A Premium Paper Board for Load-Bearing
and Structural Applications

SWEDBOARD® FIBRE

FABRICATION GUIDE

3A Composites USA

3ACOMPOSITESUSA.COM/DISPLAY / 800.626.3365

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INTRODUCTION

Thank you for choosing a 3A Composites product for your graphic display applications.

This Fabrication Guide was created in order to incorporate the most common fabrication methods that are used with 3A Composites' line of graphics display products.

Important Notes:

- The information contained in this publication is based on our current level of knowledge and is, in our opinion, reliable. However, we cannot guarantee the correctness of this information for every application and for the results arising from their use.
- The user or converter is always responsible for ensuring that the materials and processes are appropriate, cost-effective and suitable for the intended purpose and location, and that they comply with the local laws and regulations.
- Technical knowledge and skills as customary in trade and industry, a normally developed capacity to make judgements as well as knowledge and observance of the applicable regulations appertaining to work safety are assumed.

The date of the last revision is shown on the bottom right hand corner of each page. Please make sure you have the most current version by going to 3acompositesUSA.com and selecting the fabrication manual from the downloads section.

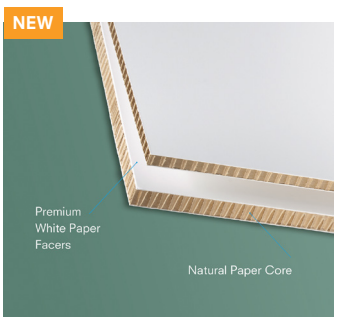
If you have any further questions about our product or about how to use this manual, please feel free to contact us at 1-800-626-3365.

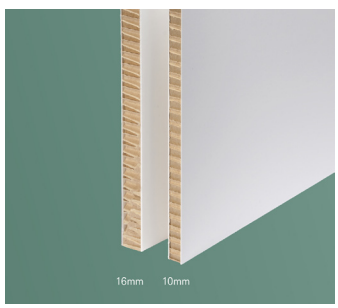
PLEASE NOTE:
TRIALING IS RECOMMENDED TO ENSURE SUITABILITY FOR THE PROPOSED APPLICATION AND FABRICATION BEFORE FULL-SCALE COMMERCIALIZATION.

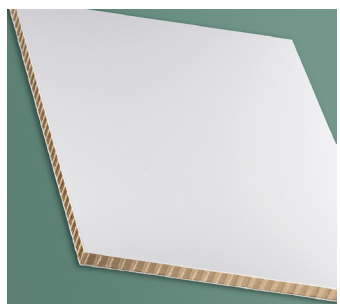
INTRODUCTION TO SWEDBOARD® FIBRE

WHY CHOOSE SWEDBOARD FIBRE?

SWEDBOARD® Fibre is a paper-based rigid board that offers a fully recyclable alternative for structural and load-bearing applications, like chairs & tables, as well as more demanding POP/POS and in-store display applications. The core has been specially engineered to be dust-free and the unique structure gives the material exceptional strength and stability while still being a very lightweight solution. It has premium white paper liners with a thin moisture barrier that helps to keep the panel flat even in extremely dry or humid conditions, and is optimal for direct digital print applications.







Features & Benefits

- Incredible rigidity and load-bearing performance
- Unique core structure provides a strong, stable board ideal for heavy duty applications
- Strong, rigid and dimensionally stable - boards stay flat
- Smooth, premium white facers deliver excellent direct printing results
- 100% sustainably sourced paper for easy recyclability
- PE coated facers provide good resistance to moisture and warping
- Can be V-cut and folded for 3 dimensional displays
- Proprietary process produces a dust free core for easy & clean cutting

Applications

SWEDBOARD FIBRE is the perfect solution for long term interior signage, exhibitions & displays, creative furniture & fixtures, or structural/load-bearing applications.

