MECHANICAL INSULATION

Product Selector

Quick reference guide for selecting the right mechanical insulation to ensure thermal efficiency, control condensation, and save energy. These trusted insulation solutions represent the North American product portfolio.

www.armacell.com

armacell®

MAKING A DIFFERENCE AROUND THE WORLD

SOLUTIONS
FOR ENERGY SAVINGS

For generations you've trusted ArmaFlex®, the original flexible elastomeric foam insulation. All of Armacell's insulation products are fiber-free, low VOC and formaldehyde free. Each insulation in our product portfolio offers superior condensation control and thermal performance you can count on.

Armacell's newest innovation, ArmaFlex Ultra with FlameDefense™ Technology, is the first elastomeric foam insulation Classified by UL to UL 723 at 25/50. This third-party certification proves our commitment to product safety and compliance. All AP/ArmaFlex-branded products are made with Microban® antimicrobial protection, are GREENGUARD Gold certified and now have Environmental Product Declarations (EPDs) to show our dedication to material transparency.

Because of the inherent durability and long life cycle, all of our products (when installed properly) should outlive fiberglass installations which are susceptible to moisture, damage and degradation over time. Count on Armacell's product line to boost investment pay-back and sustainability over the life of the system.

Tube Products

Pipe Insulation

ArmaFlex® Ultra

The first elastomeric pipe insulation Classified by UL to UL 723 at 25/50 for air plenums

ArmaFlex® UT

300°F max-use insulation for VRF, solar, dual-temperature, hot gas piping, and low pressure steam lines

AP/ArmaFlex® Black and White Tubes

Original flexible, closed cell elastomeric tubes in black and white

AP/ArmaFlex® Black and White LapSeal

Self-sealing tube insulation with reinforced lap seal

ArmaFlex® Shield

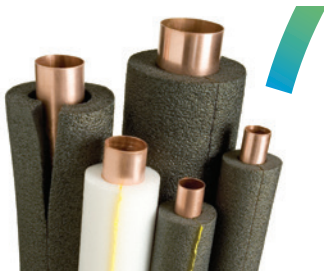
Pipe insulation with durable, protective coating

ArmaFlex® Coil

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

NH/ArmaFlex® Tubes

Halogen-free insulation for stainless steel applications below 250°F



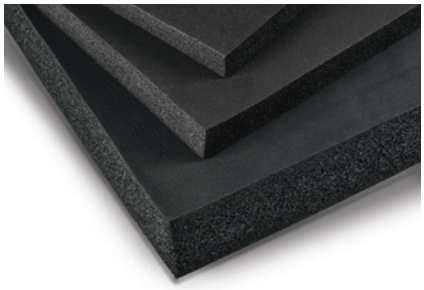
ArmaLight® Imcoa®, Tubolit®, Tundra®

Economical polyethylene insulation for plumbing lines, in semi-slit and self-seal closure

