AIS
Acoustic
Fire
Thermal
Moisture

Australasian Insulation Supplies Pty Ltd

Industrial & Marine I Commercial & Residential

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PRODUCT DATA SHEET

Safe'n'Silent™ Pro350

Type Plain faced rigid slab

Material Stone wool by the ROCKWOOL Group

Description **Engineered for higher acoustic performance and manufactured with leading edge melt chemistry (+1000^{0}C), fibre orientation and spinning technology to produce a consistent quality stone wool insulation with superior performance.**

Application **High acoustic insulation performance in all partition wall configurations and other noise reductions applications in hospitals, cinemas, schools, offices, residential and industrial buildings.**

Properties

		Performance					Code or Standard[1]
Thermal	**Conductivity (23^{0}C mean)**	K value: 0.035 W/m.K					
	Resistance	Thickness (mm)	**50**	**64**	**75**	**90**	AS/NZS 4859-1
		R-Value (m^2.K/W)	1.429	1.828	2.142	2.571	
	Specific heat capacity	0.84 kJ/kg.K					
	Aging (8-10 years)	No performance loss					
	Emissivity	0.9 (nominal)					ISO 12241
Fire	**Combustibility**	Non-combustible					AS 1530.1
	Reaction to fire	Euroclass Reaction to Fire classification: A1-Non-Combustible					EN 13501-1
	Auto ignition temp	Does not occur					ASTM G 72
	Flash point ignition temp	Does not occur					
	Melting temp	Over 1000°C					
	Linear shrinkage	≤2%					ASTM C 356
	Calorific value	0.6 MJ/kg (approx) giving a fire load of 1.8 MJ/m^2 at 50mm thickness					
	Fire hazard indices	Ignitability: 0, Spread of flame: 0, Heat evolved: 0, Smoke developed: 0-1					AS/NZS 1530.3
	Fire growth rate	Does not occur					
	Fire retardant additives	No HBCD (or HBCDD), TCPP or other chemical fire retardant additives					
Mechanical	**Compression resistance**	≥4 kPa at 10% deformation					EN 826
	Bending radius	700mm at 50mm thickness					
	Coeff thermal expansion	Nil due to the fibrous nature of the material					
	Durability	Shown to have a +50 year service life in all types of exposure					
	Manufactured tolerances	Dimension (Length, Width, Thickness) on request					EN 1602 / 823 / 822
Chemical	**pH value**	Aqueous extracts of fibres are neutral or slightly alkaline (pH 7-9) Will not cause or promote corrosion					ASTM C 795 / C 665 AS/NZS 4859-1
	Chlorides	Approx 10 ppm water leachable chloride and meets nominated standard requirements for use over stainless steel					ASTM C 795 / C 871
	Compatibility	Compatible with typical industrial and construction materials					
	Biological	Contains no nutrients and will not promote the growth of fungi, moulds or bacteria or attract insects, rodents or vermin					
Moisture	**Water repellency**	Hydrophobic, highly water resistant					BS 2972 Sect 12
	Water absorption	Approx 0.5 kg/m^2 (partial immersion)					EN 1609
	Capillary action	Capillary resisting, will not draw (wick) water up, into or across material					
	Water vapour sorption	From air ≤0.04 (Vol%)					ASTM C1104 / 1104M
	Vapour resistance	5 MN.s/g (Water vapour diffusion resistance factor (μ) = 1.3)					EN 13469 / 12086

Sound	**Noise absorption**[2]	Freq (Hz)	**125**	**250**	**500**	**1000**	**2000**	**4000**	NRC	α_w	Class	EN ISO 354 ASTM C 423 EN ISO 11654
		α_p 50mm	0.20	0.70	1.00	1.00	1.00	1.00	**1.05**	**1.00**	A	
		α_s 64mm	0.35	0.90	1.00	1.00	1.00	1.00	**1.10**	**1.00**	A	
		α_p 75mm	0.45	1.00	1.00	1.00	1.00	1.00	**1.20**	**1.00**	A	
		α_p 90mm	0.65	1.00	1.00	1.00	1.00	1.00	**1.15**	**1.00**	A	
	Sound insulation	Thickness (mm)		**50**	**64**	**75**	**90**					INSUL v8 by Marshall Day Acoustics
		Rw		12	15	19	21	(±3)				
		Rw + Ctr		9	12	16	18	(±3)				
	Air flow resistivity	23 x 10^3 rayl/m (or Pa.s/m^2, N.s/m^4)										ISO 9053
Physical	**Dimensions**	Length x width 1200 x 600mm										
	Weight per square metre	3 kg/m^2 ±15% at 50mm thickness										
	Non-fibrous (shot) content	Shot size and % weight: 150 µm ≤11% 300 µm ≤1.5% 850 µm ≤0%										ASTM C 1335
Environment		Manufacturing, recycling, use, service life and energy efficiency performance provides a low ecological footprint. No CFC's or HCFC's are used in the manufacturing process										

Full disclosure

Data in this publication adopts a principle of Full Disclosure – the declaration of relevant property and performance data rather than the selective publication or non-disclosure of data that could limit the capacity to make informed decisions about OH&S risks and other consequences of design and installation decisions. If you require additional data, please ask.

Technical support

Stone wool is an engineered stone fibre. AIS provides technical support to determine the stone wool material configuration best suited to case specific performance requirements, and the building assembly or industrial system that will optimise ACOUSTIC, FIRE, THERMAL & MOISTURE (AFTM™) design and operational performance.

Health and safety

Over 60 years of health research concluded that there are no long-term health problems from using stone wool insulation.

Under the World Health Organisation (WHO) and its Monographs Programme of the International Agency for Research on Cancer (IARC) rock (stone) wool is classified as Group 3 (not classifiable as to its carcinogenicity in humans [3]).

It is recommended that for the handling and installation of stone wool the internationally recognised Safety Data Sheet (SDS) be followed (contact AIS or download from the AIS website).

ROCKWOOL International Group stone wool does not contain asbestos.

Document notices

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[1] When tested to the Code or Standard nominated, the product will provide a performance equal to or better than the performance properties shown.

[2] Tested at 50, 75 and 100mm thicknesses. Sound Absorption Coefficient and Noise Reduction Coefficient values for intermediate stock thicknesses have been calculated by interpolating between tested values.

[3] IARC working group in Man-Made Vitreous Fibres, Volume 81 of the IARC Monographs, Lyon, 9-16 October 2001.