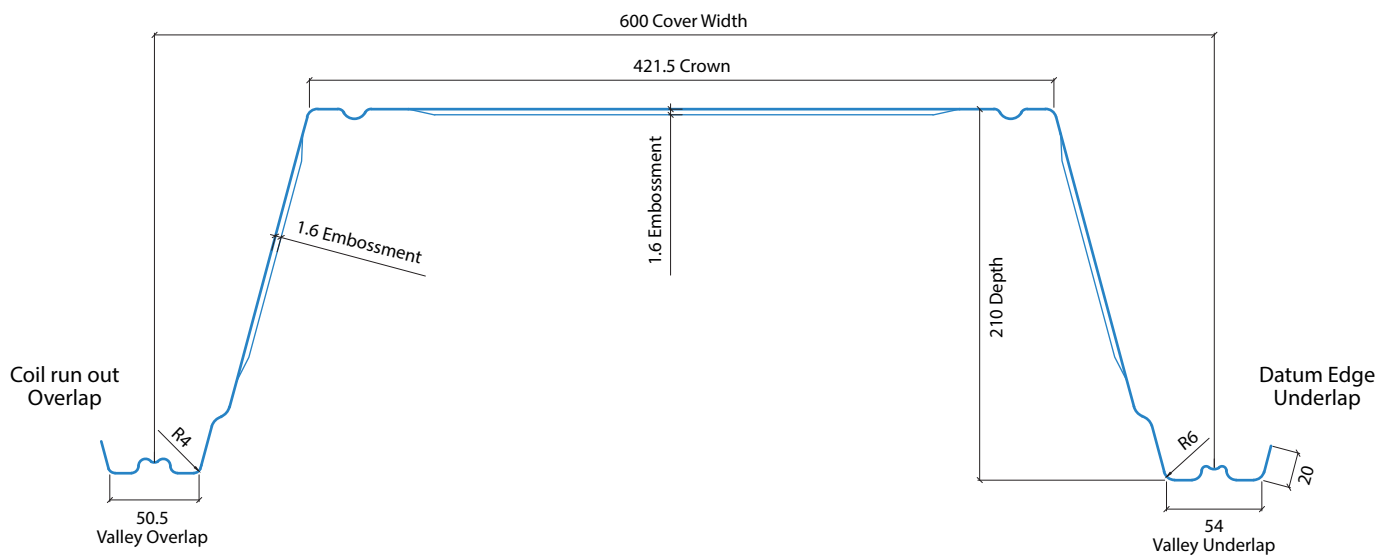


Load/span tables

ComFlor® 210 Profile - 1.25mm steel 350N/mm²

ComFlor® 210 is the original deep composite profile introduced for the first Slimflor systems with wider lower flange steel beams that allow the deck to land on the bottom not the top flange. Cross stiffener technology and the deep profile shape provides a very efficient metal deck and composite slab, with a low usage of concrete. Although it's especially suited to bear on the extended lower flange of a steel beam, it can also be used on the top flange of a non-composite steel or concrete beam. The nestable profile shape gives low transport and handling costs.



Note: all dimensions in mm

The quick reference load/span tables for ComFlor® 210 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, 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® 210 normal weight concrete – using mesh / unpropped / British Standard

Single span deck, single or continuous slab (m) - Bar Fire Method - Beam width 400mm.
Profile span type within ComFlor® 9 - Simple.

