

PRODUCT DESCRIPTION & FEATURES

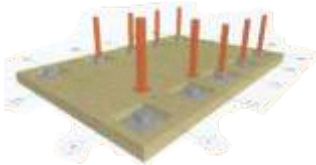
SAFDECK is MRM's brand of trapezoidal profiled, coated steel structural decking sheets that are used as a structural base layer for Multi-Storey Steel Buildings. SAFDECK is fitted on to secondary steel beams using self-drilling screws to form a diaphragm onto which light concrete works are cast. Their structural design and heavy gauge allows for large spans between supports. This fixing helps to brace the building while making significant savings on material costs by reducing the structural steelwork needed and minimizing associated labour costs.

Features and Benefits:

- Faster construction by up to half that of concrete framed buildings
- Longer spans and fewer columns possible with a lighter structure
- Lighter building loads result in reduced foundation costs
- No internal props/ shuttering required during construction
- Shallower beam and slab heights can result in reduced floor to floor heights with same functionality
- Reduced concrete use is more environmentally friendly. Steel is also 100% recyclable
- All weather construction possible
- Earlier revenue generation from completed buildings
- Lower overall costs



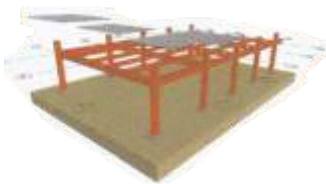
CONSTRUCTION PROCEDURE



Step 1: Construction of foundations & casting of columns



Step 2: Erection of primary & secondary steel beams



Step 3: Fixing of Decking sheets & casting of thin concrete slab



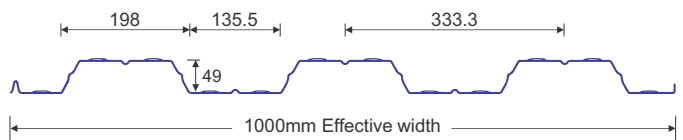
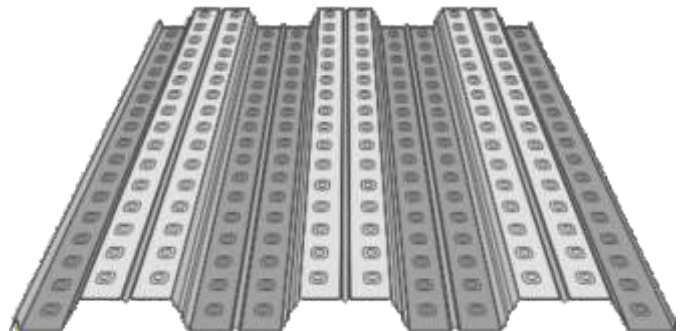
Step 4: Fixing of upper floor columns



Step 5: Repeat steps 1 to 4 for the upper floors & lay concrete on floors below



Step 6: Do all the finishing work



COVERAGE CALCULATOR

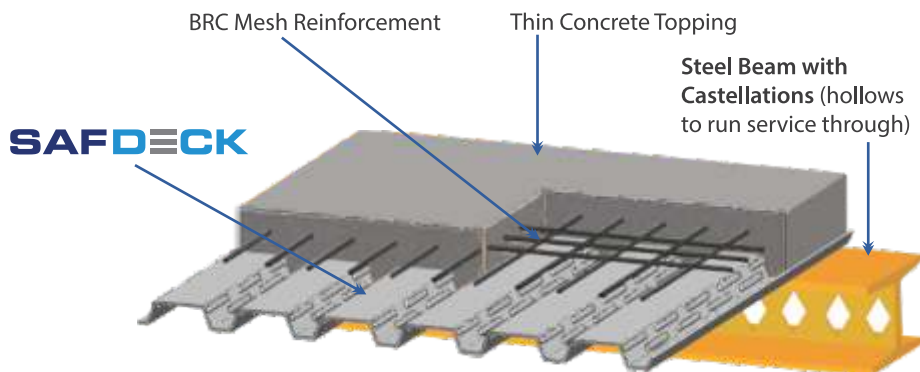
To calculate the number of sheets (N) to cover a given area required, use the formula: $N = W/1.00$ where; W is the linear width of the roof in metres and N is the number of sheets.

