



PRODUCT SELECTION GUIDE

Fiber Free



Quick guide for selecting fiber-free, mold-resistant mechanical insulation from the makers of Armaflex®

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.*

All of Armacell's products are produced from flexible, fiber-free, elastomeric foam material which is low VOC and formaldehyde free. Each insulation option saves energy, is thermally efficient and moisture resistant by its nature. Our AP branded products are made with Microban® antimicrobial protection, are GREENGUARD Gold certified and suitable for use in the air plenum.

Because of its inherent durability and long life cycle, all of our products (when installed properly) should outlive fibrous installations which are susceptible to moisture, damage and fibrous degradation over time. Most Armacell product installations will prove to be long lasting, boosting investment pay-back and sustainability over the life of the system.

Tube Products (Pipe Insulation)

Select the original fiber-free tubular foam insulation for preventing energy waste and water vapor transmission. Available in regular unslit tubes and lap seal formats.



AP Armaflex® White and Black Tubes

Original flexible, closed cell elastomeric tubes in black and white



NH Armaflex® Tubes

Non-halogen tubes especially formulated for shipboard use



AP Armaflex® Black LapSeal

Self-sealing tube insulation with reinforced lap seal



UT Solaflex

300° upper temperature insulation ideal for solar applications, hot gas piping and low pressure steam lines



AP Armaflex® White LapSeal

Self-sealing tube insulation with reinforced lap seal



Tubolit® & Tubolit® SS

Economical polyethylene insulation for plumbing lines



Armaflex® Coil

Continuous coil pipe insulation designed for labor savings and to minimize waste



AC Accoflex®

Flexible pipe insulation with UV radiation protection for commercial and residential applications

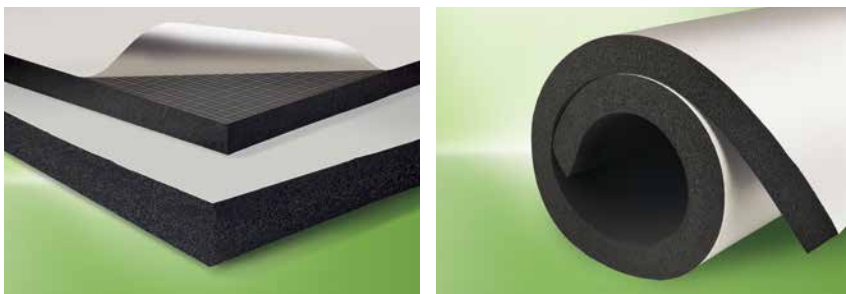
Sheet and Roll Products

Choose sheet and roll insulation for mechanical systems, chillers, larger surfaces, tanks and fittings. Available in regular and self-adhering for both interior and exterior applications.*



AP Armaflex® & AP Armaflex® FS

Original fiber-free insulation for thermal applications



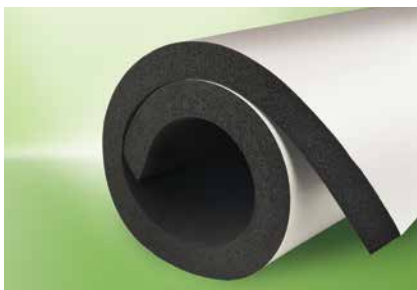
AP Armaflex® SA & AP Armaflex® FS SA

Fiber-free insulation for thermal applications in self-adhering format



NH Armaflex®

Nonhalogen sheet and roll insulation material especially formulated for shipboard use



ArmaTuff® & ArmaTuff® SA

Insulation with durable, white metal, factory-applied cladding made for exterior applications

Adhesives & Coatings



520 Adhesive & 520 Black

Recommended adhesive specially formulated for Armaflex insulation



520 BLV & Low VOC Spray Adhesive

Low VOC adhesive alternatives



WB Finish

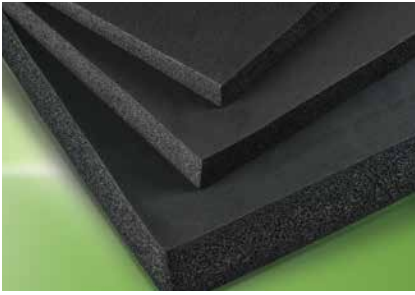
Latex-based, indoor/outdoor, UV-resistant coating for Armaflex insulation

* 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.

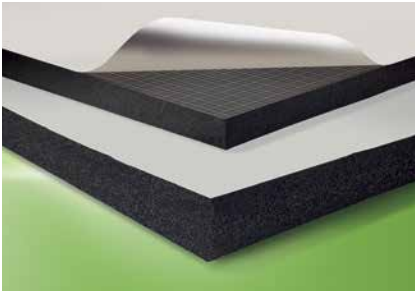
Duct Liner and Wrap

Ducts should be lined or wrapped with fiber-free elastomeric foam insulation to improve thermal efficiency, control condensation, absorb noise and protect indoor air quality.



