

MATERIAL PROPERTY DATASHEET

TRESPA® METEON®



Decorative high-pressure compact laminates according to EN 438-6:2005 with thicknesses of 6 mm ($\pm \frac{1}{4}$ in) or greater for outdoor 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 weather and light protecting properties. These components are bonded together with simultaneous application of heat ($\geq 150^\circ \text{C} / \geq 302^\circ \text{F}$) and high specific pressure ($> 7 \text{ MPa}$) to obtain a homogeneous non-porous material with increased density and integral decorative surface. They are available in the Standard grade (EDS; not available in all worldwide areas) and in the Fire-Retardant grade (EDF).

Properties	Test method	Property or attribute	Unit	Result ^A ^B			
				Grade: EDS (Meteon®) Standard: EN 438-6 Colour/Decor: All ^B	Grade: EDF (Meteon® FR) Standard: EN 438-6 Colour/Decor: All ^B		
Surface quality							
Surface quality	EN 438-2 : 4	Spots, dirt, similar surface defects	mm ² /m ² in ² /ft ²		≤ 2 ≤ 0.0003		
		Fibres, hairs & scratches	mm/m ² in/ft ²		≤ 20 ≤ 0.073		
Dimensional tolerances							
Dimensional tolerances	EN 438-2 : 5	Thickness	mm		$6.0 \leq t < 8.0$: +/- 0.40 $8.0 \leq t < 12.0$: +/- 0.50 $12.0 \leq t < 16.0$: +/- 0.60		
				in		$0.2362 \leq t < 0.3150$: +/- 0.0157 $0.3150 \leq t < 0.4724$: +/- 0.0197 $0.4724 \leq t < 0.6299$: +/- 0.0236	
						≤ 2 ≤ 0.024	
			EN 438-2 : 9		Flatness	mm/m	
				in/ft			≤ 0.024
			EN 438-2 : 6	Length & width	mm		+ 5 / -
	in				+ 0.1968 / -		
	EN 438-2 : 7	Straightness of edges	mm/m		≤ 1		
			in/ft		≤ 0.012		
	Dimensional tolerances	Trespa Standard	Squareness	mm		2550×1860 = max. difference between diagonals (x-y) = 4 3050×1530 = max. difference between diagonals (x-y) = 4 3650×1860 = max. difference between diagonals (x-y) = 5 4270×2130 = max. difference between diagonals (x-y) = 6 100.39×73.23 = max. difference between diagonals (x-y) = 0.1575 120.08×60.24 = max. difference between diagonals (x-y) = 0.1575 143.70×73.23 = max. difference between diagonals (x-y) = 0.1969 168.11×83.86 = max. difference between diagonals (x-y) = 0.2362	
					in		
						Radius inside/ outside corner	mm
in					n.a.		38.19 / 38.58 +/- 5% 50.79 / 51.18 +/- 5%
Max. height					mm	n.a.	r 970 / 980: 1300 (-0/+5) r 1290 / 1300: 1300 (-0/+5)
					in	n.a.	r 38.19 / 38.58: 51.18 (-0/+5) r 50.79 / 51.18: 51.18 (-0/+5)
Max. angle (°)			n.a.	90 +/- 0.5°			

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

^B All data are related to the products mentioned in the Trespa® Meteon® standard delivery programme.

^C Availability limited – contact your local Trespa representative for more details.

