

TECHNICAL FILE TWINSON

application: O-Terrace+
P9520

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version: v4

		prEN 15534-1	based on	specific property	unit	value	
MATERIAL CHARACTERISTICS	physical properties	density	§ 6.1	ISO 1183-1/A	kg/dm ³	1.41 ± 0.05	
		moisture content	§ 6.2	ISO 16979	%	< 0.2	
		HDT	§ 6.3	ISO 75-1/A	°C	73 ± 2	
		vicat softening point	---	ISO 306/B50	°C	84 ± 2	
	mechanical properties	impact resistance	§ 7.1.1	ISO 179-1fU	charpy	kJ/m ²	> 5
		tensile properties	§ 7.2	ISO 527-2/1B	tensile modulus	MPa	5500 ± 10%
					tensile strength	MPa	> 35
					strain at break	%	1 ± 10%
		flexural properties	§ 7.3.1	ISO 178	flexural modulus	MPa	6300 ± 10%
					bending strength	MPa	> 55
					bending at break	%	1.3 ± 10%
		creep behaviour (9MPa/30°C/20 days)	§ 7.4.1	ISO 899-2	elongation	%	< 0.3
	resistance to indentation	§ 7.5	EN 1534	1 kN	MPa	> 100	
				3 kN	MPa	> 120	
	nail and screw withdrawal	§ 7.6	EN 13446		MPa	> 50	
	durability	artificial weathering (300 hours WOM)	§ 8.1.1	ISO 4892-2	discoloration	dE	< 20
					impact retention	%	< 20
					mass increase	%	< 8
		moisture resistance (28 days)	§ 8.3.1	EN 317	length increase	%	< 0.6
					width increase	%	< 1.5
					thickness increase	%	< 4
resistance to termites		§ 8.4.2	EN 117		class	1	
resistance against basidiomycetes	§ 8.4.3.2	ENV 12038		class	1		
resistance against soil inhabiting soft rotting micro-fungi	§ 8.4.3.3	CEN/TS 15083-2		class	1		
thermal properties	linear thermal expansion (-20 °C ... +60°C)	§ 9.1	ISO 11359-2	length direction	10 ⁻⁶ m ⁻¹ K ⁻¹	20 - 25	
				width direction	10 ⁻⁶ m ⁻¹ K ⁻¹	45 - 50	
				thickness	10 ⁻⁶ m ⁻¹ K ⁻¹	80 - 90	
thermal conductivity	---	ISO/CD 22007-2	room temperature	W/m.K	0.2 - 0.3		
burning behaviour	oxygen index	§ 10.1	ISO 4589-2		%	> 20	
	epiradiator	---	NF P92-501		class	M4	
	kleinbrenner	---	NBN S21-203		class	A4	
PRODUCT RELATED CHARACTERISTICS	physical properties	slip resistance	§ 6.4	DIN 51097	bare foot ramp test	class	C
			---	EN 13893	Floor slider 2000	---	> 0.4
			---	CEN/TS 15676	pendulum	USRV	> 36
			---	DIN 51130	rubber sole ramp test	class	R13
	mechanical properties	impact resistance	§ 7.1.2.1	EN 477	falling mass	J	> 10
		flexural properties (Lv=60 cm)	§ 7.3.2	EN 310	flexural modulus	MPa	6000 ± 10%
					bending strength	MPa	> 40
					bending at break	mm	15 ± 2
	creep behaviour (Lv=60 cm/85kg/50°C/ 7 days)	§ 7.4.2.1	EN 310	additional bending	mm	< 10	
	durability	natural weathering (1 year Bandol)	§ 8.2	ISO 877-2	discoloration	dE	< 20
					impact retention	%	< 20
					bending strength retention	%	< 20
		cyclic conditions (Lv=60 cm)	§ 8.3.2	EN 321	bending strength retention	%	< 20
		boiling test	§ 8.3.3	ISO 1087-1	mass increase	%	< 8
					length increase	%	< 0.6
					width increase	%	< 1.5
	thickness increase				%	< 4	
	thermal properties	heat reversion	§ 9.2	EN 479		%	< 0.2
		heat build-up	§ 9.3	ASTM D4083		°C	< 45
	burning behaviour	single flame source	§ 10.2.1	ISO 11925-2		pass	OK
		radiant heat source	§ 10.2.3	ISO 9239-1		class	Efl s2
hot metal nut test		---	BS 4790		radius	< 35	