Sheet and Roll Products

ArmaFlex® Ultra

Sheet and roll insulation Classified by UL to UL 723 at 25/50 for air plenums

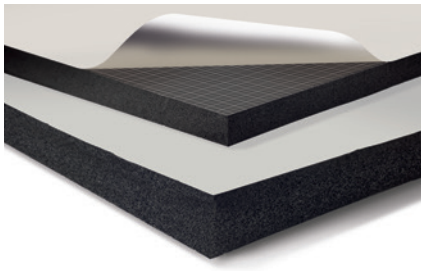


AP/ArmaFlex® & AP/ArmaFlex® FS

Original fiber-free insulation for thermal applications

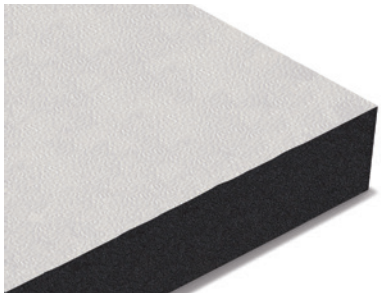
ArmaFlex® Ultra SA

Self-adhering insulation Classified by UL to UL 723 at 25/50 for air plenums



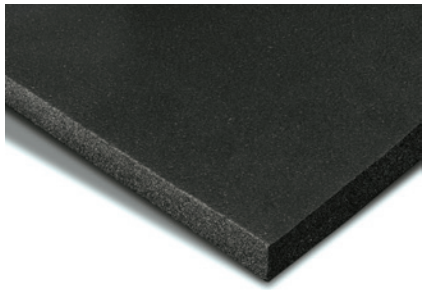
AP/ArmaFlex® SA & AP/ArmaFlex® FS SA

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



ArmaTuff® & ArmaTuff® SA

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



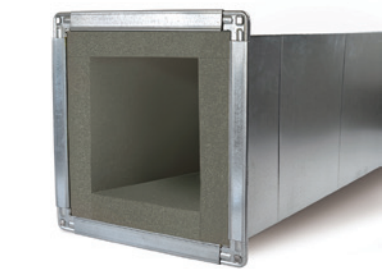
ArmaFlex® UT

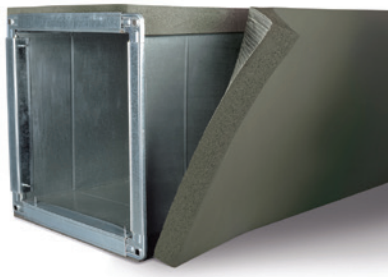
300°F max-use insulation for VRF, solar, dual-temperature, hot gas piping, and low pressure steam lines

ArmaLight® Imcoa®, Tubolit®, Tundra®

Economical polyethylene sheet and roll insulation for larger pipes and tanks.

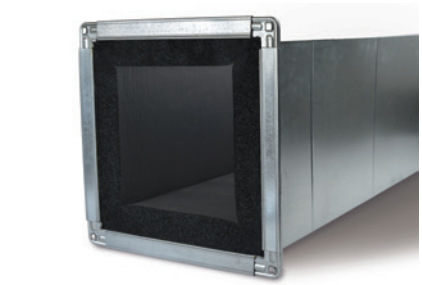
Duct Liner and Wrap





ArmaFlex® Ultra Duct Liner & Wrap

The first elastomeric duct liner Classified by UL to UL 723 at 25/50



AP/CoilFlex® Duct Liner

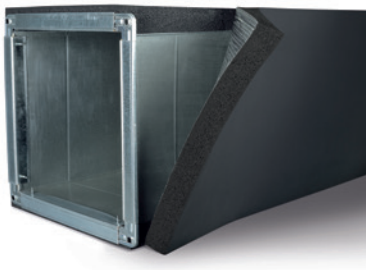
Conformable, fiber-free insulation for thermal and acoustical duct liner for automatic coil lines

AP/ArmaFlex® & AP/ArmaFlex® FS

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

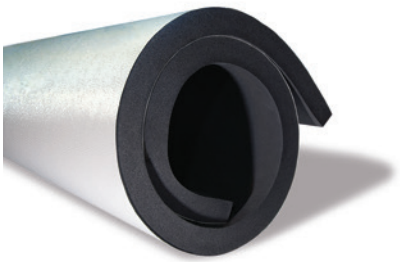
AP/SpiralFlex® Duct Liner

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



AP/ArmaFlex® SA & AP/ArmaFlex® FS SA

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



ArmaTuff® & ArmaTuff® SA Duct Wrap

Insulation with durable, white metal, factory-applied cladding made for rooftop ducts

Aerogel Blankets

ArmaGel® HT

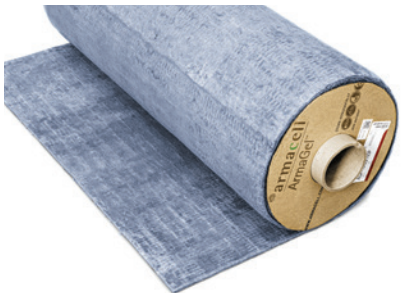
Flexible aerogel blanket for high-temperature applications up to 650°C/1200°F

ArmaGel® DT

Flexible aerogel insulation blanket for cryogenic and dual-temperature applications down to -196°C/-321°F

ArmaGel® HTL

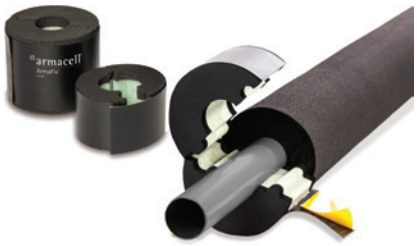
Non-combustible flexible aerogel blanket for high-temperature applications



ArmaGel® HTF

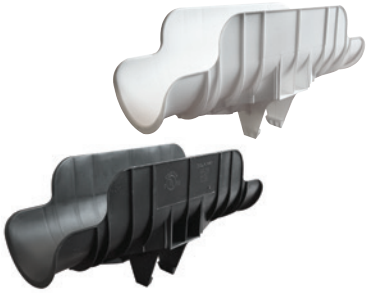
Flexible aerogel blanket for passive fire protection applications

Accessories



ArmaFix® EcoLight Pipe Support

Insulated pipe support with self-adhesive closure



Insuguard® Pipe Saddle

Easy-to-use, tool-free pipe support systems that install with 1 click

AP/ArmaFlex® Insulation Tape

Pressure sensitive foam tape for insulating pipes and fitting

ArmaFlex® Pre-fabricated Fittings

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

Insuguard® Multi Pipe Saddle

Tool-free pipe hanger system with adapters for all common mountings

ArmaFlex® Black LapSeal Tape

Low profile tape for AP/ArmaFlex Black LapSeal end seams

ArmaLight® Pre-fabricated PE Fittings

Time-saving fittings in T's and Elbows for Imcoa, Tundra, and Tubolit pipe insulation

