



Sonic System Acoustic Modular Panel V100

The Science of Silence

PRODUCT OVERVIEW

The Sonic System acoustic modular panel V100 is a high-performance sandwich panel engineered for **combined sound absorption and sound insulation** in demanding industrial environments.

With a 100mm Rockwool core, perforated internal steel face (38% open area), and solid external skin, the V100 provides enhanced acoustic control across a wide frequency range. Tested in accordance with AS ISO 354 and AS/NZS 1191, with R_w determined to AS/NZS ISO 717.1, the panel achieves NRC 1.10 and R_w 37, with transmission loss reaching 54dB at 5000 Hz.

The V100 is structurally engineered in accordance with AS 1170.2 wind loading requirements and is suitable for large-span acoustic enclosures, industrial walls, and external noise barriers where higher levels of noise reduction are required.

KEY FEATURES

- High absorption coefficients across mid - to high-frequency ranges
- Transmission loss reaching **54dB** at 5000 Hz
- Load tested and engineering assessed in accordance with AS 1170.2
- Modular system for permanent or temporary installation
- Available in standard panels or **custom sizes**
- Fire resistance tested in accordance with AS 1530.4-2014, achieving FRL -/120/- for panel integrity when tested as an isolated element.

APPLICATIONS

- Industrial acoustic walls and partitions
- Acoustic enclosures for machinery and equipment
- External acoustic noise walls
- Wall linings for manufacturing facilities
- Sound control in infrastructure projects
- Temporary and permanent noise mitigation

TECHNICAL SPECIFICATIONS

Panel construction	Internal steel sheet: 0.50mm External steel sheet: 0.70mm Rockwool core Perforated internal face (38% open area)
Standard sizes	Width: 450mm standard Overlap connection: 25mm Thickness: 100mm
Weight	28 kg/m ²
Surface finish	Anti-corrosive treatment with epoxy primer, Painted finish, Available in Pre-finished off-white
Customisation	Custom lengths and colours available to meet project requirements
Thermal transmittance	0.35 W/m ² K
Installation	Modular system for rapid assembly and disassembly
Acoustic rating	R_w 37dB determined in accordance with AS/NZS ISO 717.1, NRC 1.0
Fire rating	FRL -/120/- in accordance with AS 1530.4-2014, achieving FRL -/120/- for panel integrity when tested as an isolated element.



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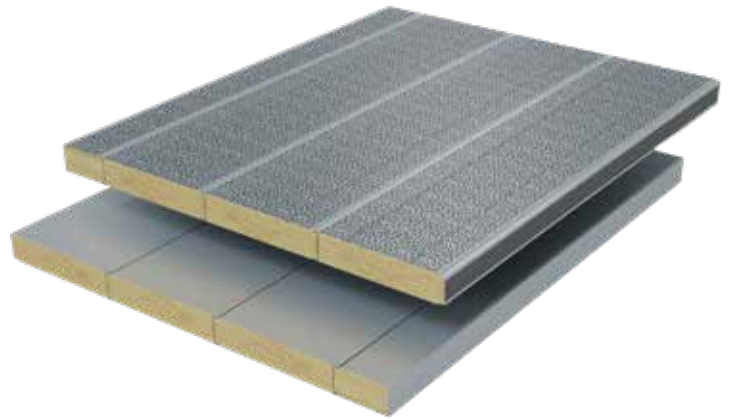
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ACOUSTIC PERFORMANCE – SOUND TRANSMISSION LOSS