Props	Fire period	Slab depth (mm)	Mesh 0.1% min.reqd.	Total applied load (kN/m ²)		
				5.00	7.50	10.00
None	60 minutes	280	A142	5.65 (16)	5.64 (20)	5.64 (20)
		290	A142	5.52 (16)	5.51 (20)	5.51 (20)
		300	A142	5.40 (16)	5.39 (20)	5.39 (20)
		310	A142	5.29 (16)	5.29 (16)	5.28 (20)
		320	A193	5.18 (16)	5.18 (16)	5.17 (20)
		330	A193	5.08 (16)	5.08 (16)	5.07 (20)
		340	A193	4.99 (16)	4.99 (16)	4.99 (16)
		350	A193	4.90 (16)	4.90 (16)	4.90 (16)
		375	A252	4.71 (12)	4.70 (16)	4.70 (16)
		400	A252	4.53 (12)	4.53 (16)	4.53 (16)
None	90 minutes	290	A142	5.51 (20)	5.51 (20)	5.50 (25)
		300	A142	5.39 (20)	5.39 (20)	5.38 (25)
		310	A142	5.28 (20)	5.28 (20)	5.27 (25)
		320	A193	5.18 (16)	5.17 (20)	5.17 (20)
		330	A193	5.08 (16)	5.07 (20)	5.07 (20)
		340	A193	4.99 (16)	4.98 (20)	4.98 (20)
		350	A193	4.90 (16)	4.90 (20)	4.90 (20)
		375	A252	4.70 (16)	4.70 (16)	4.70 (20)
		400	A252	4.53 (16)	4.53 (16)	4.53 (16)
		None	120 minutes	300	A142	5.39 (20)
310	A142			5.28 (20)	5.27 (25)	5.27 (25)
320	A193			5.17 (20)	5.16 (25)	5.16 (25)
330	A193			5.07 (20)	5.06 (25)	5.06 (25)
340	A193			4.98 (20)	4.98 (20)	4.97 (25)
350	A193			4.90 (20)	4.90 (20)	4.89 (25)
375	A252			4.70 (16)	4.70 (20)	4.70 (20)
400	A252			4.53 (16)	4.52 (20)	4.52 (20)

ComFlor® 210 normal weight concrete – using mesh / propped / British Standard

Single span deck, single or continuous slab (m) - Bar Fire Method - Beam width 400mm.
Profile span type within ComFlor® 9 - Simple.

Props	Fire period	Slab depth (mm)	Mesh 0.1% min.reqd.	Total applied load (kN/m ²)		
				5.00	7.50	10.00
1 Line	60 minutes	280	A142	7.47 (25)	7.24 (32)	6.49 (25)
		290	A142	7.20 (20)	7.11 (32)	6.62 (25)
		300	A142	6.93 (20)	6.88 (25)	6.74 (25)
		310	A142	6.67 (20)	6.67 (20)	6.64 (25)
		320	A193	6.43 (20)	6.42 (20)	6.40 (25)
		330	A193	6.22 (16)	6.21 (20)	6.20 (20)
		340	A193	6.03 (16)	6.01 (20)	6.01 (20)
		350	A193	5.84 (16)	5.83 (20)	5.82 (20)
		375	A252	5.42 (16)	5.41 (16)	5.41 (20)
		400	A252	5.06 (16)	5.06 (16)	5.06 (16)
1 Line	90 minutes	290	A142	7.17 (25)	7.11 (32)	6.61 (32)
		300	A142	6.90 (25)	6.90 (25)	6.73 (32)
		310	A142	6.64 (25)	6.64 (25)	6.60 (32)
		320	A193	6.43 (20)	6.40 (25)	6.40 (25)
		330	A193	6.21 (20)	6.19 (25)	6.19 (25)
		340	A193	6.01 (20)	5.99 (25)	5.99 (25)
		350	A193	5.83 (20)	5.83 (20)	5.81 (25)
		375	A252	5.42 (16)	5.41 (20)	5.41 (20)
		400	A252	5.06 (16)	5.06 (16)	5.05 (20)
		1 Line	120 minutes	300	A142	6.84 (32)
310	A142			6.64 (25)	6.60 (32)	6.60 (32)
320	A193			6.40 (25)	6.36 (32)	6.36 (32)
330	A193			6.19 (25)	6.18 (25)	6.15 (32)
340	A193			5.99 (25)	5.99 (25)	5.95 (32)
350	A193			5.83 (20)	5.81 (25)	5.81 (25)
375	A252			5.41 (20)	5.39 (25)	5.39 (25)
400	A252			5.05 (20)	5.05 (20)	5.05 (20)

Spans are based on beam centres, with a 400mm bottom flange width and a minimum end bearing of 50mm.

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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