HIGH-PERFORMANCE ACOUSTIC ABSORBER FOR A QUIETER ENVIRONMENT

ArmaPhonic®

Effective air-borne sound absorption across a broad frequency range

// Fibre-free, open-cell material with complex pore geometry
// Flexible and light weight
// Additional barrier performance, vibration damping and de-coupling (isolation) properties

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ArmaPhonic®

HIGH-PERFORMANCE ACOUSTIC ABSORBER FOR A QUIETER ENVIRONMENT

ArmaPhonic

Fibre-free. Maximised absorption at key "nuisance" frequencies. Proven alternative to complex "foam barrier" multi-layers. Visco-elastic properties help to dampen resonance effects in metal panels. Reduces structure-borne noise transmission when used as isolation pads.

Lining for automotives

Lining for HVAC systems

Acoustic enclosures

ArmaPhonic S

Octave band centre frequency (Hz)						
Thickness	125	250	500	1000	2000	4000
[mm]	Octave band absorption coefficient acc. to EN ISO 354					
6	0.01	0.02	0.08	0.23	0.61	1.04
10	0.01	0.04	0.16	0.50	1.04	0.84
15	0.03	0.07	0.29	0.84	0.95	0.82
20	0.05	0.14	0.60	0.96	0.72	0.84
25	0.09	0.24	0.83	0.78	0.79	0.85
50	0.21	0.69	0.87	0.82	0.85	0.93

ArmaPhonic H

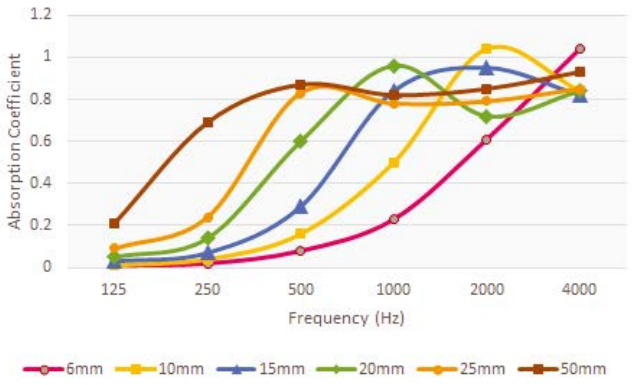
Octave band centre frequency (Hz)						
Thickness	125	250	500	1000	2000	4000
[mm]	Octave band absorption coefficient acc. to EN ISO 354					
6	0.00	0.02	0.07	0.19	0.47	0.94
10	0.01	0.04	0.15	0.39	0.88	1.06
15	0.01	0.08	0.28	0.78	1.07	0.93
20	0.04	0.13	0.50	0.99	1.02	0.95
25	0.06	0.23	0.75	1.06	0.96	1.00
50	0.20	0.68	1.02	0.99	1.03	1.04

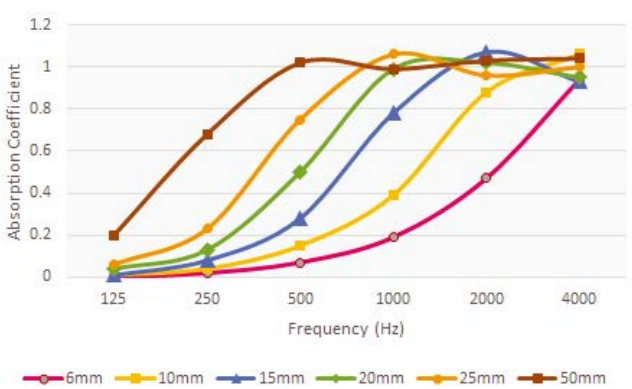
Noise reduction coefficient (NRC) acc. to ASTM C423

