

PRODUCT TECHNICAL SHEET

STANDARD



High pressure decorative laminates (HPL) according to EN 438-3:2005 or EN 438-8:2005 , consisting of a core made from layers of kraft paper impregnated with phenolic thermosetting resins and a surface of decorative paper(s) impregnated with aminoplastic resins. All the layers are bonded together with simultaneous application of heat (approximately 150°C) and high specific pressure (> 7 MPa) to obtain a homogeneous non-porous material with increased density. These laminates are normally intended for bonding to supporting substrates to produce panels by the composite manufacturers.

	Decor		Unicolours	Printed decors	Iridescent colours
	EN 438 classification		HGS	HGS	ATS
	Standard		EN 438-3	EN 438-3	EN 438-8

PROPERTIES	TEST METHOD	PROPERTY OR ATTRIBUTE	UNIT	VALUES		
------------	-------------	-----------------------	------	--------	--	--

SURFACE QUALITY

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

DIMENSIONAL TOLERANCES

Dimensional tolerances	EN 438-2.5	Thickness tolerance	mm	0,5 ≤ t ≤ 1,0: ± 0,10		
			mm	1,0 < t < 2,0: ± 0,15		
	EN 438-2.9	Flatness (measured on full-size sheet)	mm/m	≤ 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		

PHYSICAL PROPERTIES

Resistance to surface wear	EN 438-2.10	Initial Point	Revolutions	≥ 150	≥ 100	N/A
		Wear value	Revolutions	≥ 350	≥ 200	N/A
Resistance to impact with small diameter ball	EN 438-2.20	Spring force	N	≥ 20	≥ 20	≥ 15
Resistance to scratching	EN 438-2.25	Appearance	Rating	≥ 3	≥ 3	≥ 2
Dimensional stability at elevated temperatures	EN 438-2.17	Cumulative dimensional change	Longitudinal %	≤ 0,55	≤ 0,55	N/A
		Cumulative dimensional change	Transversal %	≤ 1,05	≤ 1,05	N/A
Resistance to immersion in boiling water	EN 438-2.12	Appearance - Gloss Finish	Rating	≥ 3	≥ 3	N/A
		Appearance - Other finish	Rating	≥ 4	≥ 4	N/A
Resistance to dry heat (180°C/20')	EN 438-2.16	Appearance - Gloss Finish	Rating	≥ 3	≥ 3	N/A
		Appearance - Other finish	Rating	≥ 4	≥ 4	N/A
Resistance to wet heat (100°)	EN 12721:1997	Appearance - Gloss Finish	Rating	≥ 3	≥ 3	N/A
		Appearance - Other finish	Rating	≥ 4	≥ 4	N/A
Resistance to staining	EN 438-2.26	Appearance - Group 1 & 2	Rating	≥ 5	≥ 5	≥ 5
		Appearance - Group 3	Rating	≥ 4	≥ 4	≥ 4
Light fastness (Xenon-arc)	EN 438-2.27	Contrast	Grey scale rating	≥ 4	≥ 4	≥ 4
Resistance to water vapour	EN 438-2.14	Appearance - Gloss Finish	Rating	≥ 3	≥ 3	≥ 3
		Appearance - Other finish	Rating	≥ 4	≥ 4	≥ 3
Resistance to cigarette burns	EN 438-2.30	Appearance	Rating	≥ 3	≥ 3	N/A
Density	EN ISO 1183	Density	g/cm <sup>3</sup>	≥ 1,35	≥ 1,35	≥ 1,35

FIRE PERFORMANCES

Reaction to fire	This product is not tested for Reaction-to-Fire as it involves a semi-finished product only suitable for end-use applications when bonded to a substrate. Reaction-to-Fire testing of the bonded panel is the responsibility of the panel manufacturer and results will differ depending on the substrates and bonding techniques applied.					
------------------	--	--	--	--	--	--

OTHER PROPERTIES

Thermal resistance / conductivity	EN 12664	Thermal resistance / conductivity	W/mK	0,2 to 0,5	0,2 to 0,5	0,2 to 0,5
Formaldehyde emission	EN 717- 1/2	Formaldehyde emission	Rating	Class E1	Class E1	Class E1
Evaluation of micro-organisms action	EN ISO 846	Evaluation - Methods A + C	Rating	0 - 1	0 - 1	0 - 1

rev. 01 date 19/02/2010

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.