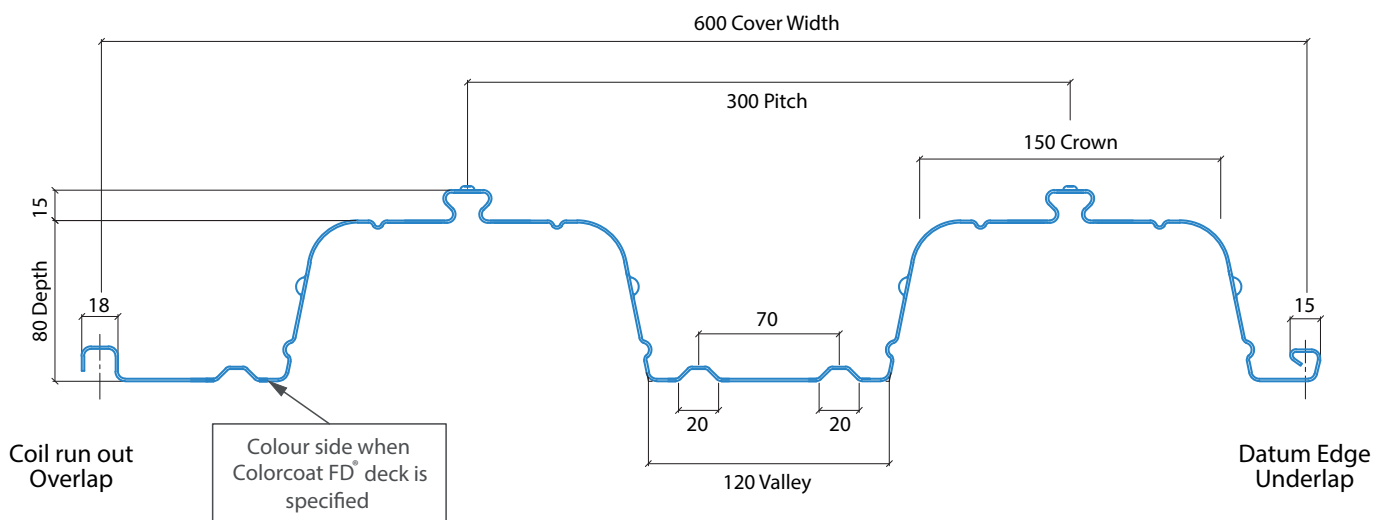


Load/span tables

ComFlor® 80 Profile - 0.90, 1.00 and 1.20mm steel 350N/mm²

ComFlor® 80 is the big sister to ComFlor® 60 with the same round shoulder combined profile technology applied to an 80 deep trapezoidal shape to give big spans. The use of this profile allows a designer to reduce still further the number of secondary beams in a building to give a cleaner lower cost structure. It allows central stud placement to ensure effective composite beam design and is 600mm cover to give lighter weight sheets in accordance with Health and Safety guidelines.



Note: all dimensions in mm

The quick reference load/span tables for ComFlor® 80 are intended as a guide for initial design. Detailed design can be carried out using the new ComFlor® 9 design software, which allows Eurocode or British Standard design.

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 Eurocode 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. The three typical load cases of

5.00, 7.50 or 10.00kN/m² have been given the imposed load categories of C, C and E, with their corresponding psi factors given in Table A1.1 of BS EN 1990:2002+A1.

Loading Combination (kN/m²)

Category	C	C	E
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® 80 normal weight concrete / using mesh / unpropped / Eurocode

Single span deck continuous slab (m) - Mesh and Deck Fire Method - Beam width 152mm

(Note: Single span deck single span slab is only permitted using Bar Fire Method.)

