

NATURALIA



Naturalia is a compact high pressure decorative laminate (HPL), according to EN 438-4:2005, consisting of a transparent surface overlay, impregnated with aminoplastic resins, and a core of wood fibres layers, impregnated with phenolic thermosetting resins. All the layers are bonded together with simultaneous application of heat ($\geq 160\text{ }^{\circ}\text{C}$) and high specific pressure ($> 7\text{ MPa}$) to obtain a homogeneous non-porous material with increased density.

The fibres are randomly arranged, giving it a pleasant appearance and texture.

These laminates are self-supporting and ready for installation.

	EN 438 classification		CGS
	Standard		EN 438-4

PROPERTIES	TEST METHOD	PROPERTY OR ATTRIBUTE	UNIT	VALUES
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SURFACE QUALITY

Surface quality	EN 438-2.4	Spots, dirt and similar surface defects	mm^2/m^2	≤ 1
		Fibres, hairs and scratches	mm/m^2	≤ 10

DIMENSIONAL TOLERANCES

Dimensional tolerances	EN 438-2.5	Thickness tolerance	mm	6.4 ± 0.40
			mm	9.7 ± 0.50
			mm	12.8 ± 0.60
	EN 438-2.6	Length and width	mm	$+10 / -0$
	EN 438-2.7	Straightness of edges	mm/m	≤ 1.5
	EN 438-2.8	Squareness	mm/m	≤ 1.5
EN 438-2.9	Flatness (measured on full-size sheet).	mm/m	≤ 5 for thickness 6,4 and 9,7	
		mm/m	≤ 3 for thickness 12,8	

GENERAL PROPERTIES

Resistance to surface wear	EN 438-2.10	Initial Point	Revolutions	≥ 150
		Wear value	Revolutions	≥ 350
Resistance to immersion in boiling water	EN 438-2.12	Mass increase	%	≤ 2
		Thickness increase	%	≤ 2
		Appearance	Rating	≥ 4
Resistance to water vapour	EN 438-2.14	Appearance	Rating	≥ 4
Resistance to dry heat (180°C/20')	EN 438-2.16	Appearance	Rating	≥ 4
Resistance to wet heat (100°)	EN 12721:1997	Appearance	Rating	≥ 4
Dimensional stability at elevated temperatures	EN 438-2.17	Cumulative dimensional change	Longitudinal %	≤ 0.30
			Transversal %	≤ 0.60
Resistance to impact with large diameter ball	EN 438-2.21	Indentation diameter with 1.8 m drop height	mm	≤ 10
Resistance to crazing	EN 438-2.24	Appearance	Rating	≥ 4
Resistance to scratching	EN 438-2.25	Appearance	Rating	≥ 3
Resistance to staining	EN 438-2.26	Appearance - Group 1 & 2	Rating	≥ 5
		Appearance - Group 3	Rating	≥ 4
Light fastness (Xenon-arc)	EN 438-2.27	Contrast	Grey scale rating	≥ 4
Resistance to cigarette burns	EN 438-2.30	Appearance	Rating	≥ 4
Flexural Modulus	EN ISO 178	Stress	Mpa	≥ 9000
Flexural strength	EN ISO 178	Stress	Mpa	≥ 80
Density	EN ISO 1183	Density	g/cm^3	$\geq 1,35$

FIRE PERFORMANCES

Surface burning characteristics (Tunnel test)	ASTM E 84	Flame Spread Index	Index	15 to 55
		Smoke Development Index	Index	70 to 135
		Classification	Class	B

OTHER PROPERTIES

Thermal resistance / conductivity	EN 12664	Thermal resistance / conductivity	W/mK	0.2 to 0.5
Formaldehyde emission	EN 717- 1	Chamber method	mg/m^3	0.01
	EN 717- 2	Gas analysis	ppm	0.01
	EN 13986	Classification	$\text{mg}/(\text{m}^2 \times \text{h})$	0.1
	JIS A 1460	Dessicator method	Rating	E1
Volatile Organic Chemical Emissions	Greenguard Certification Low Chemical Emission UL 2818 according to EPA TO-17 e ASTM D 6196 EPA TO-11A e ASTM D 5197	Individual VOCs	TLV	≤ 0.1
		Formaldehyde	ppm	≤ 0.025
		Total VOC	mg/m^3	≤ 0.25
		Total Aldehydes	ppm	≤ 0.05
		4-Phenylcyclohexene	mg/m^3	≤ 0.0033
Total respirable particles	mg/m^3	≤ 0.025		
Evaluation of micro-organisms action	EN ISO 846	Microbial growth	Rating	1 - slight and slow microbial growth
Contact with food - Overall migration	EN 1186-3	3% acetic acid 24h at 40°C	mg/dm^2	< 10
	EN 1186-3	50% ethanol 24h at 40°C		< 10
	EN 1186-14	95% ethanol 24h at 40°C		< 10
	EN 1186-14	isooctane 24h at 40°C		< 10
Contact with food - Formaldehyde specific migration	EN 13130-23	3% acetic acid 24h at 40°C	mg/kg	< 15

Note to laminates 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 at room temperature (optimum 20°C), avoiding weathering and UV exposure.

The protective film must be removed from the surface of the laminates after the application and before putting into use the finite element.

In case of thick laminate with the protective film on both sides, it must always be removed from both sides at the same time.

In any case, the removal must be made within six months from the date of shipment by Arpa Industriale.

Arpa Industriale cannot be responsible for the misuse of the laminates covered with the protective film, nor for the consequences for non-recommended applications.

Disclaimer

The Product Technical Sheets provide all the technical information relevant to the performance of the product as tested by Arpa Industriale or certified testing agencies. Arpa Industriale maintains the right to change and alter the product composition and production process and thereby the performance characteristics of the product at all times, as reported to the Arpa Industriale website. Customers and end-users of the product are requested to check for the latest technical information regarding the products performance on the website of Arpa Industriale before application. In any case, Arpa Industriale, in every contractual relationship, will refer only to the technical information published on its website. Arpa Industriale will not assume any liability if the end-user or customer refer to any other technical information of the products.