

Fiber Free

# AP/Armaflex® AP/Armaflex® FS

Sheet & Roll Insulation

The original, fiber-free, flexible elastomeric pipe, valve and duct insulation for reliable protection against condensation, mold and energy loss. AP Armaflex FS is PVC free.



- Fiber-free, formaldehyde-free, low VOC and non-particulating formulation protects indoor air quality
- Closed-cell structure provides excellent condensation control
- Built-in vapor barrier eliminates need for additional vapor retarder
- Microban® antimicrobial product protection inhibits the growth of mold and mildew in the insulation
- 25/50 rated for use in air plenums up to 1" thickness in AP Armaflex and 1-1/2" and 2" thickness in AP Armaflex FS
- Thickness up to 2" with R-value up to R-8

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](http://ul.com/gg).

 **armacell**®



PROTECTION THAT LIVES ON  
**MICROBAN**®

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 Sheet and Roll Insulation

### Description:

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

### Specifications Compliance:

ASTM C 534, Type II — Sheet Grade 1 ASTM C 1534 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 ② MIL-C-3133C (MIL STD 670B) Grade SBE 3 ②	NFPA 90A, 90B UL 181 UL 94 5V-A, V-0, File E55798 City of LA – RR 7642
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### Approvals, Certifications, Compliances:

- 3rd party certified by FM Approvals through 1" thickness.
- GREENGUARD Gold Certified.
- Manufactured without CFCs, HFCs, HCFCs, PBDEs, or Formaldehyde.
- Made with EPA registered Microban® antimicrobial product protection.
- All Armacell facilities in North America are ISO 9001:2008 certified.

### Typical Properties

Specifications:	Values			Test Method:
	AP Armaflex Through 1"	AP Armaflex FS 1-1/2" & 2"	AP Armaflex 1-1/2" & 2"	
<b>Thermal Conductivity:</b> Btu • in./h • ft <sup>2</sup> • °F (W/mK)				
75°F Mean Temperature (24°C)	0.245 (0.0353)	0.28 (0.040)	0.25 (0.036)	ASTM C 177 or C 518
90°F Mean Temperature (32°C)	0.254 (0.0366)	0.286 (0.041)	0.256 (0.037)	
<b>Water Vapor Permeability:</b> Perm-in. [Kg/(s • m • Pa)]	0.05 (0.725 x 10 <sup>-13</sup> )	0.08 (1.16 x 10 <sup>-13</sup> )	0.05 (0.725 x 10 <sup>-13</sup> )	ASTM E 96, Procedure A
<b>Flame Spread and Smoke Developed Index:</b>	25/50 rated	25/50 rated	Does not pass	ASTM E 84 CAN/ULC S102 ①
<b>Water Absorption, % by Volume:</b>	0.2%	0.2%	0.2%	ASTM C 209
<b>Mold Growth:</b>	Passed	Passed	Passed	UL181
<b>Fungi Resistance:</b>				ASTM G21/C1338
<b>Bacterial Resistance:</b>				ASTM G22
<b>Upper Use Limit:</b>	220°F (105°C) ③	300°F (149°C) ④	220°F (105°C) ③	ASTM C534
<b>Lower Use Limit:</b> ⑤	-297°F (-183°C) ⑥	-297°F (-183°C) ⑥	-297°F (-183°C) ⑥	ASTM C534
<b>Ozone Resistance:</b>	GOOD	GOOD	GOOD	Ozone Chamber Test

R-Value:	R-1.6	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"

### Sizes:

<b>Sheet:</b> Width x Length Thickness (nominal)	36" x 48" (915 m x 1.22 m) 1/8", 1/4", 3/8", 1/2", 3/4", 1", 1-1/2" & 2" (3, 6, 10, 13, 19, 25, 38 & 50 mm)	
<b>Roll:</b> Width Thickness (nominal) x Length	48" wide (1.22 m) 3/8" x 100' (10 mm x 30.5 m) 1/2" x 70' (13 mm x 21.4 m) 3/4" x 50' (19 mm x 15.2 m)	1" x 35' (25 mm x 10.7 m) 1-1/2" x 25' (38 mm x 7.6 m) 2" x 18' (50 mm x 5.4 m)

### 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 meets MIL-P-15280J, FORM S and MIL-C-3133C (MIL STD 670B) Grade SBE through 1" thickness.
- ③ AP Armaflex and AP Armaflex FS Sheet and Roll Insulation 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 Sheet and Roll 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).
- ④ AP Armaflex FS is formulated with EPDM rubber giving it a higher upper use temperature than AP Armaflex.
- ⑤ 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.
- ⑥ For applications of -40°F to -297°F (-40°C to -183°C), contact Armacell.

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AP Armaflex & FS	Sheet Roll	Submital	015	Eng/USA	5/2018
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