Props	Fire period	Slab depth (mm)	Mesh 0.2% min.reqd*	Total applied load (kN/m²)								
				5.00	7.50	10.00	5.00	7.50	10.00	5.00	7.50	10.00
				0.90mm			1.00mm			1.20mm		
None	60 minutes	140***	A142	3.71 (A193)	3.69 (A393)	3.29 (A393)	4.07 (A252)	4.06 (A393)	3.29 (A393)	4.34 (A252)	4.15 (A393)	3.31 (A393)
		150	A142	3.61 (A142)	3.60 (A252)	3.59 (2xA252)	3.96 (A193)	3.95 (A393)	3.94 (2xA252)	4.26 (A193)	4.25 (A393)	3.96 (2xA252)
		160	A193	3.51 (A193)	3.51 (A193)	3.50 (A393)	3.86 (A193)	3.86 (A252)	3.84 (2xA252)	4.18 (A193)	4.17 (A393)	4.17 (2xA252)
		170	A193	3.50 (A193)	3.50 (A193)	3.49 (A393)	3.77 (A193)	3.77 (A193)	3.76 (A393)	4.11 (A193)	4.11 (A252)	4.10 (2xA252)
		180	A252	3.45 (A252)	3.45 (A252)	3.45 (A252)	3.68 (A252)	3.68 (A252)	3.68 (A393)	4.04 (A252)	4.04 (A252)	4.04 (A393)
		190	A252	3.37 (A252)	3.37 (A252)	3.37 (A252)	3.60 (A252)	3.60 (A252)	3.60 (A252)	3.99 (A252)	3.99 (A252)	3.98 (A393)
200	A252	3.29 (A252)	3.29 (A252)	3.29 (A252)	3.53 (A252)	3.53 (A252)	3.53 (A252)	3.92 (A252)	3.92 (A252)	3.92 (A252)		
None	90 minutes	150	A142	3.59 (A393)	3.59 (2xA252)	2.89 (2xA252)	3.95 (A393)	3.65 (2xA252)	2.92 (2xA252)	4.25 (A393)	3.61 (2xA252)	2.97 (2xA252)
		160	A193	3.51 (A193)	3.50 (A393)	3.48 (2xA393)	3.85 (A393)	3.84 (2xA252)	3.83 (2xA393)	4.17 (A393)	4.17 (2xA252)	4.15 (2xA393)
		170	A193	3.50 (A193)	3.49 (A252)	3.48 (2xA252)	3.77 (A252)	3.76 (A393)	3.74 (2xA393)	4.10 (A393)	4.10 (2xA252)	4.08 (2xA393)
		180	A252	3.45 (A252)	3.45 (A252)	3.44 (A393)	3.68 (A252)	3.68 (A252)	3.67 (2xA252)	4.04 (A252)	4.04 (A393)	4.02 (2xA393)
		190	A252	3.37 (A252)	3.37 (A252)	3.36 (A393)	3.60 (A252)	3.60 (A252)	3.60 (A393)	3.99 (A252)	3.98 (A393)	3.98 (2xA252)
		200	A252	3.29 (A252)	3.29 (A252)	3.29 (A252)	3.53 (A252)	3.53 (A252)	3.52 (A393)	3.92 (A252)	3.92 (A252)	3.91 (A393)
None	120 minutes	160	A193	3.50 (A393)	3.48 (2xA393)	3.35 (2xA393)	3.85 (A393)	3.83 (2xA393)	3.34 (2xA393)	4.17 (2xA252)	4.15 (2xA393)	3.34 (2xA393)
		170	A193	3.50 (A193)	3.48 (2xA252)	3.47 (2xA393)	3.76 (A393)	3.75 (2xA252)	3.74 (2xA393)	4.10 (A393)	4.09 (2xA393)	4.08 (2xA393)
		180	A252	3.45 (A252)	3.45 (A252)	3.42 (2xA393)	3.68 (A252)	3.68 (A393)	3.66 (2xA393)	4.04 (A393)	4.03 (A252)	4.02 (2xA393)
		190	A252	3.37 (A252)	3.37 (A252)	3.36 (A393)	3.60 (A252)	3.60 (A252)	3.59 (2xA252)	3.99 (A252)	3.98 (A393)	3.96 (2xA393)
		200	A252	3.29 (A252)	3.29 (A252)	3.29 (A393)	3.53 (A252)	3.53 (A252)	3.52 (A393)	3.92 (A252)	3.92 (A252)	3.89 (2xA393)