- MDF Replacement
- Exhibition Construction & Displays
- Load Bearing Platforms
- In-Store Partitions
- Furniture & Fixtures
- Shop & Interior Design
- POP / POS Displays
- Signage & Lettering
- Longer Term Promo Campaigns

APPLICATION 'QUICK' GUIDE

		POP Displays	Exhibits & Fixtures	Framing	Interior Signage	Exterior Signage	Structural Signage	Interior Design	Packaging	Poster Glazing	Mechanical Assembly	Furniture Construction	MDF Replacement	Load-Bearing Platforms
$	**FOME-COR® FOUNDATION** (Acid-Free)	O	O	■[0]	O									
	FOME-COR®	O	O	■	O									
	FOME-COR® w/ ENCORE Technology	O	O	■	O									
	FOME-COR® SIRIUS													
	FOME-COR® SINGLESTEP (Heat-Activat-	O	O	■	O									
	FOME-COR® CANVAS	O	O	■	●			●						
	FOME-COR® JETMOUNT	O	O	■	O									
	FOME-COR® QUICKSTIK (Self-Adhesive)	O	O	■	O									
	DISPA®	O	O	■	O			O	O					
	DISPA® SIRIUS	O	O		O				O					
	POLAR™	●	●	●	●		●	●				●		
	SINTRA® CONSTRUCT		●	■			●				■			
$$	**SINTRA® VERS**	●	●	■	●	●								
	SINTRA®	●	●	■	●	●		●						
	SINTRA® ECLIPSE	●	●	■	●	●		●						
	SINTRA® XT	■	■	■	■	■	■				■			
	GATORBLANKS®	●	●		●	●								
	GATORPLAST®	●	●	■	●	●								
	GATORFOAM®	●	●	■	●	●[1]								
	GATORFOAM® SELF-ADHESIVE	●	●	■	●									
	NEW! SMART-X®	●	●	■	●	●		●						
	LUMEX® G	●	●	■	●				●	●				
	SWEDBOARD® FIBRE	■	■		■	■	■				■	■	■	■
$$$	**DIBOND®**	■	■	■	■	■	■[2]	■			■	■		■

Trialing is recommended to ensure suitability for the proposed application before full-scale commercialization.

- O Short term application
- ● Medium term application
- ■ Long term application

0 Archival conservation mounting applications
1 Black GATORFOAM is not recommended for outdoor usage
2 Applications such as workzone signage, canopies, pylons, and column covers

FABRICATION 'QUICK' GUIDE

		Mounting	Repositioning Vinyl	Digital Printing	Screen Printing	Painting	Knife Cutting	Saw Cutting	Routing	Die Cutting/ Punching	Embossing	Forming	Creasing
$	**FOME-COR® FOUNDATION** (Acid-Free)	◊[0]					◊			◊	◊		
	FOME-COR®	◊		◊	◊	◊[3]	◊			◊	◊		
	FOME-COR® w/ ENCORE Technology	◊		◊	◊	◊[3]	◊			◊			
	FOME-COR® SIRIUS			◊			◊			◊	◊		
	FOME-COR® SINGLESTEP (Heat-Activat-	◊					◊			◊	◊		
	FOME-COR® CANVAS			◊	◊	◊	◊			◊	◊		
	FOME-COR® JETMOUNT	◊		◊	◊	◊[3]	◊	◊	◊	◊	◊		
	FOME-COR® QUICKSTIK (Self-Adhesive)	◊					◊			◊	◊		
	DISPA®	◊		◊	◊	◊	◊		◊	◊		◊	◊
	DISPA® SIRIUS			◊			◊		◊	◊		◊	◊
	POLAR™	◊		◊	◊	◊	◊					◊	
	SINTRA® CONSTRUCT	◊[1]	◊			◊		◊	◊	◊[5]		◊	
$$	**SINTRA® VERS**	◊[1]	◊	◊	◊	◊	◊[4]	◊	◊	◊[5]		◊	
	SINTRA®	◊[1]	◊	◊	◊	◊	◊[4]	◊	◊	◊[5]		◊	
	SINTRA® ECLIPSE	◊[1]	◊	◊	◊	◊	◊[4]	◊	◊	◊[5]		◊	
	SINTRA® XT	◊[1]	◊	◊	◊	◊		◊	◊	◊		◊	
	GATORBLANKS®	◊				◊	◊	◊	◊				
	GATORPLAST®	◊	◊	◊	◊	◊[3]	◊	◊	◊	◊[5]			
	GATORFOAM®	◊		◊	◊[2]	◊[3]		◊	◊				
	GATORFOAM® SELF-ADHESIVE	◊	◊					◊	◊				
	NEW! SMART-X®	◊	◊	◊	◊	◊[3]	◊	◊	◊	◊[5]		◊	
	LUMEX® G	◊	◊	◊	◊	◊		◊	◊	◊		◊	
	SWEDBOARD® FIBRE	◊		◊	◊	◊	◊					◊	
$$$	**DIBOND®**	◊[1]	◊	◊	◊	◊		◊	◊	◊[6]		◊	

