

Micro Abrasive Resistance (MAR) Laminate Technical Data

Property	Test method (EN 438-2 Clause no, unless otherwise stated)	Unit (max or min)	Required Value	
			Laminat Grade	
			HGS HGP	VGS VGP
			333	222
Thickness	5	mm(max or min variation)	0,5≤t≤1,0 mm: ±0,10 mm 1,0<t<2,0 mm:±0,15 mm where t: nominal thickness)	
Flatness ^{a)}	9	mm/m (maximum deviation)	60 mm/m	
Lenght and width ^{b)}	6	mm(max or min variation)	+10 mm/-0 mm	
Straightness of edges ^{b)}	7	mm/m (maximum deviation)	1,5 mm/m	
Squareness ^{b)}	8	mm/m (maximum deviation)	1,5 mm/m	
Resistance to surface wear	10	Revolutions(min) inital Point Wear value	150 350	50 150
Resistance to impact by small diameter ball	20	N (min)	20	15
Resistance to impact by large diameter ball (optional)	21	mm (min drop height) mm (max indent diameter)	800 10	600 10
Resistance to scratching	25	Rating (min)	3	2
Dimensional Stability at elevated temperature	17	%max (Cumulative dimensional change) L ^{c)} T ^{d)}	0,55 1,05	0,75 1,25
Resistance to immersion in boiling water	12	Rating (min) Gloss finish Other finishes	3 4	3 4
Resistance to dry heat (160 °C)	16	Rating (min) Gloss finish Other finishes	3 4	3 4
Resistance to wet heat (85 °C)	EN 12721	Rating (min) Gloss finish Other finishes	3 4	3 4

Micro Abrasive Resistance (MAR) Laminate Technical Data

Property	Test method (EN 438-2 Clause no, unless otherwise stated)	Unit (max or min)	Required Value	
			Laminat Grade	
			HGS HGP	VGS VGP
			333	222
Resistance to staining	26	Rating (min) Groups 1&2 Group 3	5 4	5 4
Light fastness (xenon arc)	27	Grey scale rating	4 to 5	4 to 5
Resistance to water vapour	14	Rating (min) Gloss finish Other finishes	3 4	3 4
Resistance to cigarette burns	30	Rating (min)	3	3
Resistance to cracking under stres (optional)	23	Rating (min)	4	4
Density	EN ISO1183	g/cm ³	1,35	1,35
Formability	31 or 32	mm (radius) L ^{c)} T ^{d)}	HGP-VGP ≤ 10 x laminate nominal thickness ≤ 20 x laminate nominal thickness	
Resistance to blistering	33 or 34	Seconds Nominal thickness < 0,8 mm Nominal thickness ≥ 0,8 mm	≥10 ≥15	
Micro Abrasive Resistance (MAR)	Martindale	Rating (min)	A1	
a) Provided that the laminates are stored in the manner and conditions recommended by the manufacturer they shall comply with the flatness requirements specified in Table 4 when measured in accordance with EN 438-2 Clause 9 b) Tolerances for cut-to-size panels shall be agreed between supplier and purchaser. c) L: in the longitudinal (or machine) direction of the fibrous sheet material (normally the direction of the longest dimension of laminate d) T: in the cross-longitudinal (cross- machine) direction of fibrous shett material (at right angles to direction L)				

Remarks:

HGS: Horizontal Grade Standard Laminate
 HGP: Horizontal Grade Postforming Laminate
 VGS: Vertical Grade Standard Laminate
 VGP: Vertical Grade Postforming Laminate