# Speedpanel
Technical Data Sheet

Speedpanel is an innovative, time saving fire and acoustic rated wall system. The cutting edge pre-fab panel system is comprised of a roll-formed steel outer shell filled with an aerated cement core.

The 78mm thick Speedpanel will achieve an FRL of -/120/120. A highly versatile system, it can be used throughout a variety of applications in multiple building sectors. The lightweight, easy to handle system adds significant value to a building project by improving program speed and removing unnecessary costs involved with structural elements due to its ability to span large distances.

Common applications within high-rise buildings for the 78mm Speedpanel include shaft and riser walls, fire rated escape stairs, car park and plant room walls. For industrial projects, Speedpanel may be used for factory separations and boundary walls.
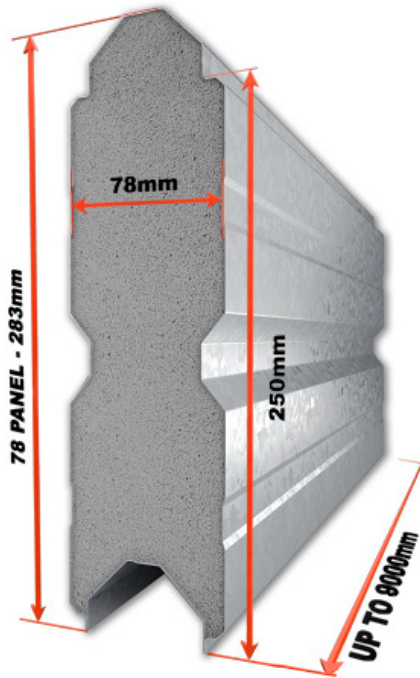
PANEL PROPERTIES

Series^	435	550	650	750	850	950
Weight per lm (kg)[W1]	10.7	12.8	14.6	16.4	18.2	20.0
Weight per m² (kg)[W2]	42.6	51.0	58.3	65.6	72.9	80.2
Shell material	0.4 BMT galvanised steel					
Core material	Lightweight aerated cement					

WALL SYSTEMS

Profile	78	
Fire rating	-/120/120	
Direction of fire rating	Both ways	

Panel orientation	Vertical	Horizontal	
		All other applications	Scissor stairs only
Max. span between structural connections	6.0m	4.5m	5.0m
Max. wall length (single span)	Unlimited	4.5m	5.0m
Max. wall height (single span)	6.0m	Unlimited	Unlimited
Max. wall length (multiple structural connections)*	N/A	Unlimited	N/A
Max. wall height (multiple structural connections)**	14.0m	N/A	N/A

DESIGN CONSIDERATIONS

Fire	All Speedpanel Systems have been tested to AS1530.4 to determine their fire resistance performance and tested to AS1530.1 to confirm their non-combustible product properties. Speedpanel utilises assessments issued by 3rd party NATA certified test laboratories to extend the scope of application of its tested systems.
Acoustics	Speedpanel Systems have been tested by NATA certified laboratories in accordance with AS 1191 for acoustic ratings of the panels, and by Speedpanel proprietary acoustic systems. Furthermore, all acoustic data has been modelled by qualified acoustic engineers to produce bespoke higher acoustic rating systems.
Wind loading / Deflection	All wind loading deflection testing has been undertaken by NATA registered laboratories in accordance with AS 4040.2-1992 (non-cyclone regions).
Cyclonic	Cyclonic wind load debris testing has been undertaken by James Cook University (Townsville, Australia) in accordance with the guidance of AS/NZS 1170.2 for impact testing of horizontal trajectories. Testing was undertaken for regions, as defined in AS 1170.2, up to region D for a 10,000 year event.
Structural	Speedpanel panels have been subjected to individual structural tests in Column, Flat Beam, Local Loading and Two-Panel Compression modes by accredited 3rd party structural laboratories based in Australia.
Air Infiltration	Speedpanel can be used as a fire rated pressurised plenum or shaft that needs to be air tight. Panels have been tested in accordance with AS/NZS 4284:2008 using NATA accredited laboratory equipment.

^ Series label based on 435, 550, 650, 750, 850 & 950 kg/m³ Speedpanel densities, +/- manufacturing tolerances.

[W1 & W2] Published weight per lineal metre and per square metre values are strictly indicative only. Panel weight subject to change based on, residual moisture, exposure to environmental factors and storage. Speedpanel strongly recommends seeking advice from a suitably qualified professional such as a engineer and/or other design consultant(s) when considering Speedpanel in project design.

* Intermediate fire rated structure between "Max. wall length" panel dimensions.

** Based on 600 kg/m³ density panel core. Reduced density may result in reduced height.

For more information please contact our office on +61 3 9115 6666.

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FRL AND ASSOCIATED SPANS - CEILINGS & BULKHEADS

Tables below illustrate Speedpanel FRL and associated spans in Speedpanel Ceiling & Bulkhead Systems. Please read these tables in conjunction with the High-Rise & Commercial Systems Guide and fire assessment for each specific system.

CEILING SYSTEMS - 78mm SPEEDPANEL	
Profile	78mm Speedpanel
Fire rating	-/120/120
Direction of fire rating	Varies***
Panel orientation	Laid flat
Max. span between structural connections	3.0m
Max. ceiling run	Unlimited

BULKHEAD SYSTEMS - 78mm SPEEDPANEL		
Profile	78mm Speedpanel	
Fire rating	-/120/120	
Direction of fire rating	Varies***	
Section of bulkhead	Vertical	Horizontal
Max. span between structural connections	1.5m	3.0m
Max. bulkhead length (single span)	Unlimited	Unlimited
Max. bulkhead width (single span)	3.0m	3.0m

***Direction of the fire rating on these Speedpanel Systems varies from one side only to both side protection. For more information contact our office.

