

Plantic Revolutionizes Packaging with the Use of Nanocomposite Technology

Plantic Technologies, in conjunction with the Cooperative Research Centre for Polymers (CRC-P), have successfully trialed the incorporation of substantially exfoliated hydrophobic clays in their Plantic[®] R1 sheet. A provisional patent application has been filed.

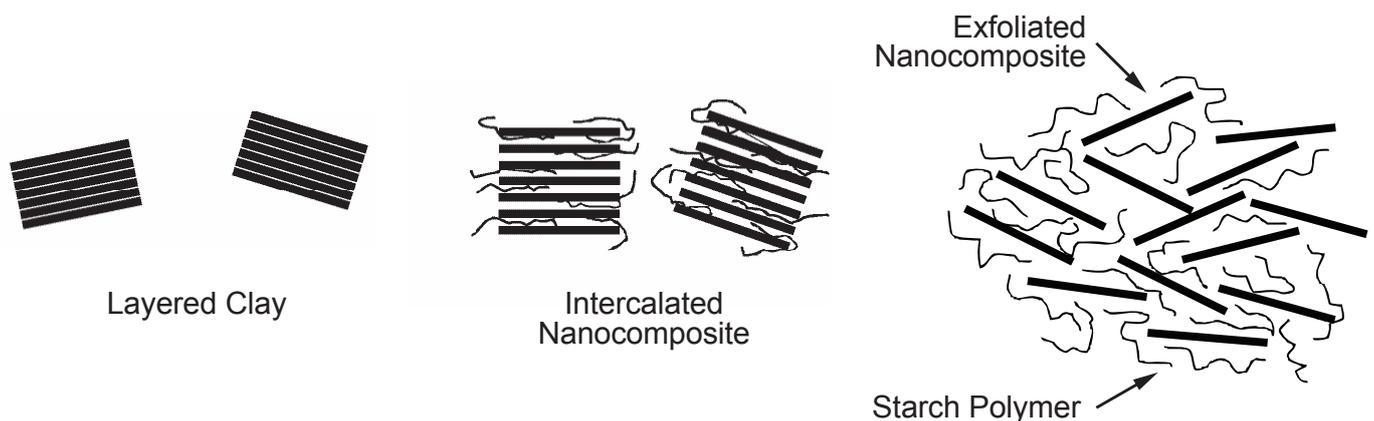
Nanocomposites are a technological breakthrough in packaging, enhancing the existing functional properties of Plantic's products, thereby creating a larger addressable market. They will be incorporated into Plantic's starch-based polymer and this improves the overall clarity and tensile strength of the products. The use of nanoclays introduces many other advantages including increased impact resistance and smoother surface, whilst maintaining excellent gas barrier properties.

The nanocomposite additive must be separated into nanoscale building blocks for the effects to be delivered in the starch polymer matrix. If the additive is not separated, it will act similarly to conventional fillers and therefore fail to improve the polymer's properties. Nanocomposite technology also improves the gas barrier properties of the material.

The incorporation of nanocomposite technology presents many commercial benefits for Plantic Technologies. The enhanced gas barrier properties improves Plantic's already-excellent oxygen transmission rate (OTR). This advance makes Plantic ideal for both rigid and flexible food packaging applications, and for co-extrusion processes, resulting in the extended shelf life of many different foods and beverages.

Nanocomposite technology also improves Plantic's sheet clarity, allowing penetration into the markets of blister and clamshell packaging, where the products inside need to be showcased. Examples of products which require this type of packaging include Easter eggs, and consumer goods such as razors, toothbrushes, cosmetics and electronics.

In commenting, Plantic's CEO, Grant Dow said, "Plantic's affiliation with leading universities and researchers have accelerated the application of nanocomposite technology. This technology brings Plantic's vision of sustainable and competitively -priced alternatives to conventional plastic packaging closer to realization. It is foreseeable in the future that this leap will usher in a range of new starch-based plastics that are indistinguishable from today's conventional plastic packaging."



Media Release

The incorporation of nanoclays does not undermine Plantic's environmental approach. Plantic® is made from non-genetically modified renewable resources – corn starch. It is also water dispersible, home compostable and compostable to EN13432 standards. Plantic materials are anti-static, are excellent gas, taint and odor barriers, are sealable, printable and laser etchable. Using industry standard equipment, they can be thermoformed, injection molded or made into film and barrier resins. They can also be formulated to work in conjunction with conventional plastics. Plantic's energy requirement is very low – approximately half that of PET and PVC. Compared to these materials, Plantic has the lowest impact in resource depletion, cumulative energy demand, acidification and waste to landfill.

About Plantic Technologies

Plantic Technologies has won numerous international awards for innovation in science. Plantic recently listed on the London Stock Exchange (AIM) under the symbol 'PLNT'.

For more information visit the company's website www.plantic.com.au

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