Trialing is recommended to ensure suitability for the proposed fabrication before full-scale commercialization.

0 Archival conservation mounting
1 Cold mounting techniques only
2 Face priming will provide better results
3 Do not expose polystyrene foam to solvent-based paints
4 1-3mm may be cut with a knife or blade
5 May be die cut in gauges up to 5mm or 3/16"
6 Punch press die set is required

MATERIAL HANDLING

Transport & Handling Storage

To receive an optimal final product, please note the following:

• Carefully transport with protection material, especially at the edges and corners. Move or stack large format sheets with two people.

• We recommend the wearing of common white cotton gloves to avoid finger marks as well as the deposition of grease and dirt particles on the surface layers.

• When lifting the sheets / pieces of material, apply as much palm as possible onto the panel in order to avoid pressure points & deformation.

• Remove the protection foil of the pallet and let the panels acclimatize prior to printing. They should adjust in the same room conditions as where the processing will take place for a period of at least 24 hours.

Storage

• Unprocessed sheets must be stored dry, flat and away from heat and dust. Surplus sheets are best kept in their original wrapping which should be carefully resealed for storage. Never store SWEDBOARD outdoors.

• For all processing technologies, please follow the usual processing recommendations for paper products.

GENERAL NOTES

Acceptable Processing Methods

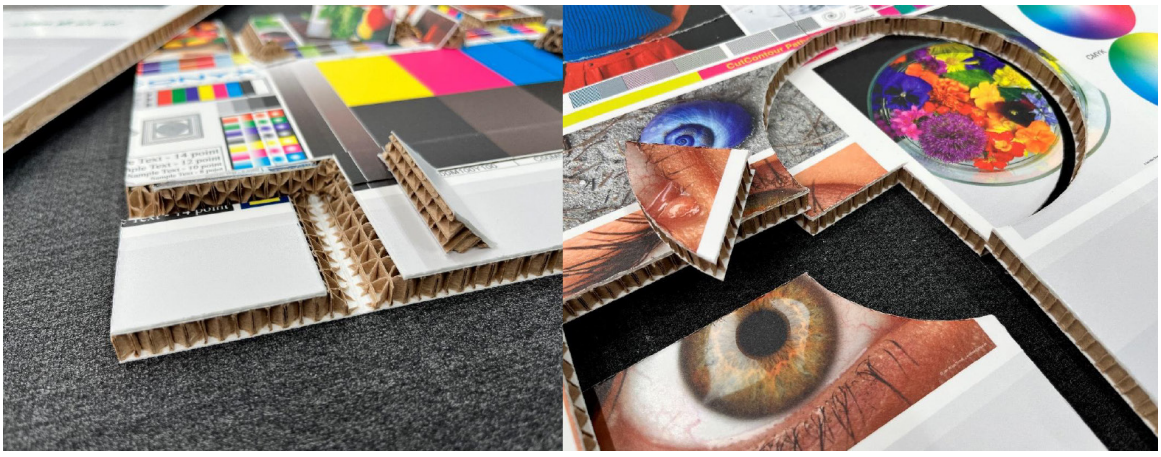
- Sawing with a circular saw
- Cutting with drawing knife and/or oscillating knife
- V-cut knife
- Folding (V-groove) for 3D objects
- Drilling (using a standard drill bit)
- Gluing
- Laminating

