Election Board X-CORE
PRODUCT DATASHEET

DESCRIPTION

X-Core is an extruded board made from polypropylene co-polymer granules along with additional components to confer specific characteristics to the product, particularly for applications where stiffness and high heat resistance is important. It can be used in the printing or fabrication industry and can be used for both internal and external applications.

APPLICATIONS

The applications are endless, but this product is most commonly used for signage, packaging, advertising, General Engineering, building trade as well as layer boards.

KEY FEATURES

Certification/Approvals

The certification is available on request and must be specified during ordering.

Industrial

Waterproofing
Foods industry
Resistant to grease and many other chemicals

Conversion

Glueing: Hot-melt or PUR glue, corona treatment is recommended. Welding preferred option.

Cutting: Guillotine, Bandsaw, Circular-Saw, Routing.
Ultrasonic welding
Edge sealed in layer board applications.

Printing/Painting

Due to its high chemical resistance, it needs to be corona treated or primed for ink adhesion. Laser printed logos are available for layer board application.

PRODUCT SPECIFICATIONS

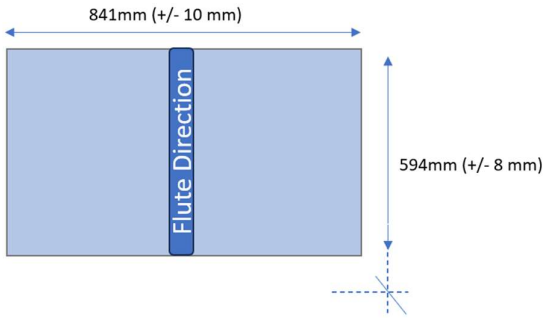
Colour
Various colours and colour matching.
White, Black and Grey are common.

Finish
Smooth texture finished.
Wider Flute Design ensures better printability.

Thickness
3mm

GSM
Increased GSM of 510

Dimensions		Specifications
Length	841mm (+/- 10 mm)	Material – Polypropylene Product – X Core Colour – As per customer requirement – CMC = to or < 2.5 Pack sizes Standard - 300 boards per pallet Pallets - Bottom only Sheet Flatness - +/- 5 mm GSM – 510 (+/- 75 allowable) Pit marks: Allowed. Lifespan: No timeframe guarantee.
Width	594mm (+/- 8 mm)	
Thickness	3 mm (+/- 0.5 mm)	
Diagonals	0.5% Tolerance	
Radius *(If Applicable)*	Not applicable	



NB: Available sizes vary depending on gauge, colours, and order size, please ask confirmation to sales department.

TYPICAL PHYSICAL PROPERTIES*

Properties	Unit	Standard	Method	Value
Density #	g/cm³	ISO 1183	-	0,92
Tensile strength at Break	MPa	ASTM D6693	50 mm/min	35,2
Hardness	N/mm²		Ball test	50
Bend Strength	kgf	In house	50mm radius	26
Melting Temperature	°C	ISO11357-3	DSC	165
Thermal Analysis	%	ASTM E1131	TGA	<0.45

*The density quoted should only be used as a guide. This value can change depending upon the type and quantity of pigments or additives used. Due to the flexible nature of extruded twin wall polypropylene (PP), absolute flatness cannot be guaranteed.

Typical commercial quality guidelines allow the following approximate variations when measured on a flat table:

- For sheet lengths under 900 mm: deviation not exceeding ±6 mm along the length or width.
- For sheets up to 3 000 mm: deviation generally within ±6 to ±10 mm.
- For sheets longer than 3 000 mm: deviation for any 3 000 mm section should not exceed the above limits.

PRODUCT AVAILABILITY

Printing

A corona discharge treatment to the surface of the material renders it suitable for screen and flexographic printing. This must be specified at time of order.

Fabrication

It can be fabricated using standard plastic methods of fixing and machining. Sheet can be cut with a band/circular saw and drilled using standard metal working tools. PP can be riveted, welded and punched. PP can easily be welded by hot gas welding (hot air temperature 280 - 330°C) and by hot plate welding (200 - 220°C). High frequency welding is not possible.

