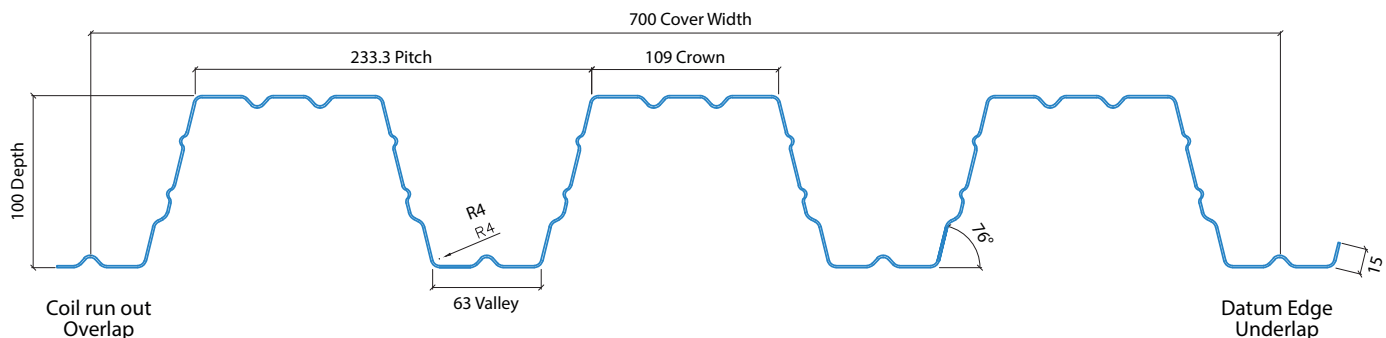


Load/span tables

ComFlor® 100 Profile - 0.90 and 1.20mm steel 280N/mm²

ComFlor® 100 is a strong long span profile that reduces or eliminates temporary propping irrespective of the frame design. It provides a composite floor slab and is suitable for use with concrete beams or non-composite steel beams. The profile is fully nestable giving low transport and handling costs and provides fast slab installation.



Note: all dimensions in mm

The quick reference load/span tables for ComFlor® 100 are intended as a guide for initial design. Detailed design can be carried out using the new ComFlor® 9 design software to British Standard only. (For Eurocode tables please refer to the Technical Department for assistance).

The tables are designed to optimise the span in the construction stage, with the minimum amount of reinforcement needed to achieve the relevant imposed loading and fire resistance. However, in certain conditions where slender slabs are subjected to the

higher imposed loads (and depending on whether Mesh and Deck Fire Method or Bar Fire Method is selected for fire resistance), then the limiting design mechanism becomes associated with the normal stage slab bending and/or vertical shear capacity, and not construction stage.

The total applied loads stated in the British Standard tables covers an allowable unfactored total load of either 5.00, 7.50 or 10.00kN/m², which represents three typical cases, as specified in the following table. The total load combination is made up of

an imposed live load, ceilings and services, finishes and partition loads. However the dead load of the slab itself has already been taken into account and need not be considered as part of the applied load.

Loading Combination (kN/m²)

Category	1	2	3
Imposed	3.00	4.00	7.50
C & S	0.50	1.00	1.00
Finishes	0.50	1.50	1.50
Partitions	1.00	1.00	0.00
TOTAL	5.00	7.50	10.00

ComFlor® 100 normal weight concrete / using mesh / unproped / British Standard

Single span slab (m) - Bar Fire Method - Beam width 152mm.

(Note: A single span deck will require trough bar reinforcement whether the concrete slab is single or continuous span, using Bar Fire Method.)