NOTE - Contour milling/drilling and routing is NOT recommended as the edges will have a bad result.

Notes on Core Structure

- Unique core structure is different than the typical honeycomb paper board.
- Core of SWEDBDOARD Fibre is much denser and stronger - load capacity of board (10mm & 16mm) is about 80 tons per sqm.
- This strength & density makes it possible to apply screws and hooks into the core
- Proprietary core production process creates a clean, dust-free core even when fabricating.

Examples of material after cutting - zero dust!



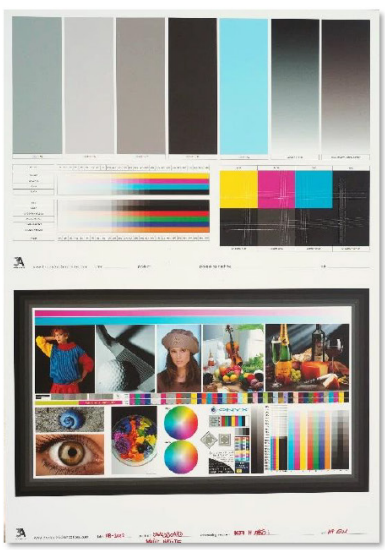
PRINTING

Acceptable Inks

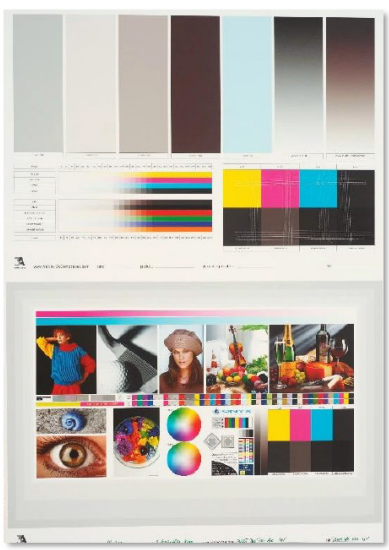
SWEDBOARD Fibre is suitanle for screen and digital printing systems. The PE coated paper facers create an excellent surface for accepting the following types of inks:

- UV and UV-LED inks
- Solvent inks
- Latex inks (HP*)
- Painting / Spraying

* Printing on SWEDBOARD Fibre with the HP Latex engine: the hot drying temperature first causes some bowing of the panel, but after about 1 minute the board flattens back out

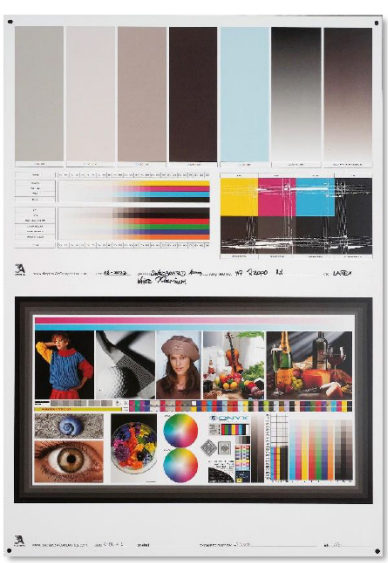


AGFA UV-LED



DURST UV

SwissQPrint UV-LED



HP R2000 LATEX ink

SwissQPrint UV-LED

CUTTING WITH KONGSBERG SYSTEMS

Notes

The settings listed are ESKO's recommendation for this material.
Settings could vary depending on the geometry of the cut file.
Material Thickness: 16mm
Machine Models: C / X / X Starter
Toolheads:

