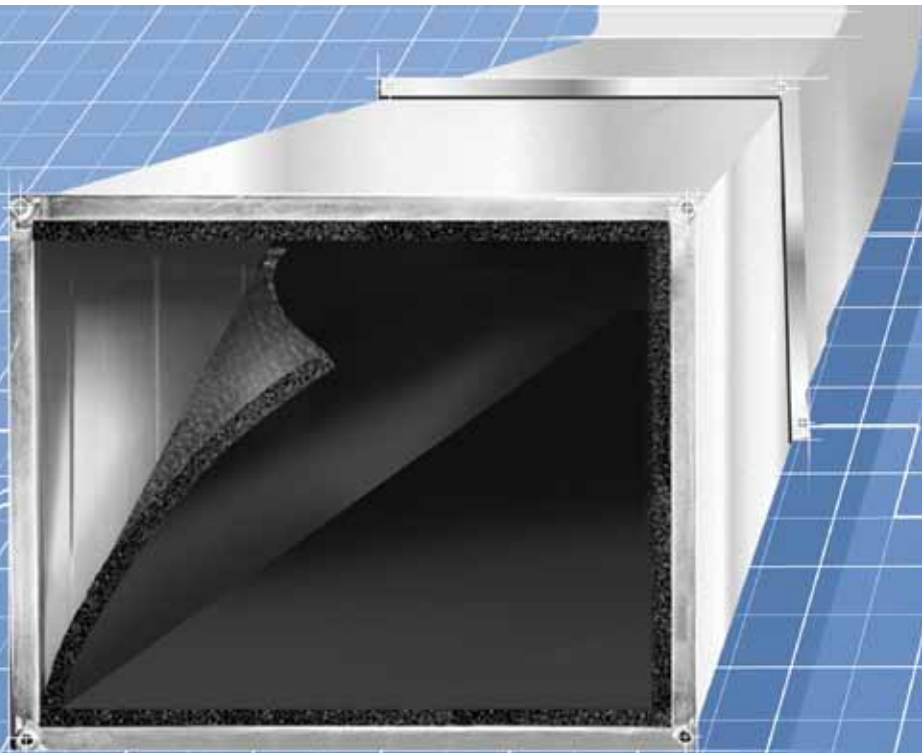


Fiber Free



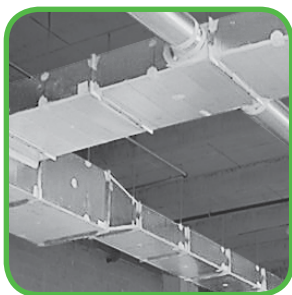
THE MAKERS OF
Armaflex®



AP/Armaflex® AP/Armaflex® FS

Duct Liner/Wrap

Mold resistant. Fiber free. Reduces noise.



- Fiber-free, formaldehyde-free, low VOCs, non-particulating
- Made with Microban® Antimicrobial Product Protection
- GREENGUARD Children & Schools Certified®
- 25/50 Rated Through 2" Wall
- Noise blocking and vibration dampening
- Smooth surface reduces dirt, wipes clean



Duct Liners/Wraps

AP Armaflex and AP Armaflex FS Black Duct Liners/Wraps are patented* non-fibrous duct liners/wraps. AP Armaflex and AP Armaflex FS Duct Liners/Wraps are a black, flexible elastomeric thermal insulation. Their closed cell structure prevents condensation and moisture wicking, and makes them an efficient insulation. They are manufactured without the use of CFCs, HFCs or HCFCs. The Microban® antimicrobial protection is registered by the Environmental Protection Agency for use in air ducts (EPA Reg. No. 1258-840-42182). AP Armaflex and AP Armaflex FS Duct Liners/Wraps are also effective for reducing HVAC noise. AP Armaflex is supplied in 36" x 48" sheets and in rolls 48" and 60" wide, in thicknesses up to 1". AP Armaflex FS is supplied in 36" x 48" sheets and in rolls 48" wide in 1-1/2" and 2" thicknesses.

Approvals and Compliance

Product approved through continuing supervision by Factory Mutual Approvals to provide consistent actual values for thermal conductivity, water vapor transmission and fire rating. AP Armaflex and AP Armaflex FS Black Duct Liners/Wraps also meet requirements of NFPA 90A and 90B for Duct Coverings and Linings, and UL 181 for Mold Growth. Approved for use in return air plenums, conforms to ASTM C 1534 requirements and withstands temperatures of 250°F for testing. All AP Armaflex insulation meets requirements of International Energy Conservation Code (IECC) and ASHRAE for R-Value 4.2 at 1" thickness.

