



## Technical Data Styrodur® C

Property	Unit <sup>1)</sup>	Code according to DIN EN 13164	2500 C		2800 C		3035 CS		3035 CN		4000 CS		5000 CS		Standard
Edge profile															
Surface			skin		embossed		skin		skin		skin		skin		
Length x width	mm		1250 x 600		1250 x 600		1265 x 615		2515 x 615 <sup>2)</sup>		1265 x 615		1265 x 615		
Density	kg/m <sup>3</sup>		28		30		33		30		35		45		DIN EN 1602
Thermal conductivity	$\lambda_D$ [W/(m·K)]		$\lambda_D$		$\lambda_D$		$\lambda_D$		$\lambda_D$		$\lambda_D$		$\lambda_D$		DIN EN 13164
Thermal resistance	$R_D$ [m <sup>2</sup> ·K/W]		$R_D$		$R_D$		$R_D$		$R_D$		$R_D$		$R_D$		
Thickness															
	20 mm	–	0.030	0.65	0.030	0.65	–	–	–	–	–	–	–	–	
	30 mm	–	0.031	1.00	0.031	1.00	0.031	1.00	0.031	1.00	0.031	1.00	–	–	
	40 mm	–	0.032	1.25	0.032	1.25	0.032	1.25	0.032	1.25	0.032	1.25	0.032	1.25	
	50 mm	–	0.033	1.55	0.033	1.55	0.033	1.55	0.033	1.55	0.033	1.55	0.033	1.55	
	60 mm	–	0.034	1.80	0.034	1.80	0.034	1.80	0.034	1.80	0.034	1.80	0.034	1.80	
	80 mm	–	–	–	0.035	2.35	0.035	2.35	0.035	2.35	0.035	2.35	0.035	2.35	
	100 mm	–	–	–	0.037	2.80	0.037	2.80	–	–	0.037	2.80	0.037	2.80	
	120 mm	–	–	–	0.038	3.30	0.038	3.30	–	–	0.038	3.30	0.038	3.30	
	140 mm	–	–	–	–	–	0.038	3.70	–	–	0.038	3.70	–	–	
	160 mm	–	–	–	–	–	0.038	4.20	–	–	–	–	–	–	
	180 mm	–	–	–	–	–	0.040	4.55	–	–	–	–	–	–	
Compressive stress or compressive strength at 10% deformation	(kPa)	CS(10\Y)	200		200		300		250		500		700		DIN EN 826
Compressive creep over 50 years at < 2% deformation	(kPa)	CC(2/1.5/50)	80		80		130		100		180		250		DIN EN 1606
Rated value of the compressive stress under foundation slabs	$\sigma_{perm}$	–	–		–		130 <sup>3)</sup>		–		180		250		DIBT Z-23.34-1325
	$f_{cd}$	–	–		–		185		–		255		355		
Adhesive strength on concrete	kPa	TR 200	–		> 200		–		–		–		–		DIN EN 1607
Compressive modulus of elasticity	Short-term E	CM	10,000		15,000		20,000		15,000		30,000		40,000		DIN EN 826
	Long-term E50		–		–		5,000		–		10,000		14,000		
Dimensional stability: 70°C; 90% r. h.	%	DS(TH)	≤ 5%		≤ 5%		≤ 5%		≤ 5%		≤ 5%		≤ 5%		DIN EN 1604
Deformation behavior: load 40 kPa; 70°C	%	DLT(2)5	≤ 5%		≤ 5%		≤ 5%		≤ 5%		≤ 5%		≤ 5%		DIN EN 1605
Linear coefficient of thermal expansion	Longitudinal	–	0.08		0.08		0.08		0.08		0.08		0.08		DIN 53752
	Transverse	–	0.06		0.06		0.06		0.06		0.06		0.06		
Reaction to fire <sup>4)</sup>	Euroclass	–	E		E		E		E		E		E		DIN EN 13501-1
Long-term water absorption by immersion	% v/v	WL(T)0.7	0.2		0.3		0.2		0.2		0.2		0.2		DIN EN 12087
Long-term water absorption by diffusion	% v/v	WD(V)3	≤ 3		≤ 5		≤ 3		≤ 3		≤ 3		≤ 3		DIN EN 12088
Water-vapor transmission (thickness-dependent)		MU	200–100		200–80		150–50		150–100		150–80		150–100		DIN EN 12086
Freeze-thaw resistance	% v/v	FT2	≤ 1		≤ 1		≤ 1		≤ 1		≤ 1		≤ 1		DIN EN 12091
Maximum service temperature	°C	–	75		75		75		75		75		75		DIN EN 14706

<sup>1)</sup> N/mm<sup>2</sup> = 1 MPa = 1,000 kPa    <sup>2)</sup> Thickness 30 and 40 mm: 2510 x 610 mm    <sup>3)</sup> For multilayer laying: 100 kPa    <sup>4)</sup> Building material class DIN 4102-B1