

Material Property Datasheet

TRESPA® METEON®

Decorative high-pressure compact laminates according to EN 438-6:2005 with thicknesses of 6 mm (± ¼ 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 Trespas'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 (≥ 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 (EDS; not available in all worldwide areas) and in the Fire-Retardant grade (EDF).

Properties	Test method	Property or attribute	Unit	Result <input type="checkbox"/> <input type="checkbox"/>			
				Grade: EDS (Meteon®) Standard: EN 438-6 Colour/Decor: All <input type="checkbox"/>	Grade: EDF (Meteon® FR) Standard: EN 438-6 Colour/Decor: All <input type="checkbox"/>		
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 ≤ t < 8.0: +/- 0.40 8.0 ≤ t < 12.0: +/- 0.50 12.0 ≤ t < 16.0: +/- 0.60		
			in		0.2362 ≤ t < 0.3150: +/- 0.0157 0.3150 ≤ t < 0.4724: +/- 0.0197 0.4724 ≤ 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 x 1860 = max. difference between diagonals (x-y) = 4 3050 x 1530 = max. difference between diagonals (x-y) = 4 3650 x 1860 = max. difference between diagonals (x-y) = 5 4270 x 2130 = max. difference between diagonals (x-y) = 6	
				in			100.39 x 73.23 = max. difference between diagonals (x-y) = 0.1575 120.08 x 60.24 = max. difference between diagonals (x-y) = 0.1575 143.70 x 73.23 = max. difference between diagonals (x-y) = 0.1969 168.11 x 83.86 = max. difference between diagonals (x-y) = 0.2362
			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 ≤ 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 ≥ 9000		
Modulus of elasticity	EN ISO 178	Stress	MPa		Curved Elements: ≥ 8000		
	ASTM D638-08	Stress	psi		≥ 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		

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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Properties	Test method	Property or attribute	Unit	Result [Ⓐ] [Ⓑ]	
				Grade: EDS (Meteon®)	Grade: EDF (Meteon® FR)
				Standard: EN 438-6	Standard: EN 438-6
				Colour/Decor: All [Ⓒ]	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) [Ⓓ] <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 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

[Ⓐ] 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.

[Ⓒ] 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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