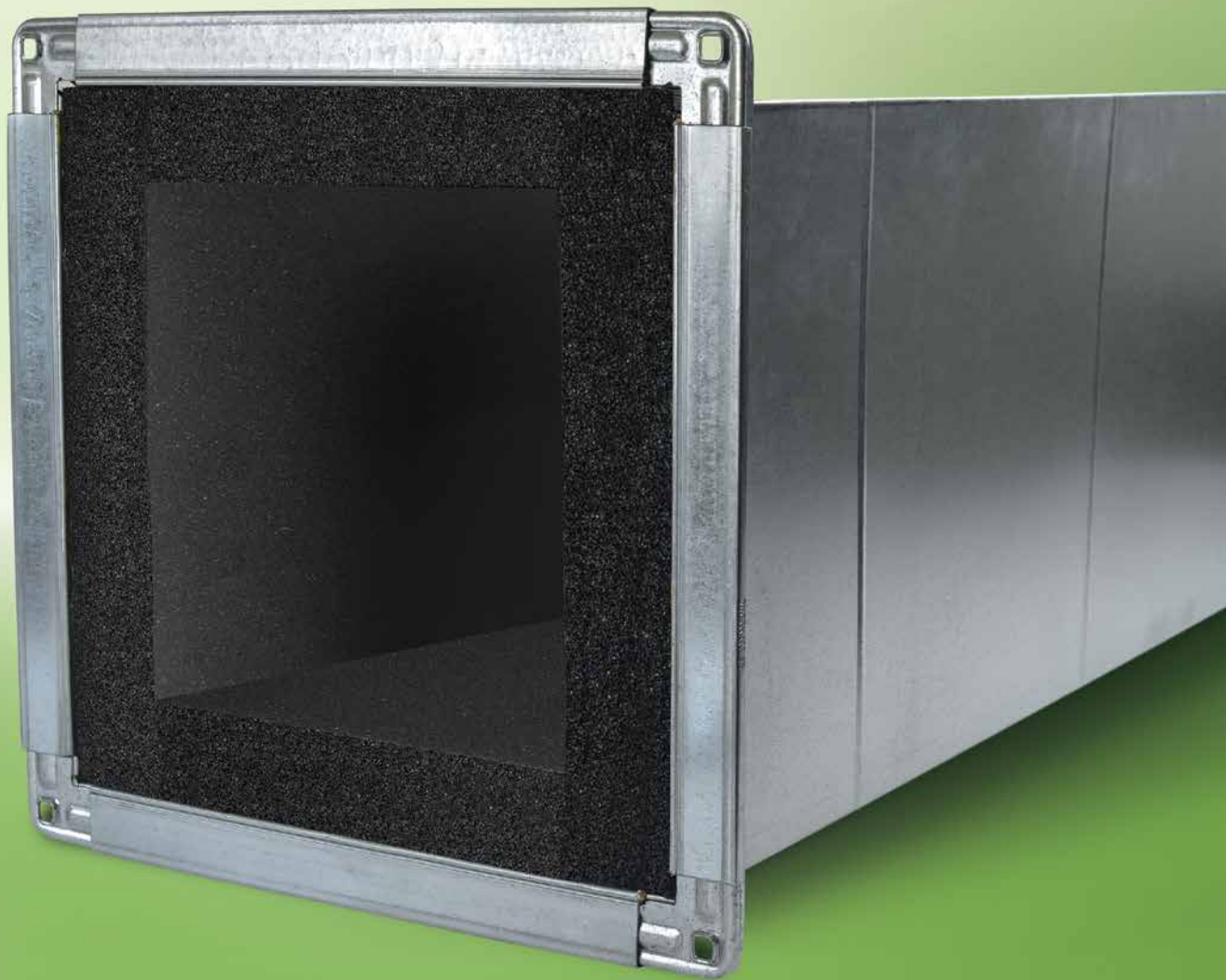


Fiber Free

AP/Armaflex® AP/Armaflex® FS Duct Liner and Wrap

The original, fiber-free, closed-cell thermal and acoustical duct insulation engineered to safeguard IAQ, attenuate HVAC noise, and reduce energy loss. AP Armaflex FS is PVC free.



- Fiber-free, non-particulating, formaldehyde-free, free of PDBE flame retardants, and low VOC
- Microban® antimicrobial product protection inhibits the growth of mold and mildew in the insulation
- Attenuates airborne noise to reduce background noise from HVAC systems
- Meets ASHRAE 90.1, ASHRAE Standard 189.1, IECC 2012 and California Title 24 for increased energy efficiency
- Designed to last the useful life of mechanical equipment

 armacell®



GREENGUARD Certified products are certified to GREENGUARD standards for low chemical emissions into indoor air during product usage. For more information, visit ul.com/gg.

