PURICELLI
DECORATIVE SURFACES

PURILAM

MATERIAL PROPERTIES DATA SHEET

PURILAM 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, in one or both sides, 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. PURILAM is available in standard VGS type, flame retardant VGF type and postformable VGP type according to EN 438-3:2016, all of them suitable for vertical use.

PROPERTIES	TEST METHOD	PROPERTY OR ATTRIBUTE	VALUES	UNIT
GENERAL PROPERTIES				
Surface quality	EN 438-2:2016 Par. 4	Spots, dirt and similar surface defects Fibers, hair and scratches	≤ 1 ≤ 10	mm^2/m^2 mm/m^2
Dimensional tolerances	EN 438-2:2016 Par. 5	Thickness [1]	± 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
PHYSICAL PROPERTIES				
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	≤ 0,75 ≤ 1,25	Longitudinal % [2] Transversal % [2]
Resistance to impact by small diameter ball	EN 438-2:2016 Par. 20	Spring force	≥ 15	N
Resistance to impact by large diameter ball	EN 438-2:2016 Par. 21	Drop height Indent diameter	≥ 600 ≤ 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^3
SURFACE PROPERTIES				
Resistance to surface wear	EN 438-2:2016 Par. 10	Initial point	≥ 50	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	≥ 2	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
POSTFORMING GRADE PROPERTIES - VGP Type				
Formability	EN 438-2:2016 Par. 32	Bending radius	≤ 10 x t Longitudinal [2] ≤ 20 x t Transversal [2]	mm
Resistance to blistering	EN 438-2:2016 Par. 34	Time to blister	≥ 10 t < 0,8 mm ≥ 15 t ≥ 0,8 mm	s
FIRE PERFORMANCES				
Reaction to fire	The reaction to fire of Purilam 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.			
FOOD & HYGIENE PROPERTIES				
Contact with food - overall migration	EN 1186	Acetic acid 3 % Ethanol 50 % Ethanol 95 % Isooctane	≤ 10 ≤ 10 ≤ 10 ≤ 10	mg/dm^2

PURICELLI
DECORATIVE SURFACES

PURILAM

MATERIAL PROPERTIES DATA SHEET

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^3
Phenol Free [3]	AFNOR NF EN ISO 16000-9	Phenol emission	< 0,002	mg/m^3

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 PURILAM production. 0,002 mg/m^3 is the detection limit (DL) value of the test.

Note to PURILAM sheets with adhesive protective film
The protective films are designed for temporary surface protection against dirt, scratches and tool marks; they are not designed for protection against corrosion, humidity or chemicals. The laminates covered with the protective film shall be stored in a clean, dry place (40 to 60 RH%) at room temperature (20 to 25 °C), avoiding weathering and UV exposure. In any case, the removal must be made within four months from the date of shipment by Puricelli. Puricelli cannot be responsible for the misuse of the laminates covered with the protective film, nor for the consequences for non-recommended applications.