Double span (m) - Mesh and Deck Fire Method - Beam width 152mm

Props	Fire period	Slab depth (mm)	Mesh 0.2% min.reqd*	Total applied load (kN/m²)								
				5.00	7.50	10.00	5.00	7.50	10.00	5.00	7.50	10.00
				0.90mm			1.00mm			1.20mm		
None	60 minutes	140***	A142	3.71 (A193)	3.69 (A393)	3.28 (A393)	4.19 (A393)	3.83 (A393)	3.28 (A393)	4.46 (A393)	3.85 (A393)	3.29 (A393)
		150	A142	3.56 (A142)	3.54 (A252)	3.47 (2xA252)	4.03 (A252)	4.02 (A393)	3.50 (2xA252)	4.64 (A393)	4.32 (2xA252)	3.57 (2xA252)
		160	A193	3.41 (A193)	3.41 (A193)	3.39 (A393)	3.88 (A193)	3.86 (A393)	3.82 (2xA393)	4.59 (A393)	4.57 (2xA393)	4.38 (2xA393)
		170	A193	3.28 (A193)	3.28 (A193)	3.27 (A252)	3.73 (A193)	3.73 (A252)	3.71 (A393)	4.54 (A252)	4.53 (A393)	4.48 (2xA393)
		180	A252	3.16 (A252)	3.16 (A252)	3.16 (A252)	3.59 (A252)	3.59 (A252)	3.58 (A393)	4.39 (A252)	4.38 (A393)	4.34 (2xA393)
		190	A252	3.05 (A252)	3.05 (A252)	3.05 (A252)	3.47 (A252)	3.47 (A252)	3.47 (A252)	4.25 (A252)	4.24 (A393)	4.23 (2xA252)
200	A252	2.95 (A252)	2.95 (A252)	2.95 (A252)	3.36 (A252)	3.36 (A252)	3.36 (A252)	4.12 (A252)	4.12 (A252)	4.11 (A393)		
None	90 minutes	150	A142	3.53 (A393)	3.31 (2xA252)	2.80 (2xA252)	3.96 (2xA252)	3.34 (2xA252)	2.83 (2xA252)	4.02 (2xA252)	3.41 (2xA252)	2.89 (2xA252)
		160	A193	3.41 (A193)	3.38 (2xA252)	3.35 (2xA393)	3.86 (A393)	3.82 (2xA393)	3.59 (2xA393)	4.57 (2xA393)	4.43 (2xA393)	3.62 (2xA393)
		170	A193	3.28 (A193)	3.27 (A252)	3.24 (2xA252)	3.73 (A193)	3.71 (A393)	3.68 (2xA393)	4.51 (2xA252)	4.48 (2xA393)	3.92 (2xA393)
		180	A252	3.16 (A252)	3.16 (A252)	3.15 (A393)	3.59 (A252)	3.59 (A252)	3.58 (A393)	4.38 (A393)	4.34 (2xA393)	4.08 (2xA393)
		190	A252	3.05 (A252)	3.05 (A252)	3.05 (A252)	3.47 (A252)	3.47 (A252)	3.46 (A393)	4.25 (A252)	4.24 (A393)	4.20 (2xA393)
		200	A252	2.95 (A252)	2.95 (A252)	2.95 (A252)	3.36 (A252)	3.36 (A252)	3.35 (A393)	4.12 (A252)	4.10 (A393)	4.07 (2xA393)
None	120 minutes	160	A193	3.40 (A252)	3.35 (2xA393)	3.12 (2xA393)	3.82 (2xA393)	3.75 (2xA393)	3.14 (2xA393)	4.54 (2xA393)	3.77 (2xA393)	3.17 (2xA393)
		170	A193	3.28 (A193)	3.27 (A252)	3.23 (2xA393)	3.73 (A252)	3.68 (2xA393)	3.46 (2xA393)	4.48 (2xA393)	4.21 (2xA393)	3.48 (2xA393)
		180	A252	3.16 (A252)	3.16 (A252)	3.15 (A393)	3.59 (A252)	3.58 (A393)	3.55 (2xA393)	4.36 (2xA252)	4.34 (2xA393)	3.76 (2xA393)
		190	A252	3.05 (A252)	3.05 (A252)	3.04 (A393)	3.47 (A252)	3.47 (A252)	3.46 (A393)	4.24 (A393)	4.20 (2xA393)	3.92 (2xA393)
		200	A252	2.95 (A252)	2.95 (A252)	2.95 (A252)	3.36 (A252)	3.36 (A252)	3.35 (A393)	4.12 (A252)	4.11 (A393)	4.04 (2xA393)