- Kongsberg C: MP HF VibraCut / HD Unit / V-notch knife
- Kongsberg X: MultiCut / FlexiHead / PowerHead
- Kongsberg X Starter: MultiCut / FlexiHead

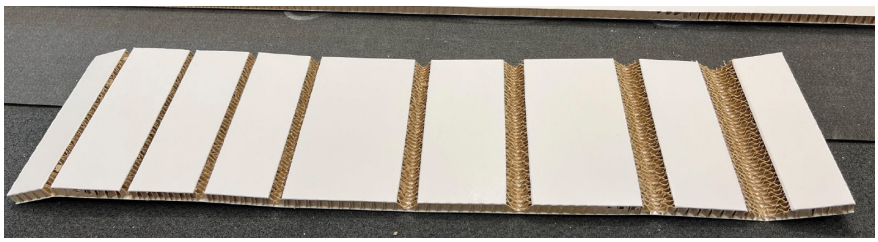
Standard Cuts on 16mm Sheets

Machine	Tool	Blade / Bit	Speed	Accel.	Passes
Kongsberg C Same for XP, XP Auto	HF VibraCut Knife	BLD-SR6307 BLD-SR6310	10 m/min 10 m/min	10% 10%	1 1
	HD Knife 17** HD Knife 30**	BLD-TZ129 BLD-TZ230	50 m/min 50 m/min	50% 50%	1 1
Kongsberg X Same for XL, XN (Insert tools for FlexiHead, MultiCut, & PowerHead)	MP HF VibraCut Knife	BLD-SR6307 BLD-SR6310	10 m/min 10 m/min	10% 10%	1 1
Kongsberg X Same for XI, XN (Tools for PowerHead HD Unit)	HD Knife 17* HD Knife 30*	BLD-TZ129 BLD-TZ230	50 m/min 50 m/min	100% 100%	1 1
Kongsberg X Starter Same for Kongsberg VL and V Table (V-notch Insert tools for FlexiHead and MultiCut toolhead)	MP HF VibraCut Knife	BLD-SR6307 BLD-SR6310	20 m/min 20 m/min	30% 30%	1 1

* only for PowerHead on Kongsberg X tables. This knife is limited to straight line only, longer than 50mm (2")

** HD knife for heavy duty unit on C is limited to straight line only, longer than 50mm (2")

**** It is possible to use the V-notch insert tools (VI45 and VI30 series) for V-cutting this material, but result will not be perfect due to thickness of the blades. Better V-notch result can be achieved with the HD V-notch tools for C or PowerHead, with thinner blades.



