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motivi laminate
technical data sheet

Motivi Supermatt & Mattwood Laminate

HPL/CPL Technical Data Sheet

HPL: 3001, 3002, 4001, 4002, 4003, 7001, 7002, 7003, 7004, 7005, 7006, 7007, 7008, 7009
 CPL: 5803, 5816, 5817

Characteristics	Test Method	Tested Value	Required Value
Thickness	EN 438-2 section 5	According to the required thickness	0.5 ≤ t ≤ 1.0 mm : ± 0.10 mm 1.0 < t < 2.0 mm : ± 0.15 mm
Density	ISO 1183 - 1	1.4 gr/cm ³	Min. 1.35 gr/cm ³
Flatness	EN 438-2 section 9 HGS ⁽¹⁾ , HGP ⁽²⁾ VGS ⁽³⁾ , VGP ⁽⁴⁾	35 mm 40 mm	60 mm/m max. deviation
Wear Resistance ⁽⁷⁾	EN 438-2 section 10 HGS, HGP VGS, VGP	IP = 185 Rev. Wear Value = 485 Rev. IP = 76 Rev. Wear Value = 198 Rev.	Initial Point ≥ 150 Rev. Wear Value ≥ 350 Rev. Initial Point ≥ 50 Rev. Wear Value ≥ 150 Rev.
Scratch Resistance ⁽⁷⁾	EN 438-2 section 25 VGS, VGP HGS, HGP	2 N 4 N	Flat Surface Min. 1 N Textured Surface Min. 2 N Flat Surface Min. 2 N Textured Surface Min. 3 N
Impact Resistance	EN 438-2 Small Ball section 20 VGS, VGP HGS, HGP Big Ball section 21 VGS, VGP HGS, HGP	18 N 22 N No Crack, 4.5 mm No Crack, 3.5 mm	Min. 15 N Min. 20 N 600 mm height : no crack, 10 mm Max. 800 mm height : no crack, 10 mm Max.
Dimensional Stability at elevated temp.	EN 438-2 section 17 VGS, VGP HGS, HGP	%L = 0.45 ; %T = 1.08 %L = 0.38 ; %T = 0.92	Max. values %L = 0.75 ; %T = 1.25 %L = 0.55 ; %T = 1.05
Resistance to immersion in Boiling Water	EN 438-2 section 12 VGS, VGP Glossy Surface Finish Other Surface Finish HGS, HGP Glossy Surface Finish Other Surface Finish	4 5 4 5	Rating Min. 3 4 3 4

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Characteristics	Test Method	Tested Value	Required Value
Resistance to Dry Heat (@ 180°C)	EN 438-2 section 16		Rating Min.
	VGS , VGP Glossy Surface Finish Other Surface Finish	4 5	3 4
	HGS , HGP Glossy Surface Finish Other Surface Finish	4 5	3 4
Resistance to Wet Heat (@ 100°C)	EN 12721:1997		Rating Min.
	VGS , VGP Glossy Surface Finish Other Surface Finish	4 5	3 4
	HGS , HGP Glossy Surface Finish Other Surface Finish	4 5	3 4
Resistance to water vapor	EN 438-2 section 14		Rating Min.
	VGS , VGP Glossy Surface Finish Other Surface Finish	4 5	3 4
	HGS , HGP Glossy Surface Finish Other Surface Finish	4 5	3 4
Resistance to Cigarette Burn	EN 438-2 section 30		Min. Level
	VGS , VGP HGS , HGP	4 4	3 3
Resistance to Staining	EN 438-2 section 26		Rating Min.
	VGS , VGP Group 1 & 2 Group 3	5 4	5 4
	HGS , HGP Group 1 & 2 Group 3	5 4	5 4
Flatness	EN 438-2 section 9 CGS		
	2.0 ≤ t < 6.0 mm	1.23 mm	Max. 8 mm / 1 M length
	6.0 ≤ t < 10.0 mm	1.46 mm	Max. 5 mm / 1 M length
	t ≥ 10.0 mm	1.87 mm	Max. 3 mm / 1 M length

