

A.BAC LAM is a high pressure decorative laminates (HPL), having thickness less than 2 mm, according to EN 438-1:2016, EN 438-2:2016 and EN 438-3:2016, normally intended for bonding to supporting substrates.

The core is composed of layers of kraft paper impregnated with thermosetting resins. The decorative surface is made of paper impregnated with aminoplastic thermosetting resins. All the layers are bonded together by a high pressure and high temperature process to obtain a high density homogeneous non-porous material. A.BAC LAM is available in standard HGS type, flame retardant HGF type and postformable HGP type according to EN 438-3:2016, all of them suitable for horizontal use.

A.BAC LAM innovative surface recipe is designed to inhibit the growth of bacteria across its whole surface. Laboratory testing has proven the prevention of bacterial growth, even in case of bacteria such as Staphylococcus Aureus and Escherichia Coli responsible for several difficult-to-treat infections. A.BAC LAM is suitable for food contact and hygienic applications such as hospitals, surgeries, pharmacies, food processing areas and clean rooms.

PROPERTIES	TEST METHOD	PROPERTY OR ATTRIBUTE	VALUES	UNIT
<b>GENERAL PROPERTIES</b>				
Surface quality	EN 438-2:2016 Par. 4	Spots, dirt and similar surface defects Fibers, hair and scratches	≤ 1 ≤ 10	mm <sup>2</sup> /m <sup>2</sup> mm/m <sup>2</sup>
Dimensional tolerances	EN 438-2:2016 Par. 5	Thickness <sup>(1)</sup>	± 0,10    0,5 ≤ t < 1,0 ± 0,15    1,0 ≤ t < 2,0	mm
	EN 438-2:2016 Par. 6	Length and width	+ 10 / - 0	mm
	EN 438-2:2016 Par. 7	Straightness of edges	≤ 1,5	mm/m
	EN 438-2:2016 Par. 8	Squareness	≤ 1,5	mm/m
	EN 438-2:2016 Par. 9	Flatness (measured on full-size sheet)	≤ 60	mm/m
<b>PHYSICAL PROPERTIES</b>				
Resistance to immersion in boiling water	EN 438-2:2016 Par. 12	Surface appearance	≥ 3    gloss finish ≥ 4    other finishes	Rating
Dimensional stability at elevated temperatures	EN 438-2:2016 Par. 17	Cumulative dimensional change	≤ 0,55 ≤ 1,05	Longitudinal % <sup>(2)</sup> Transversal % <sup>(2)</sup>
Resistance to impact by small diameter ball	EN 438-2:2016 Par. 20	Spring force	≥ 20	N
Resistance to impact by large diameter ball	EN 438-2:2016 Par. 21	Drop height Indent diameter	≥ 800 ≤ 10	mm
Resistance to cracking under stress	EN 438-2:2016 Par. 23	Appearance	≥ 4	Rating
Density	EN ISO 1183	Density	≥ 1,35	g/cm <sup>3</sup>
<b>SURFACE PROPERTIES</b>				
Resistance to surface wear	EN 438-2:2016 Par. 10	Initial point	≥ 50    vertical application ≥ 150    horizontal application	Revolutions
Resistance to water vapour	EN 438-2:2016 Par. 14	Appearance	≥ 3    gloss finish ≥ 4    other finishes	Rating
Resistance to dry heat (160°C)	EN 438-2:2016 Par. 16	Appearance	≥ 3    gloss finish ≥ 4    other finishes	Rating
Resistance to wet heat (100°C)	EN 438-2:2016 Par. 18	Appearance	≥ 3    gloss finish ≥ 4    other finishes	Rating
Resistance to scratching	EN 438-2:2016 Par. 25	Force	≥ 3	Rating
Resistance to staining	EN 438-2:2016 Par. 26	Appearance	5    groups 1 & 2 ≥ 4    group 3	Rating
Light Fastness (Xenon-arc)	EN 438-2:2016 Par. 27	Contrast	≥ 4	Grey scale rating
<b>POSTFORMING GRADE PROPERTIES - HGP Type</b>				
Formability	EN 438-2:2016 Par. 32	Bending radius	≤ 10 x t    Longitudinal <sup>(2)</sup> ≤ 20 x t    Transversal <sup>(2)</sup>	mm
Resistance to blistering	EN 438-2:2016 Par. 34	Time to blister	≥ 10    t < 0,8 mm ≥ 15    t ≥ 0,8 mm	s
<b>FOOD &amp; HYGIENE PROPERTIES</b>				
Contact with food - overall migration	EN 1186	Acetic acid 3 % Ethanol 50 % Ethanol 95 % Isooctane	≤ 10 ≤ 10 ≤ 10 ≤ 10	mg/dm <sup>2</sup>
Evaluation of micro-organisms action	JIS Z 2801:2012	Antimicrobial activity after 24h	> 3 > 99,9	Bacterial viability: Log reduction % Reduction

FIRE PERFORMANCES – HGF Type				
Reaction to fire	The reaction to fire of A.BAC LAM is related to the final composite panel where the laminate is bonded to a substrate. The composite manufacturer is responsible for the correct execution of the test in accordance with the applicable standards and test methods required for the specific application field as the test results also depend on the substrate, the adhesive and the bonding technique applied.			
ENVIRONMENTAL PROPERTIES				
Formaldehyde emission	EN 13986	Formaldehyde emission rating	E1	Rating
Volatile organic chemical emission	AFNOR NF EN ISO 16000-9	Classification	A+	Rating
		TVOC emission	≤ 0,2	mg/m <sup>3</sup>
Phenol Free <sup>(3)</sup>	AFNOR NF EN ISO 16000-9	Phenol emission	< 0,002	mg/m <sup>3</sup>

### Notes

- (1) t: nominal thickness [mm]
- (2) Longitudinal: parallel to the fiber direction (usually parallel to the direction of sanding). Transversal: at right angles to the fiber direction
- (3) Phenol is not used as raw material in A.BAC LAM production. 0,002 mg/m<sup>3</sup> is the detection limit (DL) value of the test.

### Note to A.BAC LAM sheets with adhesive protective film

Protective films are designed to temporarily protect surfaces against dirt, scratches and marks caused during processing of materials. These films do not protect against corrosion, humidity and chemicals.

A.BAC LAM laminates protected with this film must be stored in a clean, dry place (relative humidity 40 to 60%) at room temperature (20 to 25°C), preventing direct and indirect exposure to weathering and UV radiation.

The protective film may be removed without damaging the surface up to four months max from the date the product is delivered by Puricelli, provided that the above storing conditions are strictly complied with. Puricelli is in no way responsible for improper storage or improper use of the laminates protected with this film, or for any damage caused by unrecommended use.