CUTTING WITH KONGSBERG SYSTEMS

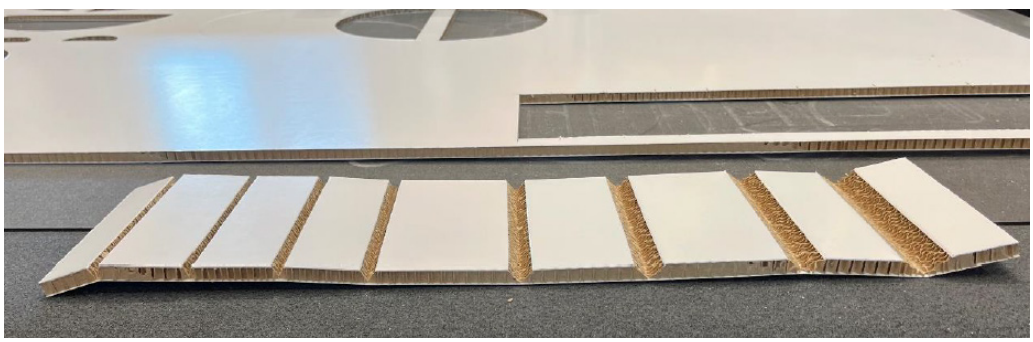
V-Notching 16mm Sheets

Machine	Tool	Blade / Bit	Speed	Accel.	Passes
Kongsberg C Same for XP, XP Auto	V-Notch Knife 45° V-Notch Knife 45° 10mm V-Notch Knife 30° V-Notch Knife 22.5° V-Notch Knife 15°	BLD-TZ511 / BLD-TZ192	50 m/min	50%	1
Kongsberg X Same for XL, XN (Insert tools for FlexiHead, MultiCut, & PowerHead)	V-Notch Knife 45° V-Notch Knife 45° 10mm V-Notch Knife 30° V-Notch Knife 22.5° V-Notch Knife 15°	BLD-TZ511 / BLD-TZ192	50 m/min	100%	1
Kongsberg X*** Same for Xl, XN (Tools for PowerHead HD Unit)	VI45-16 VI45-10 VI30-16	BLD-DF571 / BLD-DF572 BLD-DF561 / BLD-DF562 BLD-DF571 / BLD-DF572	25 m/min 25 m/min 25 m/min	50% 50% 50%	1 1 1
Kongsberg X Starter*** Same for Kongsberg VL and V Table (V-notch Insert tools for FlexiHead and MultiCut toolhead)	VI45-16 VI45-10 VI30-16	BLD-DF571 / BLD-DF572 BLD-DF561 / BLD-DF562 BLD-DF571 / BLD-DF572	30 m/min 30 m/min 30 m/min	100% 100% 100%	1 1 1

* only for PowerHead on Kongsberg X tables. This knife is limited to straight line only, longer than 50mm (2")

** HD knife for heavy duty unit on C is limited to straight line only, longer than 50mm (2")

*** It is possible to use the V-notch insert tools (VI45 and VI30 series) for V-cutting this material, but result will not be perfect due to thickness of the blades. Better V-notch result can be achieved with the HD V-notch tools for C or PowerHead, with thinner blades.



CUTTING WITH KONGSBERG SYSTEMS

Notes

The settings listed are ESKO's recommendation for this material.
Settings could vary depending on the geometry of the cut file.
Material Thickness: 10mm
Machine Models: C / X / X Edge
Toolheads:

- Kongsberg C: HF VibraCut / Viariangle / V-notch Tool / HD Knife
- Kongsberg X: HF VibraCut / RB / VI45 / HD Knife
- Kongsberg X Edge: HF VibraCut / VI45

Standard Cuts & V-Notching on 10mm Sheets

Machine	Processing	Tool	Blade / Bit	Speed	Accel.	Passes	RPM
Kongsberg C	Cut	HF VibraCut	BLD-SR6310	15 m/min	40%	1	0
	Partial Cut	HF VibraCut	BLD-SR6310	15 m/min	40%	1	0
	V-Notch	Variangle 30°	BLD-SF641	60 m/min	70%	1	0
	V-Notch	Variangle 45°	BLD-SF641	60 m/min	70%	1	0
	V-Notch	Variangle Short	BLD-SF620	100 m/min	90%	1	0
	V-Notch	V-Notch tool	BLD-TZ511	50 m/min	50%	1	0
	HD-Cut	HD Knife-17	BLD-TZ129	70 m/min	50%	1	0
Kongsberg X	Cut	HF VibraCut	BLD-SR6310	15 m/min	40%	1	0
	Cut	HF VibraCut	BLD-SR6224	20 m/min	20%	1	0
	Cut	RB-90	BLD-SF290	50 m/min	100%	1	0
	V-Notch	VI45-16	BLD-DF572	50 m/min	70%	1	0
	V-Notch	VI45-10	BLD-DF561	50 m/min	70%	1	0
	HD-Cut	HD Knife-17	BLD-TZ129	50 m/min	70%	1	0
Kongsberg X Edge	Cut	HF VibraCut	BLD-SR6310	15 m/min	30%	1	0
	V-Notch	VI45-16	BLD-DF572	30 m/min	100%	1	0

