# 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

# armacell







# 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<sup>1</sup>

MEA 107-89M MIL-P-15280J, FORM S<sup>2</sup> MIL-C-3133C (MIL STD 670B) Grade SBE 3<sup>2</sup>

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.
   All Armacell facilities in North America are ISO 9001:2008 certified.

Typical Properties									
Specifications:	Values					Test Method:			
AP Armafle Through 1			AP Armaflex FS 1-1/2" & 2"		AP Armaflex				
					1-1/2" & 2"				
Thermal Conductivity: Btu • in./h									
75°F Mean Temperature (24°C) 90°F Mean Temperature (32°C)	0.245 (0.0353) 0.254 (0.0366)		0.28 (0.040) 0.286 (0.041)		0.25 (0.036) 0.256 (0.037)	ASTM C 177 or C 518			
Water Vapor Permeability: 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			
Flame Spread and Smoke Developed Index:	25/50 rated		25/50 rated		Does not pass	ASTM E 84 CAN/ULC S102 <sup>1</sup>			
Water Absorption, % by Volume:	0.2%		0.2%		0.2%	ASTM C 209			
Mold Growth: Fungi Resistance: Bacterial Resistance:	Passed  220°F (105°C)  -297°F (-183°C) 5  GOOD		(Passed)  (220°F (105°C))  (-297°F (-183°C) 5  (GOOD)		Passed	(UL181) (ASTM G21/ (ASTM G22)	ASTM G21/C1338		
Upper Use Limit: 3					220°F (105°C)	ASTM C534			
Lower Use Limit: 4					-297°F (-183°C) 5	ASTM C534			
Ozone Resistance:					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:			'	'	<u>'</u>	,			
Sheet: Width x Length	36" x 48" (.915m x1.22m)								
Thickness (nominal)		1/8", 1/4", 3/8", 1/2", 3/4", 1", 1-1/2" & 2" (3, 6,10, 13, 19, 25, 38 & 50mm)							
Roll: Width		48" wide (1.22m)							
Thickness (nominal) x Leng	:h								
	(1/2" x 70' (13mm x 21.4m) (1-1/2" x 25' (38mm x 7.6m) (3/4" x 50' (19mm x 15.2m) (2" x 18' (50mm x 5.4m)								

 $^{\rm 1}$  AP Armaflex meets CAN/ULC S102 through 1" thickness.

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AP Armaflex & FS	Sheet Roll	Submittal	015	Eng/USA	8/2015
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<sup>&</sup>lt;sup>2</sup> AP Armaflex meets MIL-P-15280J, FORM S and MIL-C-3133C (MIL STD 670B) Grade SBE through 1" thickness.

<sup>&</sup>lt;sup>3</sup> On the heating cycle, AP Armaflex Pipe Insulation will withstand temperatures as high as 220°F (105°C). 520, 520 Black or 520 BLV Adhesive may be used with pipe insulation applications up to 220°F (105°C).

<sup>&</sup>lt;sup>4</sup>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.

<sup>&</sup>lt;sup>5</sup> For applications of -40°F to -297°F (-40°C to -183°C), contact Armacell.