

SM'art HPL technical data sheet EN438

property	test procedure	measure unit	HG	VG
			Horizontal	Vertical
specific weight	weight in kg of a dm3 of laminate or of 1 m2 in thickness 1mm	kg/dm3	1.35	1.35
thickness tolerance	measures the difference between the nominal thickness and the actual laminate thickness	mm	0,5 ≤ t ≤ 1,0 mm; ±0,10 1,0 ≤ t ≤ 2,0 mm; ±0,15	0,5 ≤ t ≤ 1,0 mm; ±0,10 1,0 ≤ t ≤ 2,0 mm; ±0,15
surface wear resistance	the taber test measures the number of cycles necessary to abrade the laminate surface with sand paper. IP is initial point, when colour begins disappearing	Taber cycles IP starting point	Solid color ≥ 150 Printed ≥ 100	≥ 50
resistance to immersion in boiling water	measures the mass and thickness increase of a laminate after a two hour immersion in boiling water	appearance gloss appearance non-gloss	3 4	3 4
resistance to water vapour	measures the appearance of a laminate exposed to water vapour for 1 hour	appearance gloss appearance non-gloss	3 4	3 4
resistance to dry heat at 180° C	measures the aesthetic properties of a laminate bonded onto an 18 - 20 mm chipboard upon which a metal block at the initial temperature of 160° C is placed and left to cool for 20 minutes.	appearance gloss appearance non-gloss	3 4	3 4
resistance to wet heat		rating	4	4
dimensional stability at high temperature	measures the changing in length and width after 24 hours at 70°C and 96 hours at 40°C and 90 - 95 % relative humidity	% max longitudinal % max transversal	0,65 t < 1,0 mm 1,15 t < 1,0 mm	0,45 t ≥ 1,0 mm 0,90 t ≥ 1,0 mm
resistance to impact by small diameter ball	measures the minimum strength necessary to a steel ball to damage a laminate bonded to a 18 mm thick particle board	N (min)	20	20
resistance to cracking	measures the aesthetic properties of laminate slightly curved and heated at 50°C for 6 hours	grade (min)	4	4
resistance to scratching	measures the minimum strength necessary to a diamond point to scratch the laminate surface	rating	3	2
color resistance to light (Xeno arc)	contrast	grey scale classification	≥ 4	≥ 4
thermic resistance / conductivity	EN12664	W/mK	da 0,2 a 0,5	da 0,2 a 0,5
electrostatic properties	EN61340-4-1	superficial resistance mass resistance	1 x 10 ⁹ - 1 x 10 ¹¹ Ω 1 x 10 ⁹ - 1 x 10 ¹¹ Ω	1 x 10 ⁹ - 1 x 10 ¹¹ Ω 1 x 10 ⁹ - 1 x 10 ¹¹ Ω
stains and dirt	measures the maximum area of stains and dirt admitted per sqm of laminate. Such an area can be concentrated in a single point or subdivided in numerous number of small faults.	mm2/m2	≤1	≤1
fibres and hairs	measures the maximum length of hair and fibre for sqm of laminate	mm/m2	≤10	≤10
length and width	measures the length and width with a metal tape or rule	mm	+ 10 / - 0	+ 10 / - 0
edge straightness	measures the deviation difference allowed for each meter of edge from perfect linearity	mm/m	≤1,5	≤1,5
edge squareness	measures the difference allowed for each meter of edge from perfect orthogonality	mm/m	≤1,5	≤1,5
flatness tolerance	measures the maximum curvature of a laminate laid flat with the concave side up	mm/m	≤60	≤60
formaldehyde emission	EN717-1 EN717-1	mg/m3 ppm classification	required < 0,062 < 0,050	actual 0.006 0.005
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