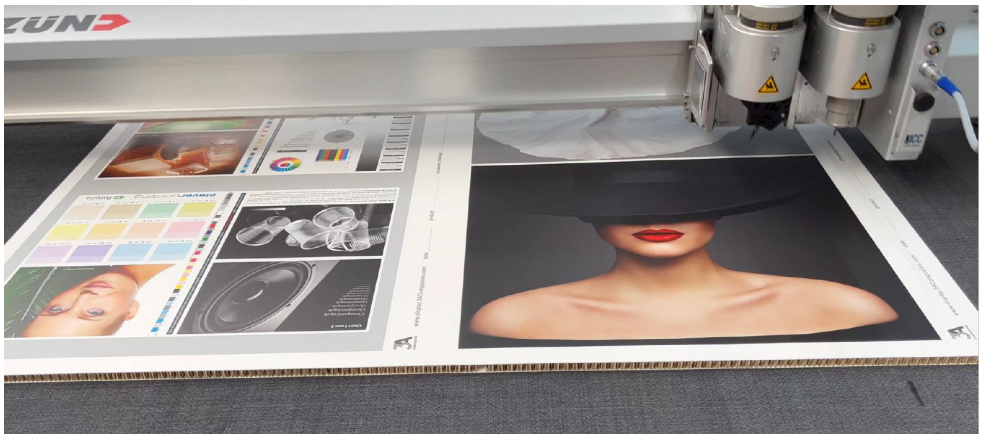
CUTTING WITH ZUND SYSTEMS

Through Cut

Tool: EOT-250 (Electrical Oscillating Tool)
Knife: Z201 (16mm) // Z202 (10mm)
Cutting Speed: 1000 mm/sec
Acceleration: 4

V-Cut

Tool: VCT (V-Cut Tool)
Knife: Z71
Cutting Speed: 600
Acceleration: 3



PRODUCT SPECIFICATIONS

	SWEDBOARD FIBRE	
DIMENSIONS & WEIGHT		
Thickness	10 mm	16 mm
Weight per Unit Area (approx.)	1.8 kg/m^2	2.4 kg/m^2
Sheet Sizes	48″ x 87″	48″ x 87″
Sheet Width Tolerances	-0/+5	
Sheet Length Tolerances	-0/+5	
Sheet Thickness Tolerances	+/- 0.4	
Tolerance in Corner Curvature from Flat	< 10	
CORE		
Paper Cell Core (Sustainably Sourced)	Natural (Brown)	
SURFACE		
Liner (Sustainably Sourced)	Brilliant white premium carton covered with a PE moisture barrier	
Whiteness	124% (ISO 11475)	
ISO Whiteness	90% (ISO 2470)	

Note: Technical data of this product are typical ones. The actual measured values are subject to production variations.
3A Composites does not guarantee the accuracy of the data provided and disclaims liability for damages resulting from its use.

CONCLUSION

This Fabrication Manual has been developed to assist fabricators to work with the substrate in the most efficient and effective manner. The tips and suggestions contained in this manual are the result of combined experience by fabricators in Europe.

These fabrication suggestions and product specifications are based on information which is, in our opinion, reliable. However, since skill, judgment, and quality of equipment and tools are involved, and since conditions and methods of using the substrate are beyond our control, the suggestions contained in this manual are provided without guarantee. We recommend that prospective users determine the suitability of both the material and suggestions before adopting them on a commercial scale.

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In no event shall 3A Composites USA, Inc., have any liability in any way related to or arising out of said suggestions and product data for direct, special, consequential or any other damages of any kind regardless of whether such liability is based on breach of contract, negligence or other tort, or breach of any warranty, express or implied.

Also, normal safety and health precautions practiced in any fabricating environment should be used when fabricating the substrate.

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