THERMAL RATING

The 78mm Speedpanel thermal rating is R0.3.

CYCLONIC DATA

Specific install methods are required to meet cyclonic regions C+D. For further information visit our website to download a copy of our Cyclonic brochure.

WIND LOADING DATA - 78mm SPEEDPANEL

The table below illustrate wind loading data for 78mm Speedpanel with 435kg/m^3 density.

Span (m)	ULS	L/150 (Kpa)	L/200 (Kpa)	L/250 (Kpa)	L/300 (Kpa)
2.0	10.69	10.69	9.37	8.03	7.10
2.5	6.87	6.04	4.96	4.21	3.66
3.0	4.79	3.63	2.95	2.48	2.13
3.5	3.53	2.36	1.90	1.58	1.35
4.0	2.71	1.62	1.30	1.07	0.91
4.5	2.14	1.17	0.92	0.76	0.64
5.0	1.74	0.87	0.68	0.56	0.46
5.5	1.44	0.66	0.52	0.42	0.35
6.0	1.21	0.52	0.40	0.33	0.27
6.5	1.03	0.41	0.32	0.26	0.21
7.0	0.89	0.34	0.26	0.21	0.17
8.0	0.68	0.23	0.18	0.14	0.11

AIR INFILTRATION DATA		
Pressure (Pa)	Unsealed (L/m^2.s)	Sealed (L/m^2.s)
+300	0.81	<0.1
-300	-0.85	<-0.1
+750	N/A	+0.1
-750	N/A	-0.1
+1000	N/A	+0.1
-1000	N/A	-0.2
+1500	N/A	+0.2
-1500	N/A	-0.3

SPEEDPANEL COLOUR OPTIONS
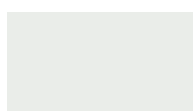
EBONY   OFF WHITE   SLATE GREY   GULL GREY   MERINO

A variety of colours options are available for products within the Speedpanel range. Colour options may incur minimum order quantity requirements, upfront deposit or additional fees. Colours shown above are to be used as a guide only. For exact colour matching and further information please contact Speedpanel.

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78mm SPEEDPANEL ACOUSTIC SOLUTIONS

System No.	Rw Rating	Rw +Ctr	System Composition	Footprint	Application
SP78003	40	34	78mm Speedpanel 435kg/m³ density	78mm	-
SP78121	50	41	78mm Speedpanel 435kg/m³ density, 16mm furring channel, 25mmx32kg/m³ polyester insulation, 13mm fire rated plasterboard	116mm	Shafts & Risers
SP78139	50	42	78mm Speedpanel 600kg/m³ density, 28mm furring channel, 25mmx32kg/m³ polyester insulation, 13mm std plasterboard	119mm	Shafts & Risers
SP78120	47	38	78mm Speedpanel 435kg/m³ density, 16mm furring channel, 25mmx32kg/m³ insulation, 13mm std plasterboard	116mm	Shafts & Risers
SP78097	58	51	78mm Speedpanel 600kg/m³ density, 20mm air gap, 75mmx14kg/m³ polyester insulation, 64mm steel stud, 13mm std plasterboard	175mm	Shafts & Risers
SP78143	59	50	13mm standard plasterboard, 16mm furring channel, 78mm Speedpanel 475kg/m³ density, 20mm air gap, 51mm steel stud, 22kg/m³x90mm glasswool insulation, 13mm std plasterboard	191mm	Intertenancy
SP78117	60	50	13mm standard plasterboard, 28mm furring channel, 78mm Speedpanel 600kg/m³ density, 52mm air gap, 50mmx14kg/m³ glasswool insulation, 64mm steel stud, 13mm std plasterboard	248mm	Intertenancy
SP78096	57	50	13mm std plasterboard, 16mm furring channel, 78mm Speedpanel 600kg/m³ density, 20mm air gap, 75mmx14kg/m³ polyester insulation, 64mm steel stud, 13mm std plasterboard	204mm	Intertenancy
SP78111	64	56	13mm std plasterboard, 28mm furring channel, 78mm Speedpanel 600kg/m³ density, 27mm air gap, 100x20kg/m³ polyester insulation, 64mm steel stud, 2x13mm std plasterboard	236mm	Intertenancy
SP2P018	61	54	78mm Speedpanel 550kg/m³ density, 50mm air gap, 51mm Speedpanel 450kg/m³ density	179mm	Plant Rooms Car Parks
SP2P013	75	66	78mm Speedpanel 600kg/m³ density, 350mm air gap, 90mmx42kg/m³ polyester insulation, 78mm Speedpanel 600kg/m³ density	595mm	Cinemas Factory Separation
SP78087	70	55	10mm std plasterboard, 90mm timber frame, 100mm 20kg/m³ autex quietstuf insulation, 20mm air gap, 78mm Speedpanel 600kg/m³ density, 20mm air gap, 90mm timber frame, 100mm 20kg/m³ Autex Quietstuf insulation, 10mm std plasterboard	318mm	Party Wall
SP78106	71	60	Kingklip roofing (0.48 BMT) with Fletchers Permastop 55mm insulation, 90mm steel stud, 78mm Speedpanel 600kg/m³ density, 32mm air gap, 100mm 20kg/m³ insulation, 64mm steel stud, 16mm fire rated plasterboard	280mm	Ceiling

Please visit our website or contact our office for alternative Speedpanel Acoustic Systems: www.speedpanel.com.au