Props	Fire period	Slab depth (mm)	Mesh 0.1% min. reqd.	Total applied load (kN/m ²)					
				5.00	7.50	10.00	5.00	7.50	10.00
				0.90mm			1.20mm		
None	60 minutes	170	A142	3.85 (10)	3.85 (10)	3.85 (12)	4.03 (10)	4.03 (10)	4.02 (12)
		180	A142	3.76 (8)	3.75 (10)	3.75 (10)	3.92 (10)	3.92 (10)	3.92 (12)
		190	A142	3.66 (8)	3.66 (10)	3.66 (10)	3.83 (8)	3.83 (10)	3.83 (10)
		200	A142	3.58 (8)	3.57 (10)	3.57 (10)	3.74 (8)	3.74 (10)	3.74 (10)
		250	A193	3.23 (8)	3.23 (8)	3.23 (8)	3.38 (8)	3.38 (8)	3.38 (8)
None	90 minutes	180	A142	3.75 (10)	3.75 (12)	3.73 (16)	3.92 (12)	3.92 (12)	3.90 (16)
		190	A142	3.66 (10)	3.66 (12)	3.66 (12)	3.83 (10)	3.82 (12)	3.81 (16)
		200	A142	3.57 (10)	3.57 (12)	3.57 (12)	3.74 (10)	3.73 (12)	3.73 (12)
		250	A193	3.23 (8)	3.22 (10)	3.22 (10)	3.38 (8)	3.37 (10)	3.37 (10)
None	120 minutes	190	A142	3.66 (12)	3.64 (16)	3.64 (16)	3.82 (12)	3.81 (16)	3.81 (16)
		200	A142	3.57 (12)	3.56 (16)	3.56 (16)	3.73 (12)	3.72 (16)	3.72 (16)
		250	A193	3.22 (10)	3.22 (12)	3.22 (12)	3.37 (10)	3.37 (12)	3.36 (12)

Double span (m) - Bar Fire Method - Beam width 152mm.

Props	Fire period	Slab depth (mm)	Mesh 0.1% min. reqd.	Total applied load (kN/m ²)					
				5.00	7.50	10.00	5.00	7.50	10.00
				0.90mm			1.20mm		
None	60 minutes	170	A142	4.01 (10)	4.01 (10)	4.00 (12)	4.59 (10)	4.58 (12)	4.56 (16)
		180	A142	3.86 (10)	3.86 (10)	3.85 (12)	4.47 (10)	4.46 (12)	4.46 (12)
		190	A142	3.73 (8)	3.73 (10)	3.73 (10)	4.36 (10)	4.36 (12)	4.36 (12)
		200	A142	3.60 (8)	3.60 (10)	3.60 (10)	4.27 (10)	4.27 (10)	4.26 (12)
		250	A193	3.10 (8)	3.10 (8)	3.10 (8)	3.86 (8)	3.85 (10)	3.85 (10)
None	90 minutes	180	A142	3.85 (12)	3.85 (12)	3.83 (16)	4.46 (12)	4.45 (16)	4.45 (16)
		190	A142	3.73 (10)	3.72 (12)	3.70 (16)	4.36 (12)	4.34 (16)	4.34 (16)
		200	A142	3.60 (10)	3.59 (12)	3.59 (12)	4.26 (12)	4.25 (16)	4.25 (16)
		250	A193	3.10 (8)	3.10 (10)	3.10 (10)	3.85 (10)	3.85 (12)	3.85 (12)
None	120 minutes	190	A142	3.72 (12)	3.70 (16)	3.70 (16)	4.34 (16)	4.34 (16)	4.33 (20)
		200	A142	3.59 (12)	3.58 (16)	3.58 (16)	4.25 (16)	4.25 (16)	4.23 (20)
		250	A193	3.10 (10)	3.09 (12)	3.09 (12)	3.85 (12)	3.84 (16)	3.84 (16)

Multi span (m) - Bar Fire Method - Beam width 152mm.