InsuCover® Pipe Shield

Flexible, ribbed pipe cover for use with both Insuguard original and Insuguard Multi systems

ArmaLight® PE Seam Tape

Butt seam tape for Imcoa, Tundra and Tubolit pipe insulation

InsuClip® Pipe Fastener

Flexible, two-way fastener for use with Insuguard Multi system only

Adhesives and Coatings

ArmaFlex® 520 Adhesive

Recommended contact adhesive specially formulated for ArmaFlex insulation

ArmaFlex® WB Finish

Acrylic-based, indoor/outdoor, UV-resistant coating for ArmaFlex insulation

ArmaFlex® 520 Black

Recommended contact adhesive in black color to match black foam 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.

ArmaFlex® 520 BLV

Black contact adhesive in low VOC formula

Low VOC Spray Adhesive

Low VOC adhesive in 27 lb. spray canister. Hose and spray gun available

PRODUCT APPLICATIONS

Common Applications	AIR PLENUMS	REFRIGERATION, HOT & COLD LINES, CHILLED WATER	HVAC/VRF	INTERIOR DUCT SYSTEMS	EXTERIOR DUCT SYSTEMS
Product Requirements	• UL Classified – Listed and Label 25/50 per UL 723 • Conforms to ASTM C534 Grade 1 • Condensation Control • Thermally Efficient	• Condensation control • GreenGuard Gold Certified • Thermally Efficient	• 25/50 rating • Tough, durable • Condensation control • Thermally Efficient	• Moisture resistant • 25/50 rating • Noise blocking • Condensation control • Thermally Efficient	• Outdoors • Maintenance-free • UV-resistant
Recommended Product	• ArmaFlex Ultra • ArmaFlex Ultra SA	• ArmaFlex Ultra • AP/ArmaFlex • AP/ArmaFlex W • AP/ArmaFlex White LapSeal • AP/ArmaFlex Black LapSeal • ArmaFlex Coil • ArmaFlex UT • ArmaFlex Shield	• ArmaFlex Ultra • AP/ArmaFlex • AP/ArmaFlex Black LapSeal • ArmaFlex UT • ArmaFlex Coil	• ArmaFlex Ultra • ArmaFlex Ultra SA • AP/ArmaFlex and FS Duct Liner/Wrap • AP/ArmaFlex SA Self-Adhering and FS SA Duct Liner/Wrap • AP/CoilFlex • AP/SpiralFlex • ArmaFlex UT	• ArmaTuff and ArmaTuff SA • AP/ArmaFlex (with WB Finish) • ArmaFlex UT (with WB Finish)

Common Applications	MECHANICAL SYSTEMS, CHILLERS	SOLAR OR HIGH TEMPERATURE (300°F)	RESIDENTIAL PLUMBING	HIGH TEMPERATURE STAINLESS STEEL APPLICATIONS	LINE SET
Product Requirements	• Thermally efficient • 25/50 rating • Sheet & roll forms • GreenGuard Gold Certified • Conforms to ASTM C534 Grade 1	• Thermally efficient • High temperature range for solar collectors or hot water piping • Mold resistant • Conforms to ASTM C534 Grade 2	• Economical polyethylene insulation • 25/50 rating • Noise blocking • Conforms to ASTM C1427	• Low halogen • Conforms to ASTM C534 • Grade 2 for ArmaFlex UT and Grade 3 for NH/ArmaFlex	• Condensation control • Continuous lengths • Conforms to ASTM C534 Grade 1 • Thermally Efficient
Recommended Product	• ArmaFlex Ultra • AP/ArmaFlex • AP/ArmaFlex Sheet and Rolls • AP/ArmaFlex Black LapSeal	• ArmaFlex UT	• Imcoa • Imcoa SS • Tubolit • Tubolit SS • Tundra • Tundra SS	• NH/ArmaFlex • ArmaFlex UT	• ArmaFlex Shield • ArmaFlex Coil

For technical values on specific products, Armacell Technical Data Sheets are available for download here.

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 AP/ArmaFlex branded products are made with Microban antimicrobial protection to prevent the growth of mold and mildew on the insulation.

