

Solid Composite Floors

Load/Span Table

A Bison Solid Composite Floor is a Bison Solid Slab with a structural concrete topping. This combination delivers increased structural performance overall, with an improved lateral load distribution where necessary for heavy point loads. The floor may be designed in the unpropped or partially propped condition to suit particular requirements. It is particularly suitable for industrial buildings, high buildings, car parks or other structures where additional longitudinal and transverse tying is required.

Fire Resistance*	Unit depth	Overall structural depth mm	Self Wt kN / m ²	Propped or Unpropped	Spans indicated below allow for characteristic service load (live load) plus self weight plus 1.5 kN / m ² for finishes									
					Characteristic service loads kN / m ²									
					0.75	1.5	2.0	2.5	3.0	4.0	5.0	10.0	15.0	
					Effective span in metres									
1 hour	75	125	2.95	P	6.70	6.25	6.00	5.70	5.50	5.15	4.87	3.90	3.80	
		150	3.54		7.50	7.00	6.80	6.50	6.35	5.95	5.60	4.56	3.92	
		175	4.12		8.32	7.78	7.52	7.25	7.02	6.62	6.29	5.12	4.05	
		200	4.71		8.90	8.40	8.12	7.85	7.62	7.20	6.85	4.98	3.96	
1 hour	75	125	2.95	U/P	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.60	3.10	
		150	3.54		3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.50	
		175	4.12		3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.65	
		200	4.71		3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.68	
1 hour	100	150	3.54	P	7.80	7.27	7.00	6.75	6.50	6.10	6.77	4.55	3.85	
		200	4.71		9.10	8.64	8.22	8.08	7.82	7.33	7.05	5.80	4.50	
		250	5.89		10.18	9.85	9.15	9.00	8.90	8.45	8.08	6.12	4.50	
		300	7.07		10.66	9.58	9.45	9.15	8.80	8.15	7.60	5.80	4.40	
1 hour	100	150	3.54	U/P	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.50	3.88	
		200	4.71		5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.96	4.50	
		250	5.89		5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.80	4.50	
		300	7.07		4.95	4.92	4.90	4.88	4.85	4.80	4.71	4.60	4.40	
2 hour	100	150	3.54	P	7.26	6.80	6.66	6.46	6.23	5.85	5.50	4.30	3.60	
		200	4.71		8.57	8.25	8.05	7.83	7.10	6.85	6.60	5.62	4.25	
		250	5.89		9.00	8.80	8.65	8.50	8.35	8.10	7.80	5.75	4.35	
		300	7.07		10.20	9.00	8.90	8.70	8.30	7.30	7.20	5.50	4.20	
2 hour	100	150	3.54	U/P	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.30	3.62	
		200	4.71		5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.60	4.20	
		250	5.89		5.00	5.00	5.00	4.95	4.90	4.85	4.80	4.55	4.35	
		300	7.07		4.65	4.65	4.65	4.65	4.60	4.55	4.55	4.40	4.02	

*Enhancement of the stated fire period may be achieved by applied soffit finishes.