Multi span (m) - Mesh and Deck Fire Method - Beam width 152mm

Props	Fire period	Slab depth (mm)	Mesh 0.2% min.reqd*	Total applied load (kN/m²)								
				5.00	7.50	10.00	5.00	7.50	10.00	5.00	7.50	10.00
				0.90mm			1.00mm			1.20mm		
None	60 minutes	140***	A142	3.84 (A252)	3.83 (A393)	3.28 (A393)	4.22 (A393)	3.84 (A393)	3.28 (A393)	4.64 (A393)	3.85 (A393)	3.29 (A393)
		150	A142	3.69 (A193)	3.67 (A393)	3.52 (2xA252)	4.16 (A252)	4.15 (2xA252)	3.55 (2xA252)	4.73 (A393)	4.55 (2xA252)	3.62 (2xA252)
		160	A193	3.54 (A193)	3.53 (A252)	3.52 (A393)	4.02 (A193)	4.00 (A393)	3.96 (2xA393)	4.58 (A393)	4.57 (2xA252)	4.52 (2xA393)
		170	A193	3.40 (A193)	3.40 (A193)	3.39 (A393)	3.87 (A193)	3.87 (A252)	3.86 (A393)	4.46 (A193)	4.44 (A393)	4.41 (2xA393)
		180	A252	3.28 (A252)	3.28 (A252)	3.28 (A252)	3.73 (A252)	3.73 (A252)	3.72 (A393)	4.32 (A252)	4.31 (A393)	4.31 (2xA252)
		190	A252	3.17 (A252)	3.17 (A252)	3.17 (A252)	3.61 (A252)	3.61 (A252)	3.60 (A393)	4.30 (A252)	4.29 (A252)	4.28 (2xA252)
200	A252	3.06 (A252)	3.06 (A252)	3.06 (A252)	3.49 (A252)	3.49 (A252)	3.49 (A252)	4.26 (A252)	4.26 (A252)	4.25 (A393)		
None	90 minutes	150	A142	3.67 (A393)	3.35 (2xA252)	2.81 (2xA252)	4.05 (2xA252)	3.38 (2xA252)	2.84 (2xA252)	4.10 (2xA252)	3.44 (2xA252)	2.90 (2xA252)
		160	A193	3.54 (A193)	3.51 (2xA252)	3.49 (2xA393)	4.00 (A393)	3.96 (2xA393)	3.66 (2xA393)	4.57 (2xA252)	4.54 (2xA393)	3.68 (2xA393)
		170	A193	3.40 (A193)	3.40 (A252)	3.36 (2xA393)	3.87 (A252)	3.85 (2xA252)	3.82 (2xA393)	4.44 (2xA193)	4.41 (2xA393)	4.03 (2xA393)
		180	A252	3.28 (A252)	3.28 (A252)	3.27 (A393)	3.73 (A252)	3.72 (A393)	3.69 (2xA393)	4.31 (A393)	4.28 (2xA393)	4.24 (2xA393)
		190	A252	3.17 (A252)	3.17 (A252)	3.16 (A393)	3.61 (A252)	3.61 (A252)	3.60 (A393)	4.30 (A252)	4.29 (A393)	4.27 (2xA393)
		200	A252	3.06 (A252)	3.06 (A252)	3.06 (A252)	3.49 (A252)	3.49 (A252)	3.48 (A393)	4.26 (A252)	4.25 (A393)	4.22 (2xA393)
None	120 minutes	160	A193	3.51 (2xA252)	3.49 (2xA393)	3.16 (2xA393)	3.96 (2xA393)	3.84 (2xA393)	3.17 (A393)	4.54 (2xA393)	3.84 (2xA393)	3.20 (2xA393)
		170	A193	3.40 (A193)	3.38 (2xA252)	3.36 (2xA393)	3.85 (2xA252)	3.82 (2xA393)	3.52 (2xA393)	4.41 (2xA393)	4.41 (2xA393)	3.53 (2xA393)
		180	A252	3.28 (A252)	3.28 (A252)	3.24 (2xA393)	3.73 (A252)	3.71 (2xA252)	3.69 (2xA393)	4.31 (2xA252)	4.28 (2xA393)	3.86 (2xA393)
		190	A252	3.17 (A252)	3.17 (A252)	3.16 (A393)	3.61 (A252)	3.60 (A393)	3.57 (2xA393)	4.29 (A393)	4.27 (2xA393)	4.06 (2xA393)
		200	A252	3.06 (A252)	3.06 (A252)	3.06 (A393)	3.49 (A252)	3.49 (A252)	3.48 (A393)	4.25 (A393)	4.25 (A393)	4.22 (2xA393)

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

* In accordance with BS EN 1994-1-1 Clause 9.8.1 (2) - Where the continuous slabs are designed as simply-supported in accordance with 9.4.2 (5), the minimum cross-sectional area of anti-crack mesh reinforcement above the ribs should not be less than 0.2% of the cross-sectional area of concrete above the ribs for un-propped construction. In order to maximise the FIRE LIMIT STATE spans, increased mesh sizing is required as specified in the above Mesh and Deck Fire Method tables.

*** All mesh covers for all profile types and slab depths are taken as 30mm. However, due to mesh size restriction, the ComFlor® 80 140mm slab depth requires a mesh cover depth of 25mm.

ComFlor® 80 normal weight concrete / using mesh / unpropped / Eurocode

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

(Note: Single span deck with single span slab is only permitted using Bar Fire Method.)