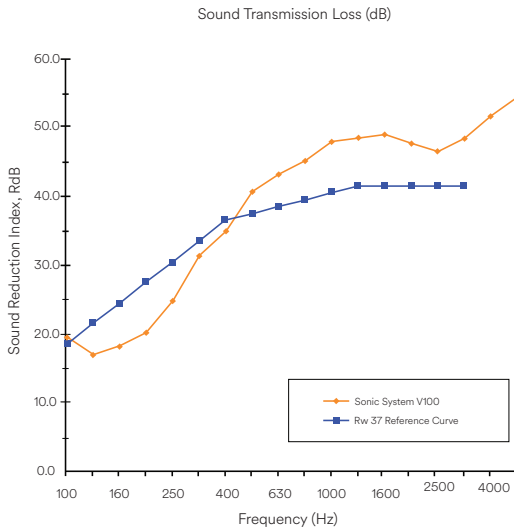
The V100 panel provides effective airborne sound insulation with a Weighted Sound Reduction Index (Rw) of 37dB, tested in accordance with AS 1191-2002, with Rw determined to AS/NZS ISO 717.1. The combination of dual steel faces and dense Rockwool core effectively blocks airborne noise transmission, making it ideal for separating noisy industrial processes from adjacent work areas or external environments.

HIGHLIGHTS

- Rw 37
- Transmission Loss up to 54dB at 5000 Hz
- Consistent attenuation across a wide frequency range



TRANSMISSION LOSS CURVE DEMONSTRATING BARRIER PERFORMANCE RISING STEADILY TO MORE THAN 50dB AT HIGH FREQUENCIES.



MEASURED TRANSMISSION LOSS BY 1/3 OCTAVE BAND

1/3 Octave Centre Frequency Hz	Sound Transmission Loss: R dB	Rw 37 Reference Curve	95% Confidence levels, dB
100	19.1	18	2.5
125	16.5	21	2.3
160	17.7	24	2.1
200	19.7	27	1.5
250	24.4	30	1.3
315	30.9	33	1.4
400	34.5	36	1.2
500	40.2	37	0.8
630	42.7	38	0.7
800	44.7	39	0.7
1000	47.5	40	0.7
1250	48.0	41	0.4
1600	48.6	41	0.6
2000	47.2	41	0.8
2500	46.0	41	0.6
3150	48.0	41	0.7
4000	51.3	-	0.7
5000	54.0	-	0.5



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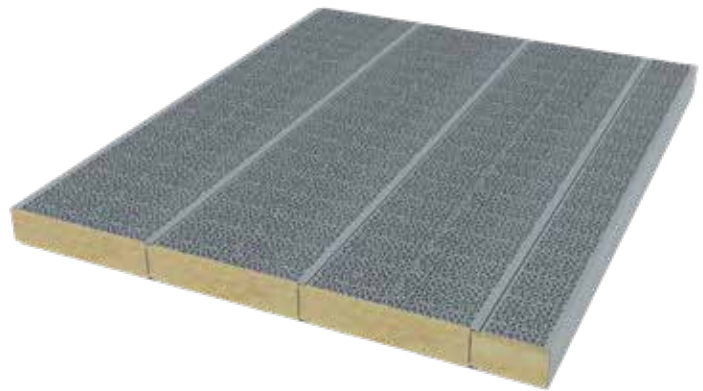
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ACOUSTIC PERFORMANCE – SOUND ABSORPTION

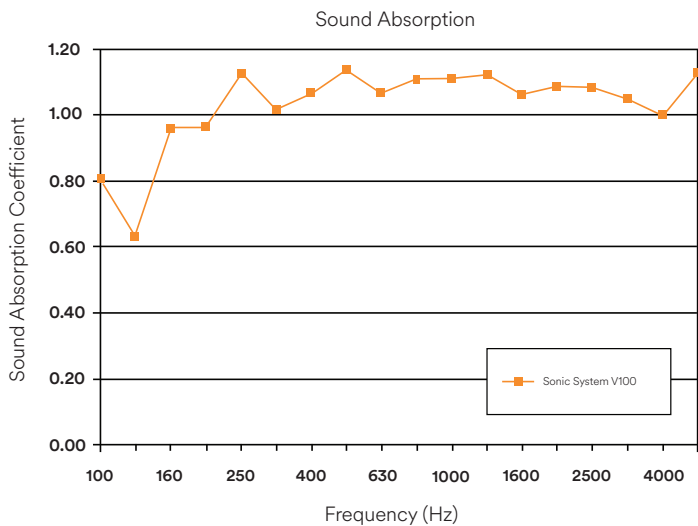
The V100 panel delivers high-performance sound absorption through its perforated internal face (38% open area) and high-density Rockwool core. Tested in accordance with AS ISO 354 at RMIT University’s reverberation chamber, the V100 achieves a Noise Reduction Coefficient (NRC) of 1.10, delivering effective reverberation control in industrial environments.

