



ENGINEERED FOR DURABILITY

# ArmaFlex Shield

## Continuous Coil Pipe Insulation

New ArmaFlex® Shield flexible foam insulation is a moisture-resistant and UV-resistant product with a durable protective jacket specially designed for line set, HVAC and refrigeration applications. This tough coating can take the abuse of challenging installations and stands up to extreme elements like UV, heat and cold, making it a great choice for outdoor applications.

- // Protection against thermal losses, condensation and moisture ingress
- // Durable outer jacket resists damage due to sunlight, line trimmers, and other outdoor hazards
- // Meets IECC code requirements for outdoor insulation
- // Meets code requirements for installation in plenums
- // Meets California Building Energy Efficiency Standards, Title 24
- // Comes in continuous coils for fast installation with fewer seams

[www.armacell.us](http://www.armacell.us)



 **armacell**<sup>®</sup>  
ArmaFlex<sup>®</sup>

# TECHNICAL DATA – ArmaFlex® SHIELD

## Description

ArmaFlex Shield consists of an ArmaFlex insulation core with a flexible, factory applied polymeric protective covering designed to prevent damage to the insulation from sunlight, installation, and physical abuse.

## Uses

For line set, HVAC, mechanical and plumbing lines in commercial and residential buildings.

## Outdoor Installation

ArmaFlex Shield meets the requirements of the International Energy Conservation Code (IECC) for protection of insulation installed outdoors. Its durable, outer covering resists damage due to sunlight and other outdoor hazards including line trimmers used for lawn maintenance. 5-year limited warranty.

## Installation

ArmaFlex Shield can be slit easily with a sharp, non-serrated knife and installed over a pipe. Longitudinal and butt joints should be sealed properly with ArmaFlex 520 adhesive.

## Specification Compliance

ASTM C 534, 2012 IECC: Section R403.3.1 2012 IECC: Section C403.2.8	2015 IECC: Section R403.4.1 2015 IECC: Section C403.2.10 Plenum Rated according to the International Mechanical Code (IMC) California Building Energy Efficiency Standards, Title 24, Section 120.3 b (1 and 2) and c
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## Typical Properties

Property	Value	Test Method
<b>Thermal Conductivity:</b> Btu • in/h • ft <sup>2</sup> • °F (W/mK)		
75°F Mean Temperature [24°C]	0.25 (0.036)	ASTM C 177 or C 518
100°F Mean Temperature [38°C]	0.257 (0.037)	
<b>Water Vapor Permeability:</b> Perm-in. [Kg/[s • m • Pa]]	0.03 (0.435 x 10 <sup>-13</sup> )	ASTM E 96, Procedure A Meets Class 1 rating
<b>Flame Spread and Smoke Developed Index through 1" wall thickness</b>	25/50 rated	ASTM E 84, UL 723, CAN ULC S102.2 ①
<b>Water Absorption, % by Volume</b>	0.2 %	ASTM C 1763
<b>Upper Use Limit:</b>	220°F [82°C]	
<b>Lower Use Limit:</b> ②	-297°F [-128°C]	
<b>Ozone Resistance:</b>	Good	
<b>UV Weather Resistance</b>	Excellent: no deterioration ③	ASTM G154 tested to 5000 hours

① CAN ULC S102.2 for up to 3/4" wall thickness.

② At -40 °F (-73 °C), the insulation becomes hard and brittle. This hardening characteristic does not affect thermal efficiency or water vapor permeability.

③ ArmaFlex Shield meets the UV resistance requirements of ASTM C1775 which describes requirements for insulation protective jacketing used outdoors.

R-value	1/4" (6 mm)	3/8" (10 mm)	1/2" (13 mm)	5/8" (16 mm)	3/4" (19 mm)	7/8" (22 mm)	1-1/8" (29 mm)
1/2" (13 mm) Wall	3.8	3.3	3.3	3.3	3.3	3.3	3.3
3/4" (19 mm) Wall	6.4	5.9	5.5	5.5	5.5	5.4	5.4
1" (25 mm) Wall	–	–	7.2	7.2	7.0	7.0	–

<b>Wall (inches)</b>	1/2" (13 mm)	3/4" (19 mm)	1" (25 mm)
<b>ID (inches)</b>	1/4", 3/8", 1/2", 5/8", 3/4", 7/8" and 1-1/8" (6, 10, 13, 16, 19, 22, 28 mm)	3/8", 1/2", 5/8", 3/4", 7/8" and 1-1/8" (6, 10, 13, 16, 19, 22, 28 mm)	1/2", 5/8", 3/4" and 7/8" (12, 15, 18, and 22 mm)
<b>Length (feet) corresponds to ID above</b>	1/4" = 155', 3/8" = 115', 1/2" = 105', 5/8" = 95', 3/4" = 85', 7/8" = 75', 1-1/8" = 55'	3/8" = 80', 1/2" = 70', 5/8" = 60', 3/4" = 40', 7/8" = 40', 1-1/8" = 35'	1/2" = 40', 5/8" = 35', 3/4" = 30', 7/8" = 25'

All data and technical information are based on results achieved under typical application conditions. It is the customer's responsibility to verify if the product is suitable for the intended application. The responsibility for professional and correct installation and compliance with relevant building regulations lies with the customer. By ordering/receiving product you accept the **Armacell General Terms and Conditions of Sale** applicable in the region. Please request a copy if you have not received these.

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# ABOUT ARMACELL

As the inventors of flexible foam for equipment insulation and a leading provider of engineered foams, Armacell develops innovative and safe thermal, acoustic and mechanical solutions that create sustainable value for its customers. Armacell's products significantly contribute to global energy efficiency making a difference around the world every day. With 3,100 employees and 24 production plants in 16 countries, the company operates two main businesses, Advanced Insulation and Engineered Foams. Armacell focuses on insulation materials for technical equipment, high-performance foams for high-tech and lightweight applications and next generation aerogel blanket technology.

For more information, please visit:

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