UV Resistance

In outdoor or strong UV light conditions, natural PP can become brittle in a matter of months. Black pigmentation will improve UV resistance. The addition of UV stabilizer additives will significantly improve longevity. Please contact our Sales office to discuss further. Layer boards do contain a portion of UV additives in the mix.

Cleaning and Maintenance

Typical detergents and soaps dissolved in warm water can be used to effectively clean surface contamination from the surface. For the more stubborn marks organic solvents such as isopropyl alcohol and n-heptane will be more effective.

CHEMICAL RESISTANCE

Chemical resistance is influenced by many factors, including concentration, temperature, exposure time and material stress.

Reagent	Chemical Resistance	Reagent	Chemical Resistance
Acetone	Very Good	Beer	Excellent
Acid - weak	Very Good	Brake Fluid	Very Good
Acid - strong	Very Good	Coffee	Excellent
Alcohol	Very Good	Detergent	Excellent
Anti-freeze (glycol free)	Excellent	Diesel	Good
Base - weak	Excellent	Foodstuffs	Excellent
Base - strong	Good	Lubrication Oil	Good
Battery Acid	Very Good	Petrol	Good

***NOTE:** The information contained in this leaflet is based on our present technical knowledge and experience. In view of the large number of factors that may influence the processing and use of our products, the information does not relieve the processors and manufacturers of the need to carry out their own tests and experiments. Our information does not constitute a legally binding assurance of product availability, of properties or of a suitability for a particular end use. Patent rights that may exist must be duly observed.

INTERNAL TESTS

(Printability)

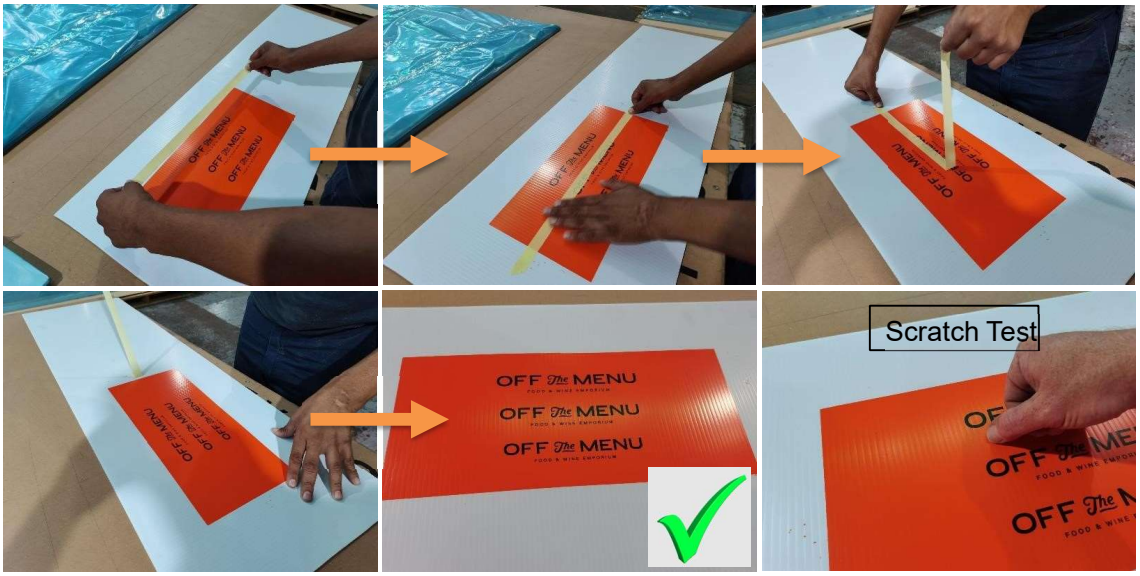
Ink Test

As per specification, we use the Arcotest® Corona Treating Testing Ink.
An Ink Test is conducted during the production cycle, both before and after Corona Treatment is applied.

LEFT: Image shows result of Ink Test during production BEFORE Corona Treatment and result AFTER Corona treatment occurred.

Tape & Scratch Test

Samples are sent for printing and thereafter tested via Scratch Test and Tape Test, where tape is applied across the printed surface and removed (ripped) to ensure that the required ink adherence to the X-Core substrate is achieved.



ADDITIONAL INFORMATION

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