HIGHLIGHTS

- NRC 1.10
- α_s greater than 1.0 from 400 Hz to 5000 Hz
- Rockwool Core (70kg/m³)
- Tested to AS ISO 354



ABSORPTION CURVE SHOWING STRONG PERFORMANCE ACROSS CRITICAL MID - TO HIGH-FREQUENCY RANGES.



ABSORPTION COEFFICIENTS ACROSS FREQUENCY RANGE

Octave Centre Frequency Bands, Hz	Average RTs for empty room. T60 _e	Average RTs f or room with sample T60 _{e+s}	Sound Absorption Coefficient α_s	95% Confidence Interval for α_s
100	7.145	4.183	0.81	0.15
125	6.508	4.321	0.63	0.16
160	8.395	4.222	0.96	0.11
200	9.319	4.429	0.96	0.09
250	9.351	4.074	1.13	0.07
315	7.830	3.955	1.02	0.08
400	7.055	3.661	1.07	0.08
500	6.682	3.455	1.14	0.05
630	6.299	3.448	1.07	0.06
800	6.210	3.365	1.11	0.07
1000	5.589	3.170	1.11	0.06
1250	5.122	3.003	1.12	0.04
1600	4.550	2.851	1.06	0.05
2000	4.085	2.636	1.09	0.05
2500	3.622	2.434	1.08	0.05
3150	3.121	2.210	1.05	0.05
4000	2.576	1.940	1.00	0.08
5000	2.193	1.661	1.13	0.12



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ACOUSTIC PERFORMANCE – WIND LOAD RESISTANCE

Engineered for real-world resilience, the V100 modular panel has been load tested and engineering assessed in accordance with AS 1170.2 (see support spacing table).

SUPPORT CENTRES VS LOAD CAPACITY

Panel Support Centres (m)	Maximum Ultimate Wind Load Pressure (kPa)
4.0m	2.58 kPa*
4.5m	2.04 kPa*
5.0m	1.65 kPa*
5.5m	1.36 kPa*
6.0m+	1.15 kPa*

*Certified loading pressure test reports available upon request

COMPLIANCE AND TESTING

- Sound absorption tested in accordance with AS ISO 354
- Sound Insulation tested to AS/NZS ISO 717.1:2004
- Sound transmission loss tested in accordance with AS 1191-2002, with R_w determined to AS/NZS ISO 717.1
- Fire resistance tested in accordance with AS 1530.4-2014, achieving FRL –/120/– for panel integrity when tested as an isolated element.
- All testing conducted by NATA-accredited laboratories. Full test certificates available upon request.

ORDERING AND SUPPORT

- AcousTech panels are available in both standard and **fully custom configurations**. From tailored dimensions to project-specific colour finishes, our team will engineer the right fit for your site.
- To discuss your project, contact AcousTech and discover how the Science of Silence can work for you.

HOW TO SPECIFY TO FIT YOUR PROJECT

System	Sonic System acoustic modular panel V100
Construction	100mm acoustic panel with solid steel faces, perforated internal face and high-density Rockwool core
Finish	Corrosion-resistant perforated steel
Acoustic Performance	Rw: 37dB NRC: 1.10



