

MetFloor® 80

The ultimate in lightweight steel decking for all multi-rise buildings

With the launch of the entire CMF MetFloor® range, composite flooring solutions just got better.

MetFloor® 80 has exceptional spanning capabilities and reduced concrete usage.

The result - a highly cost-effective, attractive, and easy-to-install floor solution. Its highly developed product range has been created with over 30 years experience in the composite metal flooring market.

MetFloor® 80 also provides great acoustic performance – it is engineered with optional closed ends – and excellent fire protection, with no need for filler blocks. The profile is designed with trough stiffeners and side laps positioned to

guarantee centrally placed shear studs. And with a cover width at just 600mm, the lightweight, easy-to-handle MetFloor® 80 sheets ensure safer on-site working conditions.

- **Long-span capability**

The smarter profile designs of MetFloor® 80 delivers exceptional unpropped spanning capability, helping to reduce structural steel requirements and costs

- **Less concrete usage**

As it needs less concrete volume for any slab depth, MetFloor® 80 delivers a more sustainable solution and helps reduce costs too

- **Enhanced shear-stud interaction**

Enhanced design profile guarantees central shear-stud positioning to optimise composite action, so reducing the need for on-site checking

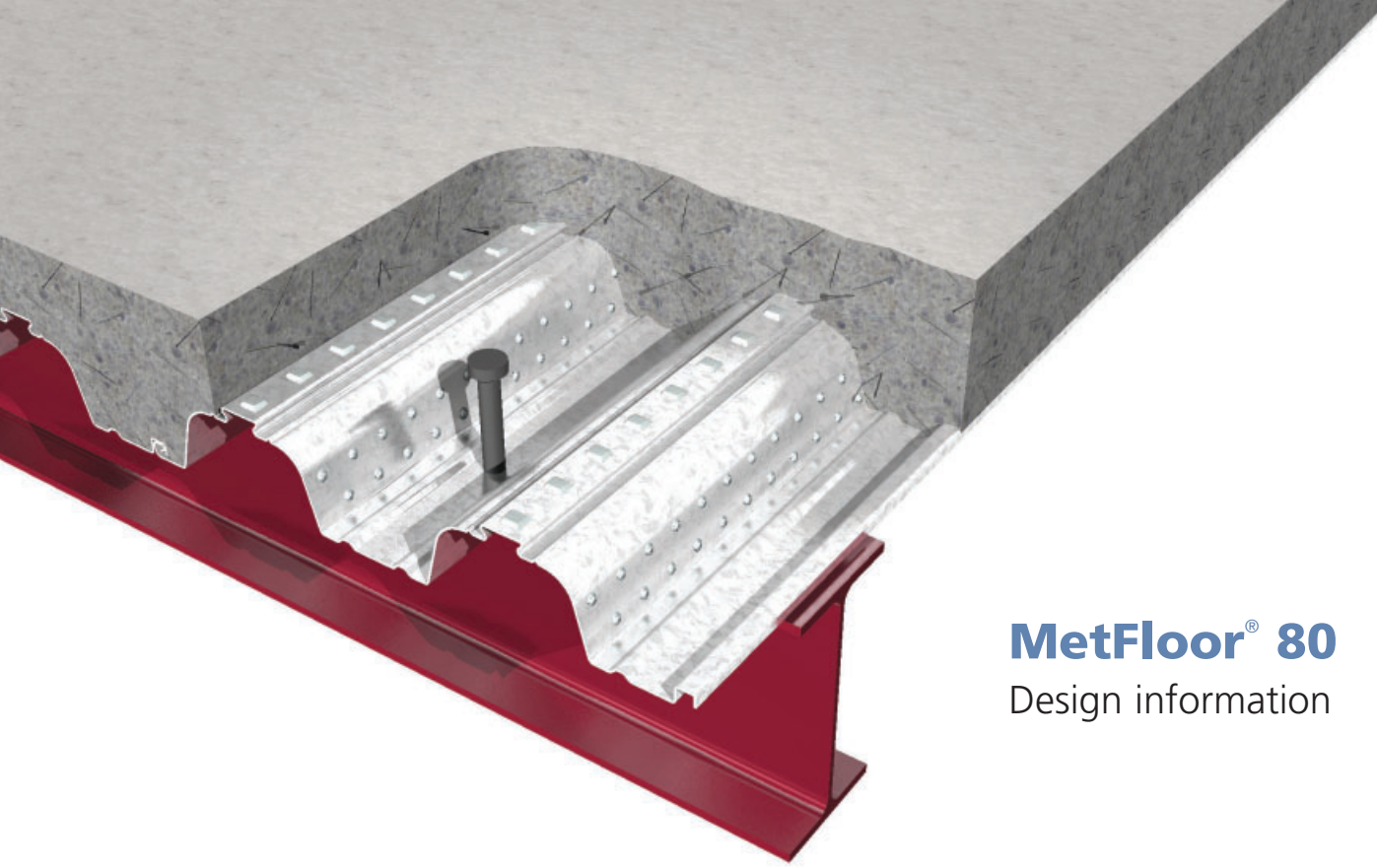
- **Excellent acoustic and fire performance**