Thickness (mm)	6	10	15	20	25	50
NRC	0.25	0.45	0.55	0.60	0.65	0.80

Noise reduction coefficient (NRC) acc. to ASTM C423

Thickness (mm)	6	10	15	20	25	50
NRC	0.20	0.35	0.55	0.65	0.75	0.95





TECHNICAL DATA - ARMAPHONIC

Brief description	ArmaPhonic is a unique open-cell sound absorber that offers additional barrier (transmission loss) performance and both vibration damping and de-coupling (isolation) properties.
Material type	Elastomeric foam based on synthetic rubber.
Colour	Black.
Special features	Excellent sound absorption performance.
Applications	Delivering optimal performance at lower thickness than conventional materials, ArmaPhonic is the trusted acoustic absorption material for HVAC applications (such as the fan-coil units, duct and cabinet linings and chiller systems), heavy industrial and automotive purposes (such as engine component lining and under-bonnet insulation), enclosures as well as in oil and gas facilities.

Property	Value/Assessment					Standard/Test method
Temperature range						
Service temperature	Max. service temperature		+85 °C		Contact Armacell for applications with service temperatures above +85 °C and below -20 °C	
	Min. service temperature		-20 °C			
Thermal conductivity						
	ArmaPhonic S	$\lambda_{20\,°C} \leq$	0.047	W/(m·K)		EN ISO 12667
	ArmaPhonic H	$\lambda_{20\,°C} \leq$	0.070	W/(m·K)		
Fire performance & approvals						
Flammability	V-0					UL 94
Other technical features						
Density	ArmaPhonic S	≥ 140	kg/m³			
	ArmaPhonic H	≥ 220	kg/m³			
Health aspects	Free of fibre and formaldehyde.					
Chemical resistance	Good (Please consult Armacell for details)					

All data and technical information are based on results achieved under typical application conditions. Recipients of this information should, in their own interest and responsibility, clarify with our Technical department in due time whether or not the data and information apply to the intended application area.

Sheets (Width: 1.0m, Length: 1.0m)

ArmaPhonic S			ArmaPhonic H		
Item	**Insulation thickness**	**Carton content**	**Item**	**Insulation thickness**	**Carton content**
	[mm]	**[sqm]**		**[mm]**	**[sqm]**
AS06100SMB	6	8	**AS06100SHD#**	6	8
AS10100SMB	10	5	**AS10100SHD**	10	5
AS15100SMB	15	3	**AS15100SHD#**	15	3
AS20100SMB	20	2	**AS20100SHD**	20	2
AS25100SMB	25	2	**AS25100SHD**	25	2
AS30100SMB#	30	2	**AS30100SHD#**	30	2
AS40100SMB#	40	1	**AS40100SHD#**	40	1
AS50100SMB#	50	1	**AS50100SHD#**	50	1

#Made to order. Minimum order quantities and different lead times may apply.
Self-adhesive option available upon request. Minimum order quantities and different lead times may apply.

// Cover Photo (Top)
Sengkang Hospital, Singapore
Support outstanding indoor air quality with no risk of fibre leakage.
Air ducts often provide a pathway for noise transmission from other parts of the building. Engineered to absorb air-borne sound across a broad frequency range, ArmaPhonic was specified to insulate the air ducts at Sengkang Hospital. This open-cell insulation material combines physical properties such as material thickness and density to influence peak absorption frequency, thereby providing optimal acoustic performance at lower thicknesses as compared to conventional materials.

00035 | ArmaPhonic S&H | ArmaPhonic | TDS | 112019 | APAC | EN MASTER

ABOUT ARMACELL

As the inventors of flexible foam for equipment insulation and a leading provider of engineered foams, Armacell develops innovative and safe thermal, acoustic and mechanical solutions that create sustainable value for its customers. Armacell's products significantly contribute to global energy efficiency making a difference around the world every day. With 3,100 employees and 24 production plants in 16 countries, the company operates two main businesses, Advanced Insulation and Engineered Foams. Armacell focuses on insulation materials for technical equipment, high-performance foams for high-tech and lightweight applications and next generation aerogel blanket technology.

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For more information, please visit:
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