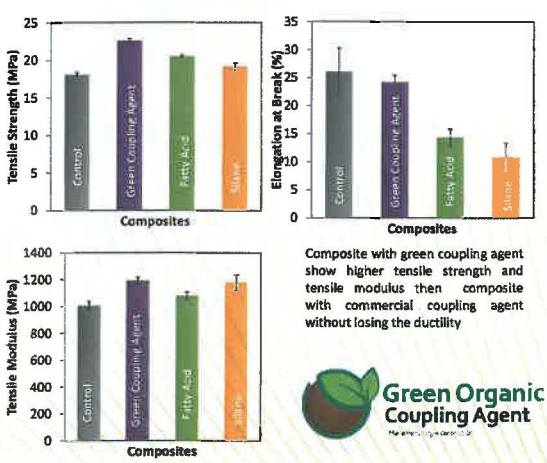
IMPROVE WATER RESISTIVITY



Composite with green organic coupling agent had lower water absorption compared to composite with commercial coupling agent

PROCESS OF GREEN ORGANIC COUPLING AGENT

IMPROVE TENSILE PROPERTIES



Composite with green coupling agent show higher tensile strength and tensile modulus then composite with commercial coupling agent without losing the ductility

Green Organic Coupling Agent

PUBLICATIONS

- K.S. Chun & S. Husseinsyah. Polylactic acid/corn cob eco-composites: effect of new organic coupling agent. Journal of Thermoplastic Composite Materials. In Press. DOI: DOI: 10.1177/0892705712475008. (Impact Factor 2012: 0.750)
- S. Husseinsyah, K.S. Chun, A. Hadi, R. Ahmad. Efffect of coconut oil coupling agent on properties of low density polytheylene and palm kernel shell eco-composites. Journal of Vinyl Additive and Technology. Accepted. (Impact Factor 2012: 1.107)