Manufactured with closed ends to give exceptional fire protection and acoustic performance, while simplifying installation

- **Safer manual handling**

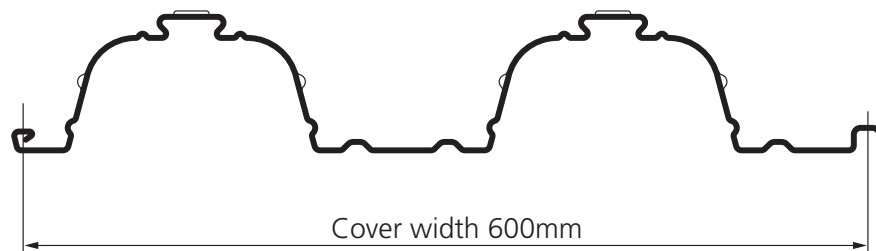
With a cover width of 600mm sheets are lightweight, making them safer and easier to handle





MetFloor® 80

Design information



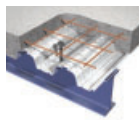
MetFloor® 80 Composite Slab - volume & weight

Slab Depth (mm)	Concrete volume (m ³ /m ²)	Weight of Concrete (kN/m ²)	
		Normal weight Concrete Wet	Dry
140	0.096	2.28	2.24
150	0.106	2.52	2.47
160	0.116	2.75	2.7
170	0.126	2.99	2.93
180	0.136	3.23	3.16
190	0.146	3.46	3.39
200	0.156	3.69	3.62
250	0.206	4.87	4.77

**Volume & weight
table notes**

1. Beam and deck deflections are not included in the above table
2. Deck and mesh weights are not included in the above table.
3. Concrete densities are:
NWC (wet) 2400kg/m³
NWC (dry) 2350kg/m³





MetFloor® 80 - Span table - normal weight concrete using mesh

MAXIMUM SPAN (m) with no additional reinforcements Deck Thickness (mm)												
Props	Span**	Fire Rating	Slab Depth (mm)	Mesh	Total Applied Load (kN/m²)							
					0.9			1			1.2	
					3.5	5.0	10.0	3.5	5.0	10.0	3.5	5.0
No Temporary props	Single Span	1 hr	140	A393	4.1a	4.1a	2.8m	4.2i	4.2i	2.9m	4.3i	4.3i
		1.5 hr	180	A393	3.8a	3.8a	2.8m	4.0i	4.0i	2.8m	4.1i	4.1i
		2 hr	180	A393	3.7a	3.7a	2.6m	4.0i	4.0i	2.6m	4.1i	4.1i
	Double Span	1 hr	140	A252	4.5e	4.3m	3.3m	4.6m	4.6m	3.3m	5.1m	4.7m
		1.5 hr	160	A252	4.4e	4.4e	3.5m	4.6e	4.6e	3.5m	5.1e	5.1m
		2 hr	190	A393	4.4e	4.4e	3.7m	4.5e	4.5e	3.8m	5.1e	5.1e
Props at Mid-Span Only	Double Span	1 hr	140	A393	5.2m	4.7m	3.4g	5.2m	4.7m	3.5g	5.2m	4.7m
		1.5 hr	160	A393	5.1m	4.6m	3.5m	5.1m	4.6m	3.6m	5.2m	4.7m
		2 hr	190	A393	5.0m	4.5m	3.5m	5.0m	4.5m	3.5m	5.0m	4.5m

Please refer to page 28 for full information on span tables.