Props	Fire period	Slab depth (mm)	Mesh 0.2% min. reqd.*	Total applied load (kN/m²)								
				5.00	7.50	10.00	5.00	7.50	10.00	5.00	7.50	10.00
None	60 minutes	140	A142	3.70 (8)	3.70 (10)	3.70 (12)	4.07 (10)	4.06 (12)	3.91 (16)	4.34 (10)	4.33 (12)	3.92 (16)
		150	A142	3.60 (8)	3.60 (10)	3.60 (12)	3.96 (10)	3.96 (10)	3.95 (12)	4.25 (10)	4.25 (12)	4.19 (16)
		160	A193	3.51 (8)	3.51 (8)	3.51 (10)	3.86 (8)	3.86 (10)	3.85 (12)	4.17 (10)	4.17 (10)	4.17 (12)
		170	A193	3.49 (8)	3.49 (8)	3.49 (10)	3.77 (8)	3.76 (10)	3.76 (10)	4.11 (8)	4.10 (10)	4.10 (12)
		180	A252	3.45 (8)	3.45 (8)	3.44 (10)	3.68 (8)	3.68 (8)	3.68 (10)	4.04 (8)	4.04 (10)	4.04 (12)
		190	A252	3.36 (8)	3.36 (8)	3.36 (8)	3.60 (8)	3.60 (8)	3.60 (10)	3.98 (8)	3.98 (8)	3.98 (10)
		200	A252	3.29 (8)	3.29 (8)	3.29 (8)	3.53 (8)	3.53 (8)	3.53 (8)	3.92 (8)	3.92 (8)	3.91 (10)
None	90 minutes	150	A142	3.60 (12)	3.59 (16)	3.59 (16)	3.94 (16)	3.94 (16)	3.93 (8)	4.24 (16)	4.24 (16)	4.18 (20)
		160	A193	3.51 (10)	3.49 (16)	3.49 (16)	3.85 (12)	3.84 (16)	3.84 (16)	4.16 (16)	4.16 (16)	4.15 (20)
		170	A193	3.49 (10)	3.49 (12)	3.48 (16)	3.76 (12)	3.75 (16)	3.75 (16)	4.10 (16)	4.10 (16)	4.09 (20)
		180	A252	3.45 (8)	3.44 (10)	3.43 (16)	3.68 (10)	3.67 (12)	3.67 (16)	4.04 (10)	4.03 (16)	4.03 (16)
		190	A252	3.36 (8)	3.36 (10)	3.36 (12)	3.60 (8)	3.60 (10)	3.59 (16)	3.98 (10)	3.97 (16)	3.97 (16)
		200	A252	3.29 (8)	3.29 (8)	3.28 (12)	3.53 (8)	3.52 (10)	3.52 (12)	3.91 (10)	3.91 (12)	3.90 (16)
None	120 minutes	160	A193	3.49 (20)	3.47 (25)	3.45 (32)	3.81 (25)	3.81 (25)	3.78 (32)	4.14 (25)	4.11 (32)	4.11 (32)
		170	A193	3.48 (16)	3.46 (25)	3.44 (32)	3.73 (20)	3.73 (25)	3.70 (32)	4.07 (25)	4.05 (32)	4.05 (32)
		180	A252	3.43 (16)	3.42 (20)	3.41 (25)	3.67 (16)	3.64 (25)	3.61 (32)	4.01 (25)	4.01 (25)	3.99 (32)
		190	A252	3.35 (16)	3.35 (16)	3.33 (25)	3.59 (16)	3.58 (20)	3.56 (25)	3.96 (20)	3.95 (25)	3.92 (32)
		200	A252	3.28 (12)	3.28 (16)	3.27 (20)	3.51 (16)	3.51 (20)	3.49 (25)	3.90 (16)	3.89 (20)	3.86 (32)

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

Props	Fire period	Slab depth (mm)	Mesh 0.2% min. reqd.*	Total applied load (kN/m²)								
				5.00	7.50	10.00	5.00	7.50	10.00	5.00	7.50	10.00
None	60 minutes	140	A142	3.70 (10)	3.70 (10)	3.69 (12)	4.21 (10)	4.20 (12)	4.03 (16)	4.82 (12)	4.80 (16)	4.01 (16)
		150	A142	3.55 (8)	3.54 (10)	3.54 (12)	4.03 (10)	4.02 (12)	4.01 (16)	4.65 (12)	4.63 (16)	4.34 (16)
		160	A193	3.40 (8)	3.40 (8)	3.40 (10)	3.87 (8)	3.86 (10)	3.86 (12)	4.60 (10)	4.59 (12)	4.58 (16)
		170	A193	3.27 (8)	3.27 (8)	3.27 (10)	3.72 (8)	3.72 (10)	3.71 (12)	4.53 (10)	4.53 (12)	4.51 (16)
		180	A252	3.15 (8)	3.15 (8)	3.15 (8)	3.59 (8)	3.59 (8)	3.58 (10)	4.38 (8)	4.38 (10)	4.37 (12)
		190	A252	3.04 (8)	3.04 (8)	3.04 (8)	3.47 (8)	3.47 (8)	3.46 (10)	4.24 (8)	4.24 (10)	4.23 (12)
		200	A252	2.95 (8)	2.95 (8)	2.95 (8)	3.36 (8)	3.36 (8)	3.36 (8)	4.11 (8)	4.11 (10)	4.10 (12)
None	90 minutes	150	A142	3.54 (12)	3.52 (16)	3.52 (16)	4.01 (16)	4.01 (16)	3.99 (20)	4.63 (16)	4.61 (20)	4.33 (20)
		160	A193	3.40 (10)	3.38 (16)	3.38 (16)	3.85 (12)	3.84 (16)	3.82 (20)	4.58 (16)	4.57 (20)	4.57 (20)
		170	A193	3.27 (8)	3.27 (10)	3.25 (16)	3.72 (10)	3.70 (16)	3.70 (16)	4.51 (16)	4.49 (20)	4.49 (20)
		180	A252	3.15 (8)	3.15 (10)	3.14 (12)	3.58 (10)	3.58 (12)	3.57 (16)	4.36 (16)	4.36 (16)	4.34 (20)
		190	A252	3.04 (8)	3.04 (8)	3.04 (10)	3.47 (8)	3.46 (10)	3.46 (12)	4.23 (12)	4.22 (16)	4.20 (20)
		200	A252	2.95 (8)	2.95 (8)	2.94 (10)	3.36 (8)	3.35 (10)	3.35 (12)	4.11 (10)	4.10 (12)	4.09 (16)
None	120 minutes	160	A193	3.36 (20)	3.33 (25)	3.28 (32)	3.79 (25)	3.74 (32)	3.74 (32)	4.52 (32)	4.52 (32)	4.01 (32)
		170	A193	3.25 (16)	3.21 (25)	3.21 (25)	3.65 (25)	3.65 (25)	3.61 (32)	4.41 (25)	4.40 (32)	4.15 (32)
		180	A252	3.14 (12)	3.13 (16)	3.11 (20)	3.57 (16)	3.55 (20)	3.48 (32)	4.31 (25)	4.26 (32)	4.26 (32)
		190	A252	3.04 (10)	3.03 (16)	3.01 (20)	3.45 (16)	3.43 (20)	3.41 (25)	4.20 (20)	4.13 (32)	4.13 (32)
		200	A252	2.94 (10)	2.94 (12)	2.93 (16)	3.35 (12)	3.34 (16)	3.33 (20)	4.07 (20)	4.05 (25)	4.00 (32)

