

**TECHNICAL FILE TWINSON**

application: O-Terrace  
P9555 (7K)

date: 02.05.2012  
version: v5

		prEN 15534-1	based on	specific property	unit	value		
MATERIAL CHARACTERISTICS	physical properties	density	§ 6.1	ISO 1183-1/A	kg/dm <sup>3</sup>	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 <sup>2</sup>	> 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%	
					elongation	%	< 0.3	
		creep behaviour (9MPa/30°C/20 days)	§ 7.4.1	ISO 899-2				
		resistance to indentation	§ 7.5	EN 1534				
	nail and screw withdrawal	§ 7.6	EN 13446	1 kN	MPa	> 100		
				3 kN	MPa	> 120		
	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 <sup>-6</sup> m <sup>-1</sup> K <sup>-1</sup>	20 - 25		
				width direction	10 <sup>-6</sup> m <sup>-1</sup> K <sup>-1</sup>	45 - 50		
				thickness	10 <sup>-6</sup> m <sup>-1</sup> K <sup>-1</sup>	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		
			DIN 4102-1		class	B2		
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	R12	
	mechanical properties	impact resistance	§ 7.1.2.1	EN 477	falling mass	J	13	
		flexural properties (Lv=50 cm)	§ 7.3.2	EN 310	flexural modulus	MPa	6000 ± 10%	
					bending strength	MPa	> 40	
					bending at break	mm	15 ± 2	
	creep behaviour (Lv=50 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=50 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	