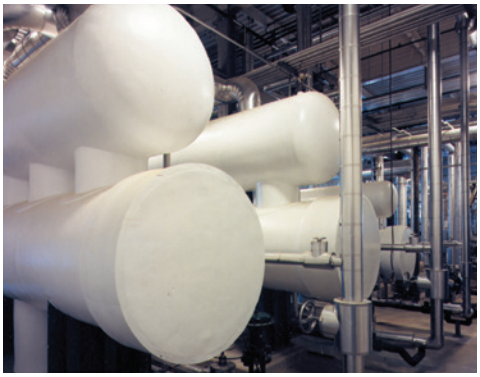
IRON / COPPER PIPE SIZE CHART

Choose sheet and roll insulation for pipes larger than 10", 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 Nom Size & ID (Types K,L,M)	Copper Nom Size & OD (ACR)	Iron / PVC IPS	DN[3]	Min ID (in)	Max ID (in)	Min ID (mm)	Max ID (mm)
1/4"	-	1/4"	-		0.293	0.355	7.4	9.0
3/8"	1/4"	3/8"	1/8"	6	0.420	0.500	10.7	12.7
1/2"	3/8"	1/2"	1/4"	8	0.560	0.640	14.2	16.3
5/8"	1/2"	5/8"	3/8"	10	0.710	0.790	18.0	20.1
3/4"	5/8"	3/4"	-	-	0.810	0.910	20.6	23.1
7/8"	3/4"	7/8"	1/2"	15	0.940	1.050	23.9	26.7
1-1/8"	1"	1 1/8"	3/4"	20	1.200	1.310	30.5	33.3
1-3/8"	1-1/4"	1 3/8"	1"	25	1.450	1.570	36.8	39.9
1-5/8"	1-1/2"	1 5/8"	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 1/8"	-	-	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 5/8"	-	-	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 1/8"	-	-	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 5/8"	-	-	3.740	3.880	95.0	98.6
4-1/8"	4"	4 1/8"	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
10"	-	-	10"	250	11.005	11.205	279.5	284.6

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.
3. DN, diametre nominel, is equivalent to NPS sizes in metric dimensions.

NOTE: See installation guide for proper installation instructions.
WEB: www.armacell.us > Knowledge Center > Document Downloads > Mechanical Insulation > Installation Manuals



HOW CAN WE HELP?

We have a global network of experts to better serve you. We can support you with installation, technical questions and specification assistance.

- Call our Customer Services team on 800 866 5638, 8 a.m. to 4:30 p.m. EST
- Visit www.armacell.us and request an Engineer Lunch and Learn

ARMACELL HAS THE SOLUTIONS

The new Solutions Portfolio groups Armacell insulation products into comprehensive packages aimed at making the specification of the right insulation for mechanical systems easier than ever before.

Now mechanical engineers, insulation contractors or distributors can easily identify the best insulation products for use in an air plenum, on HVAC/R mechanical piping, on chilled water and hydronic heating systems or on plumbing – the key places where insulation is critical to the performance of the equipment.

The Solutions are broken out by the top project types: Education, Healthcare, Office/Mixed-Use, Data Centers, Multi-Family, Hotel/Hospitality, Airports, and Supermarkets.

Product Spotlight

This versatile EPDM insulation can take the heat.

www.armacell.com

UPPER-TEMPERATURE EPDM INSULATION

ArmaFlex® UT

Armacell's newest EPDM-based, closed-cell flexible insulation is designed for use on VRF, HVAC, chilled water, refrigeration, solar, hot gas, dual temperature, low-pressure steam, and stainless steel over 125°F.

// Remains flexible up to 300°F — the highest max use temperature in the elastomeric market
// Effectively retards degradation due to ultraviolet radiation
// Closed-cell structure provides excellent condensation control and prevents energy loss
// Meets 25/50 flame and smoke index as tested according to ASTM E84

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All data and technical information are based on results achieved under the specific conditions defined according to the testing standards referenced. Despite taking every precaution to ensure that said data and technical information are up to date, Armacell does not make any representation or warranty, express or implied, as to the accuracy, content or completeness of said data and technical information. Armacell also does not assume any liability towards any person resulting from the use of said data or technical information. Armacell reserves the right to revoke, modify or amend this document at any moment. 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. This document does not constitute nor is part of a legal offer to sell or to contract.

At Armacell, your trust means everything to us, so we want to let you know your rights and make it easier for you to understand what information we collect and why we collect it. If you would like to find out about our processing of your data, please visit our **Data Protection Policy**.

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ABOUT ARMACELL

As the inventor of flexible foam for equipment insulation and a leading provider of engineered foams, Armacell develops innovative and safe thermal 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 more than 3,300 employees and 25 production plants in 19 countries, the company operates two main businesses, Advanced Insulation and Engineered Foams. Armacell focuses on insulation materials for technical equipment, high-performance foams for acoustic and lightweight applications, recycled PET products, next-generation aerogel technology and passive fire protection systems.

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For more information, please visit:
www.armacell.com