AP Armaflex® & AP Armaflex® FS

The original fiber-free insulation for thermal and acoustical duct liner or wrap applications



AP Armaflex® SA & AP Armaflex® FS SA

Fiber-free insulation for thermal and acoustical duct liner or wrap applications in self-adhering format



AP Coilflex® Duct Liner

Conformable, fiber-free insulation for thermal and acoustical duct liner for automatic coil lines



AP Spiralflex®

Lightweight foam on a flexible backer especially engineered for use as a spiral duct liner

Accessories



Armafix® Pipe Hanger

Single piece insulated pipe hanger with self-adhesive closure



Armaflex® Pre-fabricated Fittings

Made to order fittings for T's, Elbows, P Traps and more



AP Armaflex® Insulation Tape

Pressure sensitive foam tape for insulating pipes and fittings



Armaflex® Black LapSeal Tape

Low profile tape for AP Armaflex Black LapSeal end seams

Iron / Copper Pipe Size Chart

Choose sheet and roll insulation for pipes larger than 8", mechanical systems, chillers, larger surfaces, tanks and fittings. Available in regular and self-adhering for both interior and exterior applications.

Nominal Insulation ID	Fits Pipe Size			Actual Insulation ID ^{1,2}			
	Copper ID	Iron / PVC IPS	DN	Min ID (in)	Max ID (in)	Min ID (mm)	Max ID (mm)
3/8"	1/4"	1/8"	6	0.420	0.500	10.7	12.7
1/2"	3/8"	1/4"	8	0.560	0.640	14.2	16.3
5/8"	1/2"	3/8"	10	0.710	0.790	18.0	20.1
3/4"	5/8"	-	-	0.810	0.910	20.6	23.1
7/8"	3/4"	1/2"	15	0.940	1.050	23.9	26.7
1-1/8"	1"	3/4"	20	1.200	1.310	30.5	33.3
1-3/8"	1-1/4"	1"	25	1.450	1.570	36.8	39.9
1-5/8"	1-1/2"	1-1/4"	32	1.710	1.830	43.4	46.5
1-1/2"	-	1-1/2"	40	1.970	2.090	50.0	53.1
2-1/8"	2"	-	-	2.220	2.340	56.4	59.4
2"	-	2"	50	2.580	2.780	65.5	70.6
2-5/8"	2-1/2"	-	-	2.720	2.880	69.1	73.2
2-1/2"	-	2-1/2"	65	3.080	3.280	78.2	83.3
3-1/8"	3"	-	-	3.230	3.390	82.0	86.1
3"	-	3"	80	3.700	3.900	94.0	99.1
3-5/8"	3-1/2"	-	-	3.740	3.880	95.0	98.6
4-1/8"	4"	3-1/2"	90	4.250	4.420	108.0	112.3
4"	-	4"	100	4.750	4.950	120.7	125.7
5"	-	5"	125	5.810	6.010	147.6	152.7
6"	-	6"	150	6.880	7.080	174.8	179.8
8"	-	8"	200	8.880	9.080	225.6	230.6

1. ID tolerances are typical values and may differ depending on the product and wall thickness.
2. Insulation ID is sized larger than the pipe OD to fit over copper pipe couplings. When properly installed, a gap between the insulation and pipe will not adversely effect the insulation performance.

NOTE: See installation guide for proper installation instructions.

WEB: www.armacell.us > Knowledge Center > Document Downloads > Mechanical Insulation > Installation Manuals



Product Applications

Common Applications	REFRIGERATION, HOT & COLD LINES, CHILLED WATER	HVAC	INTERIOR DUCT SYSTEMS	EXTERIOR DUCT SYSTEMS
Product Requirements	<ul style="list-style-type: none"> • Microban antimicrobial protection • Condensation control 	<ul style="list-style-type: none"> • 25/50 rating • Tough, durable • AP Products: Microban antimicrobial protection • Condensation control 	<ul style="list-style-type: none"> • Moisture resistant • 25/50 rating • Noise blocking • Condensation control • Microban antimicrobial protection • Condensation control 	<ul style="list-style-type: none"> • Outdoors • Maintenance-free • UV-resistant
Recommended Product	<ul style="list-style-type: none"> • AP Armaflex • AP Armaflex W • AP Armaflex White LapSeal • AP Armaflex Black LapSeal • Armaflex Coil (no added antimicrobial) 	<ul style="list-style-type: none"> • AP Armaflex • AC Accoflex • AP Armaflex Black LapSeal • AP Spiralflex • Armaflex Coil (no added antimicrobial) 	<ul style="list-style-type: none"> • AP Armaflex and FS Duct Liner/Wrap • AP Armaflex SA Self-Adhering and FSSA Duct Liner/Wrap • AP Coilflex • AP Spiralflex 	<ul style="list-style-type: none"> • ArmaTuff and ArmaTuff SA • AP Armaflex (with WB Finish)