Physical Properties

Specifications	Values		Test Method
Thermal Conductivity, Btu • in./h • ft ² • °F (W/mK) 75°F mean temperature (24°C) 90°F mean temperature (32°C)	AP Armaflex	AP Armaflex FS	ASTM C 177 or C 518
	0.25 (0.036) 0.256 (0.037)	0.28 (0.040)	
Water Vapor Permeability, Perm-inch. [Kg/(s•m•Pa)]	0.05 [0.725 x 10 ⁻¹³]	0.08 [1.16 x 10 ⁻¹³]	ASTM E 96, Procedure A
Flame Spread and Smoke Developed Index ① Through 1" (25 mm)	Through 1" (25 mm) 25/50	1-1/2" and 2" 25/50	ASTM E 84 CAN ULC S-102 – AP through 1"
Mold Growth Fungi Resistance Bacterial Resistance	Meets requirements		UL181 ASTM G21/C1338 ASTM G22
Water Absorption, % by Volume	0.2%		ASTM C 209
Upper Use Limit ②	180°F (82°C)		
Lower Use Limit ③	-297°F (-183°C)		
Erosion Resistance	Does not break away, flake off or show evidence or delamination at velocities of 10,000 ft/min		ASTM C 1071
Corrosiveness	Noncorrosive		ASTM C 665
Odor Emissions	No objectionable odors		ASTM C 665

Notes

- AP/Armaflex Duct Liner/Wrap has a flame spread index of less than 25 and a smoke developed index of less than 50 for all thicknesses up to and including 1" (25 mm) when tested according to ASTM E 84 and CAN ULC S-102. AP Armaflex FS has a flame spread index of less than 25 and a smoke developed index of less than 50 for all thicknesses up to and including 1-1/2" and 2" when tested according to ASTM E84 and CAN ULC S-102. Numerical flammability ratings alone may not define the performance of products under actual fire conditions. They are provided only for use in the selection of products to meet limits specified.
- Withstands temperature of 250°F (121°C) when tested according to ASTM C 411. "Test Method for Surface Performance of High-Temperature Insulations". At this temperature, AP/Armaflex Duct Liner/Wrap insulation shows no evidence of flaming, glowing, smoldering, delamination, melting or insulation collapse. Although this insulation will withstand high temperatures, continuous use temperature should be limited to 180°F (82°C).
- At temperatures below -20°F (-29°C) elastomeric insulation starts to become less flexible. However, this characteristic does not affect thermal efficiency or water vapor permeability of Armaflex insulation.

Uses and Applications

AP Armaflex and Armaflex FS Black Duct Liners/Wraps are ideal for air handling systems, VAV units, ducts and other air system components requiring condensation control, resistance to moisture, damage or heat gain or HVAC noise blocking or sound dampening.

Installation

Must be installed according to "Installation of Armaflex Insulations" publication (000-005).

When air stream velocities exceed 4,000 FPM (20.3m/second), metal nosing should be applied to every leading edge. Nosing may be formed on ducts or be channeled or zee-attached by screws, rivets or welds.

No pinning is required when applying AP Armaflex and AP Armaflex FS as a duct liner using Armaflex 520 Adhesive, Armaflex 520 Black Adhesive or Armaflex Low VOC Spray Contact Adhesive.

Pinning according to SMACNA guidelines is required when applying AP Armaflex and AP Armaflex FS as a duct liner using Armaflex BLV Adhesive.

ALL ARMACELL FACILITIES
IN NORTH AMERICA ARE
ISO 9001:2008 CERTIFIED.

Sound Absorption Coefficients at Frequency

Thickness	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	NRC†
Nom. 1" (25 mm)	0.01	0.13	0.39	0.69	0.29	0.26	0.40

Sound Transmission Class (STC)

Thickness	STC Class
Nom. 1/2" (13 mm)	25
Nom. 1" (25 mm)	25

Sizes

Sheet Width / Length	36" x 48"
Roll Width	48" (all thicknesses) and 60" (1" only)
Wall Thickness	AP Armaflex: 1/2", 3/4" and 1" AP Armaflex FS: 1-1/2" and 2"

ARMACELL LLC

TEL: 1 800 866-5638

FAX: 919 304-3847

info.us@armacell.com

www.armacell.us

7600 Oakwood Street Extension • Mebane, NC 27302



Armacell provides this information as a technical service. To the extent the information is derived from sources other than Armacell, Armacell is substantially, if not wholly, relying upon the other source(s) to provide accurate information. Information provided as a result of Armacell's own technical analysis and testing is accurate to the extent of our knowledge and ability, as of date of printing, using effective standardized methods and procedures. Each user of these products, or information, should perform their own tests to determine the safety, fitness and suitability of the products, or combination of products, for any foreseeable purposes, applications and uses by the user and by any third party to which the user may convey the products. Since Armacell cannot control the end use of this product, Armacell does not guarantee that the user will obtain the same results as published in this document. The data and information are provided as a technical service and are subject to change without notice.

The GREENGUARD INDOOR AIR QUALITY CERTIFIED Mark is a registered certification mark used under license through the GREENGUARD Environmental Institute.

Microban is a registered trademark of Microban Products Company.