Properties	Test method	Property or attribute	Unit	Result Ⓜ Ⓧ	
Physical properties					
Resistance to impact by large diameter ball	EN 438-2 : 21	Indentation diameter - $\delta \leq t$ mm with drop height 1.8 m	mm	≤ 10	
Impact resistance	ASTM D5420-04	Mean failure height	ft	1.0466	
		Mean failure energy	J	11.3	
Dimensional stability at elevated temperature	EN 438-2 : 17	Cumulative dimensional change	Longitudinal %	≤ 0.25	
			Transversal %	≤ 0.25	
Resistance to wet conditions	EN 438-2 : 15	Mass increase	%	≤ 3	
	ASTM D2247-02 ASTM D2842-06	Appearance	Rating	≥ 4	
		Water resistance	Rating	No change	
		Water absorption	%	0.5	
Modulus of elasticity	EN ISO 178	Stress	MPa	≥ 9000	
	ASTM D638-08	Stress	psi	Curved Elements: ≥ 8000 ≥ 1305000	
Flexural strength	EN ISO 178	Stress	MPa	≥ 120	
	ASTM D790-07	Stress	psi	≥ 17500	
Tensile strength	EN ISO 527-2	Stress	MPa	≥ 70	
	ASTM D638-08	Stress	psi	≥ 10150	
Density	EN ISO 1183	Density	g/cm ³	≥ 1.35	
	ASTM D792-08	Density	g/cm ³	≥ 1.35	
Resistance to fixings	ISO 13894-1	Pull out strength	N	6 mm: ≥ 2000	
				8 mm: ≥ 3000	
				≥ 10 mm: ≥ 4000	
				0.2362 in: ≥ 2000	
				0.3150 in: ≥ 3000	
				≥ 0.3937 in: ≥ 4000	
Other properties					
Thermal resistance / conductivity	EN 12524	Thermal resistance / conductivity	W/mK	0.3	
				Grade: EDS (Meteon®) Standard: EN 438-6 Colour/Decor: All Ⓧ	
				Grade: EDF (Meteon® FR) Standard: EN 438-6 Colour/Decor: All Ⓧ	
Weather resistance properties					
Resistance to climatic shock	EN 438-2 : 19	Flexural strength index (Ds)	Index	≥ 0.95	
		Flexural modulus index (Dm)	Index	≥ 0.95	
		Appearance	Rating	≥ 4	
Resistance to artificial weathering (incl. Light fastness) West European cycle	EN 438-2 : 29	Contrast	Grey scale ISO 105 A02	4.5 Ⓧ	
		Contrast	Grey scale ISO 105 A03	4.5	
		Appearance	Rating	≥ 4	
Resistance to artificial weathering (incl. Light fastness) Ⓧ Florida cycle 3000hrs	Trespa Standard	Contrast	Grey scale ISO 105 A02	4.5 Ⓧ	
		Contrast	Grey scale ISO 105 A03	4.5	
		Appearance	Rating	≥ 4	
Resistance to SO ₂	DIN 50018	Contrast	Grey scale ISO 105 A02	4.5 Ⓧ	
		Contrast	Grey scale ISO 105 A03	4.5	
		Appearance	Rating	≥ 4	
Fire performance					
Europe					
Reaction to Fire	EN 438-7	Classification $t \geq 6$ mm / 0.2362 in	Euroclass		B-s2, d0
		Classification $t \geq 8$ mm / 0.3150 in (Metal Frame)	Euroclass	D-s2, d0	B-s1, d0
Reaction to Fire (Germany)	DIN 4102-1	Classification	Class	B2	B1
Reaction to Fire (France)	NF P 92-501	Classification	Class	M3	M1
North America					
Material Surface Burning Characteristics Ⓧ	ASTM E84/UL 723	Classification	Class	n.a.	A
		Flame Spread Index	FSI	n.a.	0-25
		Smoke Developed Index	SDI	n.a.	0-450
Asia Pacific					
Reaction to Fire (China)	GB 8624	Classification	Class	D-s2, d0	B-s1, d0, t1

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Ⓧ All data are related to the products mentioned in the Trespa® Meteon® standard delivery programme.

Ⓧ Not valid for following colours: A04.0.1/A10.1.8/A20.2.3/A17.3.5/A12.3.7.

Ⓧ For other applications/colours such as project colours, please contact your local Trespa representative.

Ⓧ For more information on Delta E values, please contact the Technical Service Department of Trespa North America at 1-800-487-3772.

Ⓧ Laboratory test results are not intended to represent hazards that may be present under actual fire conditions.

Ⓧ For multi-story applications, where local or national building codes may require full-scale fire testing in accordance with NFPA 285(U.S.) or Can/ULC-S134 (Canada), please visit our website www.trespa.info or contact the Technical Service Department of Trespa North America at 1-800-487-3772 for installation information.

Please note:

Trespa® Meteon® is engineered for vertical exterior wall coverings such as façade cladding, balcony panelling as well as horizontal exterior ceiling applications (Trespa® Meteon® Curved Elements are only suitable for vertical exterior wall coverings). For other applications please contact your local Trespa representative. Storage, machining, mounting and cleaning instructions are provided by the manufacturer.

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