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

Props	Fire period	Slab depth (mm)	Mesh 0.2% min. reqd.*	Total applied load (kN/m²)								
				5.00	7.50	10.00	5.00	7.50	10.00	5.00	7.50	10.00
None	60 minutes	140	A142	3.84 (10)	3.84 (12)	3.82 (16)	4.23 (10)	4.23 (12)	4.03 (16)	4.90 (12)	4.86 (20)	4.01 (16)
		150	A142	3.69 (8)	3.68 (10)	3.67 (12)	4.17 (10)	4.17 (12)	4.15 (16)	4.73 (12)	4.72 (16)	4.34 (16)
		160	A193	3.53 (8)	3.53 (8)	3.52 (10)	4.01 (8)	4.01 (10)	4.00 (12)	4.59 (10)	4.58 (12)	4.53 (16)
		170	A193	3.40 (8)	3.40 (8)	3.39 (10)	3.87 (8)	3.86 (10)	3.86 (12)	4.45 (10)	4.44 (12)	4.43 (16)
		180	A252	3.27 (8)	3.27 (8)	3.27 (8)	3.73 (8)	3.73 (8)	3.72 (10)	4.32 (8)	4.32 (10)	4.31 (12)
		190	A252	3.16 (8)	3.16 (8)	3.16 (8)	3.60 (8)	3.60 (8)	3.60 (10)	4.29 (8)	4.29 (10)	4.29 (12)
		200	A252	3.06 (8)	3.06 (8)	3.06 (8)	3.49 (8)	3.49 (8)	3.49 (8)	4.26 (8)	4.25 (10)	4.25 (12)
None	90 minutes	150	A142	3.67 (12)	3.66 (16)	3.64 (20)	4.15 (16)	4.15 (16)	4.13 (20)	4.72 (16)	4.70 (20)	4.33 (20)
		160	A193	3.53 (10)	3.51 (16)	3.51 (16)	3.99 (16)	3.99 (16)	3.97 (20)	4.57 (16)	4.55 (20)	4.52 (20)
		170	A193	3.39 (10)	3.39 (12)	3.38 (16)	3.86 (12)	3.84 (16)	3.84 (16)	4.43 (16)	4.43 (16)	4.42 (20)
		180	A252	3.27 (8)	3.27 (10)	3.26 (12)	3.72 (10)	3.72 (12)	3.71 (16)	4.30 (16)	4.30 (16)	4.29 (20)
		190	A252	3.16 (8)	3.16 (8)	3.16 (10)	3.60 (8)	3.60 (10)	3.58 (16)	4.29 (12)	4.28 (16)	4.27 (20)
		200	A252	3.06 (8)	3.06 (8)	3.06 (10)	3.49 (8)	3.48 (10)	3.48 (12)	4.25 (12)	4.24 (16)	4.24 (16)
None	120 minutes	160	A193	3.49 (20)	3.47 (25)	3.43 (32)	3.94 (25)	3.90 (32)	3.90 (32)	4.48 (32)	4.48 (32)	4.04 (32)
		170	A193	3.38 (16)	3.34 (25)	3.34 (25)	3.80 (25)	3.80 (25)	3.76 (32)	4.39 (25)	4.35 (32)	4.19 (32)
		180	A252	3.25 (16)	3.25 (16)	3.22 (25)	3.70 (16)	3.67 (25)	3.63 (32)	4.27 (25)	4.24 (32)	4.24 (32)
		190	A252	3.15 (12)	3.14 (16)	3.13 (20)	3.58 (16)	3.57 (20)	3.55 (25)	4.26 (25)	4.23 (32)	4.23 (32)
		200	A252	3.06 (10)	3.04 (16)	3.03 (20)	3.47 (16)	3.46 (20)	3.44 (25)	4.22 (20)	4.20 (25)	4.16 (32)

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

* In accordance with BS EN 1994-1-1 Clause 9.8.1 (2) - Where the continuous slabs are designed as simply-supported in accordance with 9.4.2 (5), the minimum cross-sectional area of anti-crack mesh reinforcement above the ribs should not be less than 0.2% of the cross-sectional area of concrete above the ribs for un-propped construction. In order to maximise the FIRE LIMIT STATE spans, increased mesh sizing is required as specified in the above Bar Fire Method tables.

