

Material Property Datasheet

TRESPA® TOPLAB®PLUS

Decorative high-pressure compact laminates according to EN 438-4:2005 of thicknesses of 13 mm (± 1/2 in) or greater for interior scientific surface solutions. Sheets consisting of layers of wood-based fibres (paper and/or wood) impregnated with thermosetting resins and surface layer(s) on one or both sides, having decorative colours or designs. A transparent topcoat is added to the surface layer(s) and cured by Trespa's unique in-house technology Electron Beam Curing (EBC), to enhance the scratch and chemical resistance. These components are bonded together with simultaneous application of heat (≥ 150° C / ≥ 302° F) and high specific pressure (> 5 MPa) to obtain a homogeneous non-porous material with increased density and integral decorative surface. They are available in the Standard grade (CGS).

Properties	Test method	Property or attribute	Unit	Result [Ⓐ] [Ⓑ]	
				Grade: CGS	Standard: EN 438-4
				Colour/Decor: All [Ⓐ]	
Surface quality					
Surface quality	EN 438-2 : 4	Spots, dirt, similar surface defects	mm ² /m ² in ² /ft ²	≤ 1 ≤ 0.0001	
		Fibres, hairs & scratches	mm/m ² in/ft ²	≤ 10 ≤ 0.036	
Dimensional tolerances					
Dimensional tolerances	EN 438-2 : 5	Thickness	mm	13.0 ≤ t < 16.0: +/- 0.60	
				16.0 ≤ t < 20.0: +/- 0.70	
			in	20.0 ≤ t ≤ 25.0: +/- 0.80	
				0.4724 ≤ t < 0.6299 : +/- 0.0236	
	EN 438-2 : 9	Flatness	mm/m in/ft	0.6299 ≤ t < 0.7874 : +/- 0.0275	
				0.7874 ≤ t ≤ 0.9842 : +/- 0.0315	
	EN 438-2 : 6	Length & width	mm in	≤ 2 ≤ 0.024	
	EN 438-2 : 7	Straightness of edges	mm in/ft	+ 5 / - 0 + 0.1968 / - 0	
Trespa standard	Squareness	mm	≤ 1 ≤ 0.012		
		in	2550 x 1860 : difference between diagonals (x-y) ≤ 4 3050 x 1530 : difference between diagonals (x-y) ≤ 4 100.39 x 73.23 : difference between diagonals (x-y) ≤ 0.1575 120.08 x 60.24 : difference between diagonals (x-y) ≤ 0.1575		
Physical properties					
Resistance to surface wear	EN 438-2 : 10	Wear resistance - Revolutions (min)	Initial point	≥ 150	
			Wear value	≥ 200	
Resistance to impact by large diameter ball	EN 438-2 : 21	Indentation diameter - δ ≤ t mm with drop height 1.8m	mm	≤ 10	
Resistance to scratching	EN 438-2 : 25	Force	Rating (min)	≥ 4	
Resistance to dry heat (160° C / 320° F)	EN 438-2 : 16	Appearance	Rating (min)	≥ 4	
Resistance to wet heat (100° C / 212° F)	EN 12721	Appearance	Rating (min)	≥ 4	
Resistance to immersion in boiling water	EN 438-2 : 12	Mass increase (% max)	t ≥ 6 mm	≤ 1	
		Thickness increase (% max)	t ≥ 6 mm	≤ 1	
		Appearance	Rating (min)	≥ 4	
Dimensional stability at elevated temperature	EN 438-2 : 17	Cumulative dimensional change	Longitudinal %	≤ 0.25	
			Transversal %	≤ 0.25	
Light fastness (xenon arc)	EN 438-2 : 27	Contrast (Wool scale)	ASTM G53-91 (314-400nm)	≥ 6	
Resistance to water vapour	EN 438-2 : 14	Appearance	Rating (min)	≥ 4	
Resistance to cigarette burns	EN 438-2 : 30	Appearance	Rating (min)	≥ 4	
Resistance to crazing	EN 438-2 : 24	Appearance	Rating (min)	≥ 4	
Modulus of elasticity	EN ISO 178	Stress	MPa	≥ 9000	
Flexural strength	EN ISO 178	Stress	MPa	≥ 100	
Tensile strength	EN ISO 527-2	Stress	MPa	≥ 70	
Density	EN ISO 1183	Density	g/cm ³	≥ 1.35	
Other properties					
Release of formaldehyde	EN 717-2	Classification	Class	E1	
Chemical resistance	SEFA3-2010	Classification	Rating	Pass	

[Ⓐ] Due to conversion from metric values, the US values provided are approximate.

[Ⓑ] All data are related to the products mentioned in the Trespa® TopLab®PLUS standard delivery programme.