

# Material Property Datasheet

## TRESPA® TOPLAB<sup>PLUS</sup>®

Decorative high-pressure compact laminates according to EN 438-4:2005 of thicknesses of 13 mm (± 1/2 in) or greater for indoor scientific furnitures applications. 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 (> 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 <input type="checkbox"/> <input type="checkbox"/>	
				<b>Grade: CGS</b>	
				<b>Standard: EN 438-4</b>	
				<b>Colour/Decor: All <input type="checkbox"/></b>	
<b>Surface quality</b>					
Surface quality	EN 438-2 : 4	Spots, dirt, similar surface defects	mm <sup>2</sup> /m <sup>2</sup> in <sup>2</sup> /ft <sup>2</sup>	≤ 1 ≤ 0.0001	
		Fibres, hairs & scratches	mm/m <sup>2</sup> in/ft <sup>2</sup>	≤ 10 ≤ 0.036	
<b>Dimensional tolerances</b>					
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	
			mm/m in/ft	≤ 2 ≤ 0.024	
	EN 438-2 : 9	Flatness	mm/m in/ft	≤ 2 ≤ 0.024	
	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	2550 x 1860 : difference between diagonals (x-y) ≤ 4 3050 x 1530 : difference between diagonals (x-y) ≤ 4	
			in	100.39 x 73.23 : difference between diagonals (x-y) ≤ 0.1575 120.08 x 60.24 : difference between diagonals (x-y) ≤ 0.1575	
	<b>Physical properties</b>				
	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 - 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 % 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 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	
	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 <sup>3</sup>	≥ 1.35	
<b>Other properties</b>					
Release of formaldehyde	EN 717-2	Classification	Class	E1	
Chemical resistance	SEFA3-2010:2.1.1	Classification	Rating	Pass <input type="checkbox"/>	

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

All data are related to the products mentioned in the Trespa® TopLab<sup>PLUS</sup> standard delivery programme.

Because of the colour-through core, this test is not applicable.

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

### Please note:

Trespa® TopLab<sup>PLUS</sup> 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.

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