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Characteristics	Test Method	Tested Value	Required Value
Determination of Formaldehyde Release HPL 0.7 mm HGP	EN 717-2 : 1999 Gas Analysis	0.191 mg/m ² h	≤ 3.5 mg/m ² h
Formaldehyde Emission	EN 717-1 0.7 mm CPL HGP / VGP	≤ LOQ ⁽⁹⁾ mg/m ³ ≤ LOQ ⁽⁹⁾ ppm	≤ 0.124 0.1 ppm (E0 Class)
Release of dangerous substances	UNI EN 16516 : 2020 0.7 mm CPL HGP / VGP	0.037 mg/m ³ 0.03 ppm	≤ 0.124 0.1 ppm (E0.5 Class)
PAH Content (Polycyclic Aromatic Hydrocarbons)	AfPS GS 2014:01 PAK Category 2	< 0.2 mg/kg	< 0.5 mg/kg
Light fastness (Xenon Arc)	EN 438-2 section 27 VGS , VGP HGS , HGP	5 5	Contrast Grey Scale Rating 4 – 5 4 - 5
Formability Radius	EN 438-2 section 31 / 32 HGP , VGP L (Machine Direction) T (Cross Direction)	R5 R6	≤ 10 x laminate nominal thickness ≤ 20 x laminate nominal thickness
Fire Classification ⁽⁸⁾	<u>EN 13501-1</u> t ≥ 0.9 mm CPL HGS/VGS t ≥ 0.6 mm HPL HGF/VGF	B S1 d0 B S1 d0	C S2 d0 C S2 d0

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Characteristics	Test Method	Tested Value	Required Value
Resistance To Blister	EN 438-2 section 33 / 34 HGP , VGP $t_2 - t_1$ (Sec) Nominal Thickness < 0.8 mm	15	≥ 10
Antiseptics & Sanitizers Surface Resistance	Gentas Internal test Method	See Table below	---
Contact With Food – Overall Migration ⁽⁶⁾	EN 1186-3 ⁽⁵⁾ Acetic Acid 3% w/w	9.6 mg/dm ²	< 10 mg/dm ²
	EN 1186-14 ⁽⁵⁾ Ethanol 10% w/w	4.3 mg/dm ²	< 10 mg/dm ²
	EN 1186-14 ⁽⁵⁾ Ethanol 95% w/w	< 2 mg/dm ²	< 10 mg/dm ²
Chlorine Surface Resistance	Gentas Internal test Method	See Table below	---
Hydrogen Peroxide Surface Resistance	Gentas Internal test Method	See Table below	---

Remarks :

HGS = Horizontal Grade Standard Laminate

(2) HGP = Horizontal Grade Post Forming Laminate

(3) VGS = Vertical Grade Standard Laminate

(4) VGP = Vertical Grade Post Forming Laminate

(5) Migration test conducted at 40°C for 24 hours

(6) CoC available upon request (ISEGA 37314 U 14)

(7) The Wear and Scratch resistance represent an average values between different types of decors and finishes tested with a decorative laminate (HPL / CPL) applied with an Overlay layer. For a specific value of a decorative laminate with / without overlay layer, please contact sales department.

(8) The Fire Classification refer to thin laminates bonded with FR adhesive on Non Combustible a Class Core substrate (such as Calcium Silicate boards). For further detailed information, please refer to Fire Resistance Explanation Sheet.

(9) LOQ : Limit Of Quantification (0.02 mg/m³).

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Chlorine Surface Resistance Test ⁽⁶⁾ :

3001⁽¹⁾ / 4003⁽²⁾ ; 1mm⁽³⁾ ; Velur Finish ; 1000 ppm concentration ⁽⁴⁾

Duration ⁽⁵⁾ Decor	1 hour	2 hours	4 hours	8 hours	12 hours	24 hours
3001 ⁽¹⁾ Rating Scale ⁽⁷⁾	0	0	0	0	0	0
4003 ⁽²⁾ Rating Scale ⁽⁷⁾	0	0	0	0	0	0

3001⁽¹⁾ / 4003⁽²⁾ ; 1mm⁽³⁾ ; Velur Finish ; 10,000 ppm concentration ⁽⁴⁾

Duration ⁽⁵⁾ Decor	1 hour	2 hours	4 hours	8 hours	12 hours	24 hours
3001 ⁽¹⁾ Rating Scale ⁽⁷⁾	0	0	0	0	0	0
4003 ⁽²⁾ Rating Scale ⁽⁷⁾	0	0	0	0	0	0

Remarks :

(1) 3001 Plain décor HGS

(2) 4003 Printed décor HGS

(3) 1 mm pressed in Velur finish

(4) 1000 and 10,000 ppm water base solutions

(5) Duration according to Tables; Test method according to the below instructions;
Rating Scale according to the below instructions

(6) Test method :

- With a pipette drop 5 drops from the tested concentration and cover with a laboratory glass cover
- After the required duration, remove the glass cover, rains with water and wiper with a dry cotton cloth
- Examine the tested samples according to the below rating scale and advice with a test report

(7) Rating Scale : Level 0 – No Detectable Change for naked eye

Level 1 – Slight Change in Color or Gloss or surface structure

Level 2 – Slight Surface Etching or Severe Staining

Level 3 – Pitting / Cracking / Swelling / Erosion of the surface

Level 4 - Obvious & Significant Deterioration of the surface