Armacell Product Specifications

Specifications	Test Method	AP Armaflex Tubes, AP Armaflex White LapSeal, AP Armaflex Black LapSeal	AP Armaflex Sheet, Rolls, Duct Liner/Wrap, AP Coilflex, AP Spiralflex	AC Accoflex Tubes
Thermal Conductivity, Btu • in./h • ft² • °F (W/mK) 75°F mean temperature [24°C] 90°F mean temperature [32°C]	ASTM C 177 or C 518	0.245 [0.0353] 0.254 [0.0366]	0.245 [0.0353] 0.254 [0.0366]	0.27 [0.039] 0.226 [0.040]
Water Vapor Permeability, Perm-inch. [Kg/(s•m•Pa)]	ASTM E 96, Procedure A	0.05 [0.725 x 10 ⁻¹³]	0.05 [0.725 x 10 ⁻¹³] (AP Armaflex)	0.08 [1.16 x 10 ⁻¹³]
Flame Spread and Smoke Developed Index	ASTM E 84 UL94	25/50 V-0, 5VA	25/50	25/50
Microban Antimicrobial Protection	—	Yes	Yes	No
Water Absorption, % by Volume	ASTM C 209	0.2	0.2	0.2
Upper Use Limit	—	220°F [105°C]	180°F [82°C]	220°F [105°C]
Lower Use Limit ①	—	-297°F [-183°C]	-297°F [-183°C]	-297°F [-183°C]
Ozone Resistance	ASTM C 1534	Good	Good	Good
Ultraviolet (UV) Resistance	QUV Chamber Test	—	—	Good
Third Party Certification	Factory Mutual Approvals	Yes	Yes	—
GREENGUARD Gold	—	Yes	Yes	—
Specification Compliance	—	ASTM C534	ASTM C534	ASTM C534

① At temperatures below -20°F (-29°C) elastomeric insulation starts to become less flexible. However, this characteristic does not affect thermal efficiency or water vapor permeability of Armaflex insulation. For applications of -40°F to -297°F (-40°C to -183°C) contact Armacell.

	MECHANICAL SYSTEMS, CHILLERS	SOLAR OR HIGH TEMPERATURE (300°F)	RESIDENTIAL PLUMBING	MARINE & OFFSHORE
	<ul style="list-style-type: none"> • Thermally efficient • 25/50 rating • Sheet & roll forms • Easy to cut and fabricate • Microban antimicrobial protection 	<ul style="list-style-type: none"> • Thermally efficient • High temperature range for solar collectors or hot water piping • Mold resistant 	<ul style="list-style-type: none"> • Economical • 25/50 rating • Noise blocking 	<ul style="list-style-type: none"> • Non-halogen
	<ul style="list-style-type: none"> • AP Armaflex • AP Armaflex Sheet and Rolls • AP Armaflex Black LapSeal 	<ul style="list-style-type: none"> • UT Solaflex 	<ul style="list-style-type: none"> • Tubolit 	<ul style="list-style-type: none"> • NH Armaflex

	NH Armaflex	UT Solaflex	ArmaTuff	Tubolit
	0.27 [0.039] 0.276 [0.040]	0.28 [0.046] 0.286 [0.041]	0.25 [0.036] 0.256 [0.037]	0.25 [0.036]
	0.05 [0.725 x 10 ⁻¹³]	0.08 [1.16 x 10 ⁻¹³]	0.05 [7.25 x 10 ⁻¹³] 0.00 Laminate	0.00 [0.0 x 10 ⁻¹³]
	Meets EB 4013, SOLAS, USN test. Toxicity-free V-0	25/50 V-0	(for exterior application)	25/50 HBF
	No	No	Yes	No
	0.2	0.2	0.2 0.0 Laminate	0.2
	250°F [120°C]	300°F [150°C]	180°F [82°C]	200°F [93°C]
	-297°F [-183°C]	-297°F [-183°C]	-297°F [-183°C]	-200°F [-129°C]
	Good	Excellent	Excellent	Good
	—	Excellent	Excellent	—
	Yes	—	—	—
	Yes	Yes	Yes	Yes
	ASTM C534	ASTM C534	ASTM C534	ASTM C1427



The Armacell Advantage

Building Relationships That Endure

Armacell is an easy access organization that values customers as business partners. Support is available for help with installation, technical questions and specification assistance.

- **Customer Service:** The Armacell Customer Service Team is the best in our industry. Teams from manufacturing, logistics and customer service work to anticipate surges in demand, monitor service levels and promptly resolve any customer issues.
- **Application and Technical Assistance:** Guidance and training for installers, from the experts who trained an industry.
- **Specification Assistance:** Specifiers can receive guidance for writing mechanical specifications and selecting the right solution for their project.

Call 800.866.5638 8:00 a.m. – 4:30 p.m. EST for assistance.

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* 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.

World Leader in Mechanical Insulation

Armacell is the global leader in mechanical insulation and foam technologies. Armacell produces Armaflex®, the world's first elastomeric thermal insulation and provides product solutions to meet the challenges of thermal efficiency, condensation control, indoor air quality, sound attenuation and long-lasting performance.



Armacell has unrivaled global capabilities bolstered by 23 manufacturing facilities around the world including five operations in the US and one in Canada. Globally integrated research and development allows our scientists and technicians to benchmark global practices and adapt them to either global or regional requirements, codes or specifications.