Microban antimicrobial product protection is limited to the product itself and is not designed to protect the users of these products from disease causing microorganisms, or as a substitute for normal cleaning and hygiene practices.*

Technical Data: AP Armaflex® and AP Armaflex® FS Duct Liner and Wrap

Description:

Black flexible closed-cell elastomeric thermal and acoustical duct insulation in sheet and roll form

Specifications Compliance:

ASTM C 534, Type II — Sheet Grade 1 ASTM C 1534, Type I ASTM D 1056, 2B1	ASTM E 84, NFPA 255, UL723 ASTM G21/C1338 ASTM G22 CAN/ULC S102 ①	MEA 107-89M MIL-P-15280J, FORM S	NFPA 90A, 90B UL 181 UL 94 5V-A, V-0, File E55798 City of LA – RR 7642
---	--	-------------------------------------	---

Approvals, Certifications, Compliances:

- GREENGUARD Gold Certified.
- Manufactured without CFCs, HFCs, HCFCs, PBDEs, or Formaldehyde.
- Made with EPA registered Microban® antimicrobial product protection.
- Manufactured in the USA at an ISO 9001:2008 certified facility.

Typical Properties

Specifications:	Values	Test Method:
	AP Armaflex Through 1" Duct Liner and Wrap	AP Armaflex FS 1-1/2" & 2" Duct Liner and Wrap
Thermal Conductivity: Btu • in./h • ft ² • °F (W/mK)		
75°F Mean Temperature (24°C)	0.245 (0.0353)	0.28 (0.040)
90°F Mean Temperature (32°C)	0.254 (0.0366)	0.286 (0.042)
Water Vapor Permeability: Perm-in. [Kg/(s • m • Pa)]	0.05 (0.725 x 10 ⁻¹³)	0.08 (1.16 x 10 ⁻¹³)
Flame Spread and Smoke Developed Index:	25/50 rated	25/50 rated
Water Absorption, % by Volume:	0.2%	0.2%
Mold Growth:	Passed	Passed
Fungi Resistance :		
Bacterial Resistance:		
Upper Use Limit:	220°F (105°C) ②	300°F (149°C) ③
Lower Use Limit: ④	-297°F (-183°C) ⑤	-297°F (-183°C) ⑤
Ozone Resistance:	GOOD	GOOD
Erosion Resistance:	Does not break away, flake off or show evidence of delamination at velocities of 10,000 ft/min	

R-Value	R-1.4	R-2.1	R-3.1	R-4.2	R-6	R-8
Thickness:	3/8"	1/2"	3/4"	1"	1-1/2"	2"

Sound Absorption Coefficients Frequency	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	NRC	SAA
Thickness Nom. 1" (25mm)	0.01	0.13	0.39	0.69	0.29	0.26	0.40	0.38
Thickness Nom. 1-1/2" (38 mm)	0.07	0.26	0.92	0.31	0.49	0.53	0.50	0.49
Thickness Nom. 2" (50 mm)	0.14	0.62	0.44	0.43	0.51	0.45	0.50	0.51

Sizes:

Sheet: Width x Length	36" x 48"
Roll: Width	48" (all thicknesses) 56-1/4", 59", 60" (1/2", 1", and 1-1/2" thick)
Thickness	AP Armaflex Duct Liner and Wrap: 1/2", 3/4", and 1" AP Armaflex FS Duct Liner and Wrap: 1-1/2" and 2"

Outdoor Use

Painting with WB Finish or other protective jacketing is required to prevent damage to the insulation in exterior applications and to comply with the insulation protection sections of the International Energy Conservation Code (IECC) and ASHRAE 90.1.

① AP Armaflex meets CAN/ULC S102 through 1" thickness.

② AP Armaflex and AP Armaflex FS Black Duct Liner/Wraps withstand 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 220°F (105°C).

③ AP Armaflex FS is formulated with EPDM rubber giving it a higher upper use temperature than AP Armaflex.

④ At temperatures below -20°F (-29°C), elastomeric insulation starts to become less flexible. However, this characteristic does not affect thermal efficiency and resistance to water vapor permeability of Armaflex insulation.

⑤ For applications of -40°F to -297°F (-40°C to -183°C), contact Armacell.

ARMACELL LLC

TEL: 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. * Microban antimicrobial product protection is limited to the product itself and is not designed to protect the users of these products from disease causing microorganisms, or as a substitute for normal cleaning and hygiene practices. Microban International, Ltd. makes neither direct nor implied health claims for the products containing Microban® antimicrobial product protection. Data, photomicrographs and information presented are based on standard laboratory tests and are provided for comparative purposes to substantiate antimicrobial activity for non-public health uses. Microban is a registered trademark of Microban International, Ltd.

AP Armaflex & FS	Non SA Duct Liner/Wrap	Submittal	019	Eng/USA	4/2017
------------------	------------------------	-----------	-----	---------	--------