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FIRE SAFETY STANDARDS

FIRE RATING & TESTING COMPLIANCE

Fire Safety Category	Standard/Test Method	Result/Rating	Details
Fire Resistance Level (FRL)	Fire resistance tested in accordance with AS 1530.4-2014, achieving FRL -/120/- for panel integrity when tested as an isolated element.	-/120/-	<ul style="list-style-type: none"> Structural Adequacy: - (N/A) Integrity: 120 minutes Insulation: - (Not rated)
Ignitability Index	AS/NZS 1530.3:1999 (R2016)	0	Scale: 0-20 (0 = best performance)
Spread of Flame Index	AS/NZS 1530.3:1999 (R2016)	0	Scale: 0-10 (0 = best performance)
Heat Evolved Index	AS/NZS 1530.3:1999 (R2016)	0	Scale: 0-10 (0 = best performance)
Smoke Developed Index	AS/NZS 1530.3:1999 (R2016)	1	Scale: 0-10 (lower = better)
Combustibility	Tested in accordance with AS 1530.1 AS/NZS 1530.3 AS 1530.4-2014	Non-Combustible	Rockwool core is inorganic and non-combustible

MATERIAL FIRE PROPERTIES

Component	Material	Thickness/Density	Fire Characteristics
Internal Face	Perforated Steel Sheet	0.50mm (38% FOA)	Non-combustible metal
Core	Rockwool	50mm / 70kg/m ³	<ul style="list-style-type: none"> Non-combustible Inorganic, amorphous Does not contribute significant toxic gases during fire exposure Maintains structural integrity at elevated temperatures
External Face	Solid Steel Sheet	0.70mm	Non-combustible metal
Surface Treatment	Epoxy Primer + Paint	Anti-corrosive coating	Protective coating system

COMPLIANCE & CERTIFICATION

Category	Details
Testing Laboratory	NATA-accredited facilities
Documentation Available	<ul style="list-style-type: none"> Full AS 1530.4-2014 fire resistance certificate AS/NZS 1530.3 test reports Material Safety Data Sheets (MSDS) Fire engineering reports
BCA/NCC Compliance	Suitable for fire-rated partitions and acoustic enclosures (subject to engineering assessment)
Certificate Availability	Full fire test results available upon request

FIRE SAFETY PERFORMANCE SUMMARY

Performance Metric	V100 Rating	Interpretation
Fire Barrier Integrity	120 minutes	Maintains barrier for 2 hours during fire exposure
Contribution to Fire Load	0	Non-combustible construction throughout
Flame Spread	0	Does not support flame propagation
Smoke Generation	1	Low smoke generation during fire exposure
Toxic Fume Production	None	Inorganic materials do not produce toxic gases



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QUICK REFERENCE SPECIFICATIONS

Category	Specification
Acoustic Absorption	α_s up to 1.10 (AS ISO 354) NRC: 1.10 providing reliable absorption across mid- to high-frequency ranges
Acoustic Transmission	Rw37dB determined to AS/NZS ISO 717.1 Transmission loss up to 54dB
Structural Performance	Load tested and engineering-assessed in accordance with AS 1170.2 (refer support spacing table)
Hydrophobic Rockwool core	Actively repels water on contact. Rain simply beads off and runs away; the core does not absorb or wick moisture.
Inorganic Rockwool	Will not support biological growth even if minor moisture is present (ASTM C1104). Remains clean and stable indefinitely.
Water absorption	0.5kg/m ² (partial immersion test, BS EN ISO 29767) if core is submerged, uptake is negligible and dries out immediately with no long-term retention.
Panel Construction	Internal steel sheet: 0.50mm External steel sheet: 0.70mm Rockwool core Perforated internal face (38% open area)
Standard Sizes	Width: 450mm standard Overlap connection: 25mm Thickness: 100mm
Custom Options	Custom sizes and colours available
Weight	28 kg/m ²
Surface Finish	Anti-corrosive treatment with epoxy primer Painted finish Available in Pre-finished off-white
Thermal Transmittance	0.35 W/m ² K
Installation	Interlocking modular panel system with screwless assembly
Compliance	AS ISO 354 – Sound absorption AS 1191-2002 – Airborne sound transmission loss AS/NZS ISO 717.1:2004 – Rw determination AS 1170.2 – Wind actions (engineering assessment) AS 1530.1 / AS/NZS 1530.3 – Reaction to fire AS 1530.4-2014 – Fire resistance
Branding	AcousTech part of the Flexshield Group Pty Ltd (ABN 42 631 902 899 ACN 631 902 899)