

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 indoor scientific furniture applications. Sheets consisting of layers of wood-based fibers (paper and or wood) impregnated with thermosetting resins and surface layer(s) on one or both sides, having decorative colors 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 (> 7 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		
				Color/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		
		Fibers, hairs & scratches	mm/m ² in/ft ²	≤ 10 ≤ 0.036		
Dimensional tolerances						
Dimensional tolerances	EN 438-2 : 5	Thickness	mm	12.0 ≤ t < 16.0: +/- 0.60 16.0 ≤ t < 20.0: +/- 0.70 20.0 ≤ t ≤ 25.0: +/- 0.80		
				in	0.4724 ≤ t < 0.6299 : +/- 0.0236 0.6299 ≤ t < 0.7874 : +/- 0.0275 0.7874 ≤ t ≤ 0.9842 : +/- 0.0315	
			EN 438-2 : 9		Flatness	mm/m in/ft
			EN 438-2 : 6	Length & width	mm in	+ 5 / - 0 + 0.1968 / - 0
	EN 438-2 : 7	Straightness of edges	mm/m in/ft	≤ 1 ≤ 0.012		
	Trespa standard	Squareness	mm 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 Wear value	≥ 150 ≥ 200		
Resistance to impact by large diameter ball	EN 438-2 : 21	Indentation diameter - 6 ≤ 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 % Transversal %	≤ 0.25 ≤ 0.25		
Light fastness (xenon arc)	EN 438-2 : 27	Contrast (Wool scale)	ASTM G53-91 (314-400nm)	≥ 6		
Resistance to water vapor	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		
	ASTM D638-08	Stress	psi	≥ 1305000		
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	SEFA3-2010:2.1.1	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 program.

[Ⓒ] Because of the color-through core, this test is not applicable.

[Ⓓ] Laboratory test results may not represent hazards or performance in field applications.

Please note:

Trespa® TopLab^{PLUS} is engineered for laboratory worktops and scientific furniture. For other applications please contact your local Trespa representative. Storage, machining, mounting and cleaning instructions are provided by the manufacturer.

Please visit www.trespa.info for the most up to date version of this document.

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