

SMART-X[®] natura

THE BIO-BASED DISPLAY BOARD

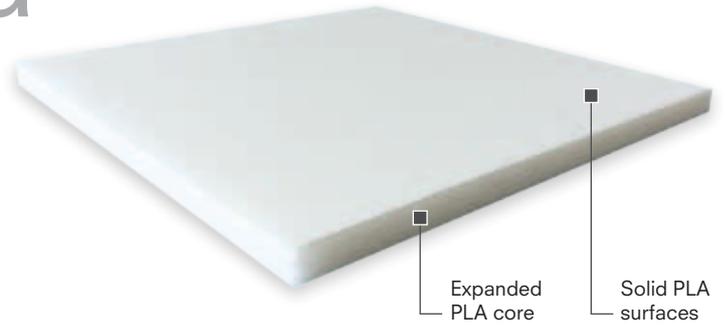
A TRUE GREEN ALTERNATIVE.



SMART-X[®]natura

PRODUCT RANGE

Colour	<input type="checkbox"/> white
Thickness	5 mm
Standard formats (WxL)	1220 x 2440 mm 1220 x 3050 mm



PRODUCT

SMART-X[®]natura is a bio-based display board made of PLA. PLA (polylactic acid) is a thermoplastic polyester derived from 100% renewable sources. It is compostable as well as recyclable. The two co-extruded outer-layers on top of the PLA foam core ensure the surface quality of the product: Printability tests show good results in terms of ink adhesion and visual quality.

SMART-X[®]natura can contribute significantly to a reduction in green-house-gas (GHG) emissions and in non-renewable energy usage. The Ingeo[™] used to produce SMART-X[®]natura can generate up to about 60% less GHG emissions and uses less non-renewable energy compared with oil-based polymers.

Another advantage of SMART-X[®]natura is its recyclability: It can be economically recycled through either mechanical or chemical recovery processes.

A TRUE GREEN ALTERNATIVE

- Made from 100% renewable resources (sugar based) and a biodegradable polymer
- Contributes to a lower carbon footprint and a reduction in non-renewable energy used
- Can be 100% recycled as it is a monomaterial (foamed PLA core with compact PLA outer-layer)

SMART-X[®]natura – AT A GLANCE

- Lightweight panel combining rigidity and stiffness
- Good printability with direct digital printing
- Good processability with existing equipment, e.g. lamination or printing
- Suitable for internal and external applications
- Good resistance to weathering

3A COMPOSITES WORKS WITH INCEO[™] – A BIOPOLYMER MADE FROM PLANTS.

PLA Ingeo[™] is produced by NatureWorks in North America and is made from dextrose (sugar) that is derived from field corn. NatureWorks uses less than 1/25th of 1% (0.04%) of the annual global corn crop today (world corn production in 2011), so there's little to no impact on food prices or supply. The process does not require corn; it only needs a sugar source. In the future this will include cellulosic raw materials, agricultural wastes and non-food plants.

The sugar comes from the photosynthesis process:



Microorganisms convert the sugar into lactic acid through fermentation. This lactic acid through different chemical reactions gives the polylactide acid (PLA) for Ingeo[™].

3A Composites uses this biopolymer to transform it into an innovative display product: SMART-X[®]natura. It is the result of a large scale collaborative project financed by the European Commission. The goal of the project was to develop new types of sustainable composite materials whose polymers were not based on petroleum. Since the carbon footprint for Ingeo[™] is about 60% lower than for traditional display materials, 3A Composites is able to offer consumers a more responsible choice when it comes to the selection of the ideal display panel.



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