Props	Fire period	Slab depth (mm)	Mesh 0.1% min. reqd.	Total applied load (kN/m ²)					
				5.00	7.50	10.00	5.00	7.50	10.00
				0.90mm			1.20mm		
None	60 minutes	170	A142	4.11 (10)	4.11 (10)	4.11 (12)	4.62 (10)	4.62 (12)	4.60 (16)
		180	A142	3.96 (10)	3.96 (10)	3.96 (12)	4.51 (10)	4.50 (12)	4.50 (12)
		190	A142	3.83 (8)	3.83 (10)	3.83 (10)	4.40 (10)	4.40 (12)	4.40 (12)
		200	A142	3.71 (8)	3.70 (10)	3.70 (10)	4.30 (10)	4.30 (10)	4.30 (12)
		250	A193	3.19 (8)	3.19 (8)	3.19 (8)	3.89 (8)	3.89 (10)	3.89 (10)
None	90 minutes	180	A142	3.96 (12)	3.96 (12)	3.94 (16)	4.50 (12)	4.49 (16)	4.49 (16)
		190	A142	3.83 (10)	3.82 (12)	3.80 (16)	4.40 (12)	4.38 (16)	4.38 (16)
		200	A142	3.70 (10)	3.70 (12)	3.70 (12)	4.30 (12)	4.28 (16)	4.28 (16)
		250	A193	3.19 (8)	3.19 (10)	3.19 (10)	3.89 (10)	3.88 (12)	3.88 (12)
None	120 minutes	190	A142	3.81 (12)	3.80 (16)	3.80 (16)	4.38 (16)	4.38 (16)	4.36 (20)
		200	A142	3.70 (12)	3.68 (16)	3.68 (16)	4.28 (16)	4.28 (16)	4.27 (20)
		250	A193	3.19 (10)	3.18 (12)	3.18 (12)	3.88 (12)	3.87 (16)	3.87 (16)

Spans are based on beam centres, with a 152mm flange width and a minimum end bearing of 50mm.

ComFlor® 100 normal weight concrete / using mesh / propped / British Standard

Propped deck, single or continuous slab (m) - Bar Fire Method - Beam width 152mm.

(Note: For Simple Mesh and Deck Fire Method load/span tables, please refer to the Technical Department.)

Props	Fire period	Slab depth (mm)	Mesh 0.1% min. reqd.	Total applied load (kN/m ²)					
				5.00	7.50	10.00	5.00	7.50	10.00
1 line	60 minutes	170	A142	6.30 (32)	5.84 (32)	5.24 (25)	6.52 (32)	5.98 (32)	5.36 (25)
		180	A142	6.19 (25)	6.05 (32)	5.44 (25)	6.80 (32)	6.28 (32)	5.76 (32)
		190	A142	6.04 (16)	5.97 (25)	5.63 (25)	7.02 (32)	6.54 (32)	6.15 (32)
		200	A142	5.87 (16)	5.83 (20)	5.81 (20)	7.18 (32)	6.71 (32)	6.41 (32)
		250	A193	5.06 (10)	5.04 (16)	5.04 (16)	6.98 (16)	6.90 (25)	6.90 (25)
1 line	90 minutes	180	A142	6.19 (25)	6.05 (32)	5.44 (25)	6.80 (32)	6.28 (32)	5.76 (32)
		190	A142	6.03 (20)	5.97 (25)	5.63 (25)	7.02 (32)	6.54 (32)	6.15 (32)
		200	A142	5.86 (16)	5.83 (20)	5.81 (20)	7.18 (32)	6.71 (32)	6.41 (32)
		250	A193	5.04 (16)	5.04 (16)	5.04 (16)	6.95 (20)	6.90 (25)	6.90 (25)
1 line	120 minutes	190	A142	6.03 (20)	5.97 (25)	5.63 (25)	7.02 (32)	6.54 (32)	6.15 (32)
		200	A142	5.83 (20)	5.78 (25)	5.77 (25)	7.18 (32)	6.71 (32)	6.41 (32)
		250	A193	5.04 (16)	5.01 (20)	5.01 (20)	6.90 (25)	6.90 (25)	6.80 (32)

Further help and advice

Tata Steel offers a comprehensive advisory service on the design of composite flooring, available free of charge to specifiers and designers.

Please contact the Technical Department reference the loading method for the current British Standard tables or any other technical queries not covered by this datasheet or by the ComFlor® 9 software on T: +44 (0) 1244 892199

Comprehensive ComFlor® 9 Software is also freely available to all professionals by registering at www.tatasteelconstruction.com/comflor

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