

Material Property Datasheet

TRESPA METEON

Decorative high-pressure compact laminates according to EN 438-6:2005 with thicknesses of 6 mm ($\pm 1/4$ 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. When they are self-supporting, exterior-grade compact laminates are ready for installation and only require cutting to size, drilling, etc. to suit the application. 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 [Ⓐ]			
				Grade: EDS (Meteon) Standard: EN 438-6 Colour/Decor: All [Ⓑ]	Grade: EDF (Meteon FR) Standard: EN 438-6 Colour/Decor: All [Ⓑ]		
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		
	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			2550×1860 = diagonals length of 3156 +/- 13 3050×1530 = diagonals length of 3412 +/- 14 3650×1860 = diagonals length of 4097 +/- 17 4270×2130 = diagonals length of 4772 +/- 20	
				in		100.39×73.23 = diagonals length of 124.25 +/- 0.5118 120.08×60.24 = diagonals length of 134.33 +/- 0.5512 143.70×73.23 = diagonals length of 161.30 +/- 0.6693 168.11×83.86 = diagonals length of 187.87 +/- 0.7874	
			Radius inside/ outside corner	mm	n.a.		970/980 +/- 5% 1290/1300 +/- 5%
				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°		
	Physical properties						
	Resistance to impact by large diameter ball	EN 438-2 : 21	Indentation diameter - $6 \leq t$ 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		
		Appearance	Rating		≥ 4		
	ASTM D2247-02	Water resistance	Rating		No change		
	ASTM D2842-06	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			6 mm: ≥ 2000 8 mm: ≥ 3000 $\geq 10\text{ mm}$: ≥ 4000 0.2362 in: ≥ 2000 0.3150 in: ≥ 3000 $\geq 0.3937\text{ in}$: ≥ 4000		
Other properties							
Thermal resistance / conductivity	EN 12524	Thermal resistance / conductivity	W/mK		0.3		

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

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

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

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

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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) <i>West European cycle</i>	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) [Ⓔ] <i>Florida cycle 3000hrs</i>	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 ≥ 6 mm / 0.2362 in Classification t ≥ 8 mm / 0.3150 in (Metal Frame)	Euroclass	D-s2, d0	B-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/ A08.8.1/A10.3.4/A10.1.8/ A20.2.3/A30.3.2/A36.3.5/A17.3.5/ M18.7.2/A04.1.7/ A12.3.7/ A18.3.5 and decors NA/NW.
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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