ComFlor® 80 normal weight concrete / using mesh / propped / Eurocode

Single Span propped deck, continuous slab (m) - Mesh and Deck Fire Method - Beam width 152mm.

(Note: Single span deck single span slab is only permitted using Bar Fire Method.)

Props	Fire period	Slab depth (mm)	Mesh 0.4% min. reqd**	Total applied load (kN/m ²)								
				5.00	7.50	10.00	5.00	7.50	10.00	5.00	7.50	10.00
1 line	60 minutes	140***	A252	0.90mm			1.00mm			1.20mm		
		150	A393	4.43 (A393)	3.83 (A393)	3.28 (A393)	4.44 (A393)	3.84 (A393)	3.29 (A393)	4.43 (A393)	3.84 (A393)	3.29 (A393)
		160	A393	4.61 (A393)	4.01 (A393)	3.45 (A393)	4.64 (A393)	4.03 (A393)	3.46 (A393)	4.63 (A393)	4.03 (A393)	3.46 (A393)
		170	A393	4.93 (2xA393)	4.46 (2xA393)	3.85 (2xA393)	4.99 (2xA393)	4.51 (2xA393)	3.89 (2xA393)	5.11 (2xA393)	4.58 (2xA393)	3.96 (2xA393)
		180	2xA252	4.97 (2xA252)	4.56 (2xA252)	3.94 (2xA393)	5.20 (2xA252)	4.60 (2xA393)	3.98 (2xA393)	5.32 (2xA393)	4.68 (2xA393)	4.05 (2xA393)
		200	2xA252	4.79 (2xA252)	4.76 (2xA393)	4.23 (2xA393)	5.37 (2xA252)	4.88 (2xA393)	4.24 (2xA393)	5.53 (2xA393)	4.90 (2xA393)	4.25 (2xA393)
1 line	90 minutes	150	A393	3.66 (2xA252)	3.19 (2xA252)	2.74 (2xA252)	3.70 (2xA252)	3.22 (2xA252)	2.77 (2xA252)	3.79 (2xA252)	3.30 (2xA252)	2.84 (2xA252)
		160	A393	4.44 (2xA393)	3.89 (2xA393)	3.35 (2xA393)	4.48 (2xA393)	3.92 (2xA393)	3.38 (2xA393)	4.55 (2xA393)	3.98 (2xA393)	3.43 (2xA393)
		170	A393	4.67 (2xA393)	4.10 (2xA393)	3.55 (2xA393)	4.71 (2xA393)	4.13 (2xA393)	3.58 (2xA393)	4.77 (2xA393)	4.19 (2xA393)	3.63 (2xA393)
		180	2xA252	4.75 (2xA393)	4.09 (2xA393)	3.64 (2xA393)	4.79 (2xA393)	4.22 (2xA393)	3.66 (2xA393)	4.85 (2xA393)	4.28 (2xA393)	3.72 (2xA393)
		190	2xA252	4.62 (2xA252)	4.25 (2xA393)	3.70 (2xA393)	4.84 (2xA393)	4.28 (2xA393)	3.73 (2xA393)	4.91 (2xA393)	4.35 (2xA393)	3.79 (2xA393)
		200	2xA252	4.47 (2xA252)	4.47 (2xA252)	3.97 (2xA252)	5.14 (2xA252)	4.58 (2xA252)	4.00 (2xA252)	5.23 (2xA252)	4.64 (2xA252)	4.05 (2xA252)
1 line	120 minutes	160	A393	3.98 (2xA393)	3.48 (2xA393)	3.01 (2xA393)	4.01 (2xA393)	3.51 (2xA393)	3.03 (2xA393)	4.07 (2xA393)	3.56 (2xA393)	3.07 (2xA393)
		170	A393	4.27 (2xA393)	3.75 (2xA393)	3.25 (2xA393)	4.30 (2xA393)	3.77 (2xA393)	3.27 (2xA393)	4.35 (2xA393)	3.82 (2xA393)	3.31 (2xA393)
		180	2xA252	4.49 (2xA393)	3.96 (2xA393)	3.44 (2xA393)	4.52 (2xA393)	3.98 (2xA393)	3.46 (2xA393)	4.57 (2xA393)	4.03 (2xA393)	3.50 (2xA393)
		190	2xA252	4.59 (2xA393)	4.05 (2xA393)	3.53 (2xA393)	4.61 (2xA393)	4.08 (2xA393)	3.55 (2xA393)	4.66 (2xA393)	4.12 (2xA393)	3.59 (2xA393)
		200	2xA252	4.47 (2xA252)	4.18 (2xA252)	3.65 (2xA252)	4.70 (2xA252)	4.17 (2xA252)	3.64 (2xA252)	4.71 (2xA393)	4.18 (2xA393)	3.65 (2xA393)

ComFlor® 80 normal weight concrete / using mesh / propped / Eurocode

Single Span propped deck, continuous slab (m) - Bar Fire Method - Beam width 152mm.