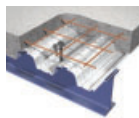
**In all cases the slab is designed as simply supported

Design Criteria

- a: Deck bending resistance check
- e: Interaction of bending moment and web crushing
- g: Shear bond resistance check
- i: Construction stage deflection
- k: Total load deflection check
- m: Fire design

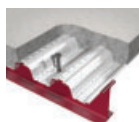
Notes:

- 1 Beam deflections are not included in the above table
- 2 Deck and mesh weights are not included in the above table.
- 3 Concrete densities are:
NWC (wet) 2400kg/m³
NWC (dry) 2350kg/m³
LWC (wet) 1900kg/m³
LWC (dry) 1800kg/m³



MetFloor® 80 - Span table - lightweight concrete using mesh

MAXIMUM SPAN (m) with no additional reinforcements Deck Thickness (mm)												
Props	Span**	Fire Rating	Slab Depth (mm)	Mesh	Total Applied Load (kN/m²)							
					0.9			1			1.2	
					3.5	5.0	10.0	3.5	5.0	10.0	3.5	5.0
No Temporary props	Single Span	1 hr	140	A393	4.3a	4.3a	2.9m	4.4i	4.4i	2.9m	4.6i	4.6i
		1.5 hr	180	A393	4.0a	4.0a	2.8m	4.2i	4.2i	2.8m	4.3i	4.3i
		2 hr	180	A393	4.0a	3.9m	2.4m	4.0m	3.7m	2.4m	4.0m	3.6m
	Double Span	1 hr	140	A252	4.8e	4.8e	3.5m	5.1e	4.8m	3.5m	5.5j	5.0m
		1.5 hr	160	A252	4.6e	4.6e	3.5m	4.9e	4.9e	3.6m	5.5i	5.2m
		2 hr	190	A393	4.6e	4.6e	3.8m	4.9e	4.9e	3.9m	5.5e	5.5e
Props at Mid-Span Only	Double Span	1 hr	140	A393	5.2k	4.8k	3.8m	5.2k	4.8k	3.8m	5.3k	4.8k
		1.5 hr	160	A393	5.4m	4.9m	3.9m	5.4m	4.9m	3.9m	5.4m	4.9m
		2 hr	190	A393	5.2m	4.8m	3.8m	5.2m	4.8m	3.8m	5.2m	4.8m



MetFloor® 80 - Span table - Using Grade 350 Steel - Normal Weight Concrete using Fibredeck

MAXIMUM SPAN (m) with no additional reinforcements Deck Thickness (mm)												
Props	Span**	Fire Rating	Slab Depth (mm)	Fibredeck (Dossage)	Total Applied Load (kN/m²)							
					0.9			1			1.2	
					3.5	5.0	10.0	3.5	5.0	10.0	3.5	5.0
No Temporary props	Single Span	1 hr	130	25	4.0m	3.6m	2.9m	4.1m	3.7m	3.0m	4.4i	4.1m
		1.5 hr	160	30	3.6m	3.3m	2.7m	3.7m	3.4m	2.8m	3.9m	3.6m
		2 hr	180	35	3.5m	3.3m	2.6m	3.6m	3.4m	2.7m	3.9m	3.5m
	Double Span	1 hr	130	25	4.3m	3.9m	3.1m	4.5m	4.1m	3.2m	4.8m	4.4m
		1.5 hr	150	30	4.4e	4.2m	3.3m	4.5e	4.3m	3.4m	5.0m	4.6m
		2 hr	180	35	3.7m	3.3m	2.5m	3.8m	3.4m	2.6m	4.0m	3.6m
Props at Mid-Span Only	Double Span	1 hr	130	25	4.4m	4.0m	3.1m	4.5m	4.1m	3.2m	4.9m	4.4m
		1.5 hr	160	30	3.7m	3.3m	2.5m	3.8m	3.4m	2.6m	4.0m	3.6m
		2 hr	180	35	4.0m	3.6m	2.7m	4.1m	3.7m	2.8m	4.3m	3.9m