LENGTHS & ROOF PITCH

Slab Thickness (mm)	Deck Thickness (mm)	MAX unshored Span			Self weight KN/M ²	Comp moment of inertia 10 ⁶	Deck-Slab total UDL (KN/M ²)											
		Single (mm)	Double (mm)	Triple (mm)			1.75	1.9	2.05	2.2	2.35	2.5	2.65	2.8	2.95	3.1	3.25	
100																		
	0.6	2077	2783	2565	1.88													
	0.7	2184	2927	2697	1.89													
	0.8	2281	3057	2818	1.90	5.509	14	14	14	14	14	14	14	14	12.80	11.50	10.43	
120																		
	0.6	1987	2663	2454	2.36													
	0.7	2090	2800	2581	2.37													
	0.8	2183	3926	2696	2.38	8.262	14	14	14	14	14	14	14	14	14	14	14	14
140																		
	0.6	1910	2560	2359	2.85													
	0.7	2009	2692	2482	2.85													
	0.8	2100	2814	2593	2.86	14.128	14	14	14	14	14	14	14	14	14	14	14	14
150																		
	0.6	1875	2513	2316	3.09													
	0.7	1973	2644	2436	3.10													
	0.8	2061	2762	2546	3.11	16.843	14	14	14	14	14	14	14	14	14	14	14	14
160																		
	0.6	1844	2471	2277	3.33													
	0.7	1939	2599	2395	3.34													
	0.8	2027	2716	2503	3.35	20.336	14	14	14	14	14	14	14	14	14	14	14	14
180																		
	0.6	1786	2394	2206	3.81													
	0.7	1879	2519	2321	3.82													
	0.8	1964	2632	2425	3.83	28.743	14	14	14	14	14	14	14	14	14	14	14	14

NOTES:

- The maximum unshored span is checked for bending under self weight and construction loads and for deflection under wet concrete to be less than $L_s/180$.
- The loads in the table have been limited to 14kPa.
- For decks having a thickness less than 0.8mm they have been considered as a form deck for permanent shuttering and not for composite action.



PURLIN SPACINGS

Purlin Spacings are dependant on both downward loading and negative suction loading caused by wind. Your engineer should be consulted to calculate your load (kN/m²) for your particular application.

STEEL SHEETS SUPPORT SYSTEM			
TOTAL COATED THICKNESS (TCT) mm	MAXIMUM PURLIN SPACING IN METRES (m)		
	SIMPLY SUPPORTED (2 SUPPORTS)	CONTINUOUS SUPPORTS (3 SUPPORTS)	CONTINUOUS SUPPORTS (>3 SUPPORTS)
FLOOR DECKING			
0.32	0.8	1.1	1.2
0.40	1.0	1.2	1.4
0.50	1.1	1.4	1.6
0.60	1.3	1.6	1.8

RECOMMENDED END-LAPPING			
	SLOPE/PITCH	ENDLAP MIN. mm	ENDLAP MAX. mm
ROOFS	less than 15°	100	200
	Greater than 15°	N/A	N/A

Notes:

1. These spacings are indicated as a guide for information purposes only. The user should ensure to have a qualified professional work out the precise spacing specifications based on the design considerations unique to the project/site.
2. SAFDEK must be specified to bear the significant mass of wet concrete, hence the conservative spanning values recommended compared to sloped roof profiles



Disclaimer:

- Care has been taken to ensure that the information provided is accurate. MRM does not assume responsibility for inaccuracies or misinterpretations of this data.
- MRM is continuously engaged in product development, please ensure that you have the most recent issue of information from MRM.
- Photographs and illustrations are typical examples of roofing and cladding products and applications.