(Note: Single span deck single span slab is only permitted using Bar Fire Method.)

Props	Fire period	Slab depth (mm)	Mesh 0.4% min. reqd.**	Total applied load (kN/m ²)								
				5.00	7.50	10.00	5.00	7.50	10.00	5.00	7.50	10.00
1 line	60 minutes	140***	A252	0.90mm			1.00mm			1.20mm		
		150	A393	5.17 (32)	4.80 (32)	4.02 (16)	5.19 (32)	4.82 (32)	4.02 (16)	5.24 (32)	4.86 (32)	4.01 (16)
		160	A393	5.25 (25)	5.06 (32)	4.35 (16)	5.45 (32)	5.08 (32)	4.34 (16)	5.50 (32)	5.12 (32)	4.33 (16)
		170	A393	5.15 (16)	5.08 (25)	4.65 (20)	5.72 (32)	5.34 (32)	4.65 (20)	5.76 (32)	5.38 (32)	4.64 (16)
		180	A393	4.97 (10)	4.95 (16)	4.92 (32)	5.62 (20)	5.56 (32)	4.95 (20)	6.02 (32)	5.63 (32)	4.94 (20)
		200	2xA252	4.78 (8)	4.77 (10)	4.75 (16)	5.49 (12)	5.45 (20)	5.22 (25)	6.26 (32)	5.87 (32)	5.23 (20)
1 line	90 minutes	150	A393	4.61 (8)	4.61 (10)	4.59 (16)	5.30 (10)	5.28 (16)	5.27 (16)	6.45 (32)	6.12 (32)	5.49 (25)
		160	2xA252	4.46 (8)	4.46 (8)	4.45 (12)	5.13 (10)	5.12 (12)	5.11 (16)	6.35 (20)	6.25 (32)	5.77 (25)
		150	A393	5.25 (25)	5.06 (32)	4.32 (25)	5.45 (32)	5.08 (32)	4.31 (25)	5.50 (32)	5.12 (32)	4.30 (25)
		160	A393	5.12 (20)	5.08 (25)	4.64 (25)	5.72 (32)	5.34 (32)	4.63 (25)	5.76 (32)	5.38 (32)	4.62 (25)
		170	A393	4.93 (20)	4.92 (20)	4.89 (25)	5.63 (25)	5.56 (32)	4.94 (25)	6.02 (32)	5.63 (32)	4.92 (25)
		180	2xA252	4.75 (16)	4.73 (20)	4.70 (25)	5.45 (20)	5.41 (25)	5.22 (25)	6.26 (32)	5.87 (32)	5.21 (25)
1 line	120 minutes	190	2xA252	4.60 (12)	4.57 (20)	4.57 (20)	5.26 (20)	5.26 (20)	5.22 (25)	6.45 (32)	6.12 (32)	5.49 (25)
		200	2xA252	4.45 (10)	4.43 (20)	4.42 (20)	5.11 (16)	5.09 (20)	5.05 (25)	6.35 (20)	6.25 (32)	5.77 (25)
		160	A393	5.02 (32)	4.51 (32)	3.90 (32)	5.14 (32)	4.51 (32)	3.90 (32)	5.15 (32)	4.50 (32)	3.90 (32)
		170	A393	4.83 (32)	4.65 (32)	4.03 (32)	5.28 (32)	4.65 (32)	4.03 (32)	5.29 (32)	4.64 (32)	4.03 (32)
		180	2xA252	4.64 (32)	4.64 (32)	4.13 (32)	5.35 (32)	4.74 (32)	4.13 (32)	5.38 (32)	4.74 (32)	4.12 (32)

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

** In accordance with BS EN 1994-1-1 Clause 9.8.1 (2) - Where the continuous slabs are designed as simply-supported in accordance with 9.4.2 (5), the minimum cross-sectional area of anti-crack mesh reinforcement above the ribs should not be less than 0.4% of the cross-sectional area of concrete above the ribs for propped construction. In order to maximise the FIRE LIMIT STATE spans, increased mesh sizing is required as specified in the above Mesh and Deck Fire Method and Bar Fire Method tables.

*** All mesh covers for all profile types and slab depths are taken as 30mm. However, due to mesh size restriction, the ComFlor® 80 140mm slab depth requires a mesh cover depth of 25mm.

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

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