



AP Armaflex® & AP Armaflex W Tube Insulation

Superior Moisture Control, Mold-Resistant, Available Black or White



- Closed-cell, nonwicking
- GREENGUARD Indoor Air Quality Certified®
- Microban® antimicrobial product protection
- The IAQ Insulation™
- Fiber-free
- 25/50 rated through 1" wall
- 25/50 rated through 2" wall available in AP Armaflex FS (see AP Armaflex FS submittal form)



AP Armaflex (and AP Armaflex W) Pipe (Tube) Insulation

AP Armaflex Pipe (Tube) Insulation is the original closed cell, fiber-free elastomeric foam and the world's most recognized brand in flexible mechanical insulation.

- **Proven:** World's first choice for insulating chilled water and refrigeration lines
- **Mold resistant:** Made with Microban antimicrobial product protection
- **Indoor Air Quality-friendly:** Fiber-free, formaldehyde-free, low VOCs, nonparticulating. GREENGUARD Indoor Air Quality Certified®
- **Durable:** No fragile vapor retarder

Description

AP Armaflex Pipe (Tube) Insulation is a black or white flexible elastomeric thermal insulation. The expanded closed-cell structure makes it an efficient insulation. It is manufactured without the use of CFC's, HFC's or HCFC's. All AP Armaflex products are made with Microban® antimicrobial product protection for added defense against mold on the insulation.

- Nominal wall thicknesses of 3/8", 1/2", 3/4" and 1" (10, 13, 19 and 25mm)
- Popular sizes up to 8" IPS

Factory Mutual (FM) Approvals

AP Armaflex is approved through continuing supervision by Factory Mutual Approvals to consistently provide actual values on these key performance criteria for mechanical system insulation:

- **Thermal Conductivity:** 0.25 BTU-in/hr. ft² °F
- **Water Vapor Transmission:** 0.05 perm-inch
- **Fire Rating:** will not contribute significantly to fire (simulated end-use testing)

As tested by ASTM E 84 "Method of Test for Surface Burning Characteristics for Building Materials" AP Armaflex Pipe Insulation has a flame-spread index of less than 25 and a smoke-developed index of less than 50.

AP Armaflex meets CAN/UL S102.

Note: 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.

ALL ARMACELL FACILITIES
IN NORTH AMERICA ARE
ISO 9001:2000 CERTIFIED.

AP Armaflex Tube Insulation

www.armacell.us

For the latest document, please refer to our website.

Uses

- Retards heat gain and controls condensation drip from chilled-water and refrigeration systems. Efficiently reduces heat flow for hot-water plumbing, liquid-heating and dual-temperature piping
- Acceptable for use in air plenums and conforms to NFPA 90A and NFPA 90B requirements

The recommended temperature usage range for AP Armaflex Pipe Insulation is -297°F to +220°F (-183°C to +105°C). For use on cold pipes, thicknesses have been calculated to control condensation on the insulation outer surface, as shown in the table of thickness recommendations. AP Armaflex meets the energy code requirements of ASHRAE 90.1, International Energy Conservation Code (IECC) and other building codes.

Application

AP Armaflex Pipe Insulation in unslit tubular form can be slipped onto piping before it is connected, or it can be slit lengthwise and snapped over piping already connected. Fitting covers are fabricated from miter-cut tubular form. In all cases, butt joints and seams are to be sealed with one of our Armaflex adhesives: Armaflex 520, 520 Black or, where a low V.O.C. adhesive is required, 520 BLV. 520 Adhesives are contact adhesives; therefore, in all cases, both surfaces to be joined are coated with adhesive.

For pipes greater than 8" IPS*, use AP/Armaflex Sheet/Roll insulation (black only). For thicknesses greater than 1", sleeve the insulation. See technical bulletin #030 for additional information.

AP Armaflex normally requires no supplemental vapor-retarder protection but additional vapor-retarder protection may be necessary when installed on very-low-temperature piping or exposure to continually high humidity conditions.

AP Armaflex is designed for installation above or below ground. For below ground applications, contact Armacell or see our Technical Bulletin No. 7 on our website, www.armacell.com. Outdoors, a weather-resistant protective finish is to be applied and Armaflex WB Finish is recommended.

Armaflex insulation products must be installed according to "Installation of Armaflex Insulations" brochure. Proper installation is required to assure Armaflex insulation performance.

AP Armaflex FS pipe insulation is available in 1-1/2" and 2" wall thicknesses with 25/50 rating for ID size range from 3/8" to 8" IPS*. See AP Armaflex FS submittal.

Specification Compliance

AP Armaflex Pipe Insulation developed to meet:

ASTM C 534, Type I — Tubular Grade 1	ASTM G-22 ASTM D 1056, 2B1
ASTM E 84, NFPA 255, UL 723 CAN/ULC S102	MIL-P-15280J, FORM T (Black) MIL-C-3133C (MIL STD 670B), Black
UL 94 5V-5A, V-O, File E 55798	Grade SBE 3
NFPA 90A, 90B	MEA 96-85-M
UL 181	City of LA – RR 7642
ASTM G-21/C1338,	

Physical Properties

Specifications	Values	Test Method
Thermal Conductivity, Btu • in./h • ft² • °F (W/mK) 75°F Mean Temperature (24°C) 90°F Mean Temperature (32°C)	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 ⁻¹³)	ASTM E 96, Procedure A
Flame Spread and Smoke Developed Index	25/50*	ASTM E 84 CAN/ULC S102 ^③
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^①	220°F (105°C)	—
Lower Use Limit^②	-297°F (-183°C)**	—
Ozone Resistance	GOOD	—
Sizes		
Wall Thickness, (nominal) Form	3/8", 1/2", 3/4", 1", (10, 13, 19 and 25mm)	
Inside Diameter, Tubular Form	3/8" ID to 8" ID* (10mm ID to 203mm)	—
Length of Sections, Feet, Tubular Form	6 (1.8m) *Black Only	

Notes

① 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).

② 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.

③ AP Armaflex Black tested for CAN/ULC 5102. AP Armaflex White determined to be comparable.

* For 25/50 above 1" (25mm) please see our AP Armaflex FS Submittal.

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



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