

MECHANICAL INSULATION

Product Selector

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

www.armacell.us



 **armacell**[®]
MAKING A DIFFERENCE AROUND THE WORLD

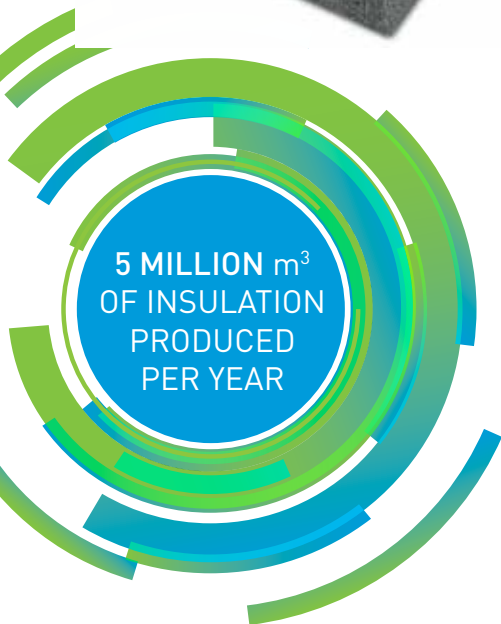
SOLUTIONS

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



AP ArmaFlex® Black and White Tubes

Original flexible, closed cell
elastomeric tubes in black and white



ProFlex® Tubes & LapSeal

Economical flexible foam insulation
for HVAC/R applications



AP ArmaFlex® Ultra LapSeal

The first elastomeric pipe insulation
Classified by UL to UL 723 at 25/50,
with reinforced lap seal closure



AP ArmaFlex® Black and White LapSeal

Self-sealing tube insulation with
reinforced lap seal



Imcoa®, Tubolit®, Tundra®

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



ArmaFlex® Coil

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



NH ArmaFlex® Tubes

Non-halogen tubes especially
formulated for shipboard use



ArmaFlex® Shield

Continuous coil pipe insulation with
durable, protective coating



AC Accoflex® Black

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



UT SolaFlex

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

Sheet and Roll Products



ArmaFlex® Ultra

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



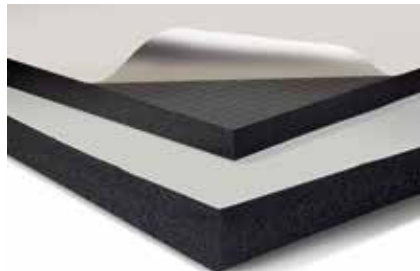
AP ArmaFlex® & AP ArmaFlex® FS

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



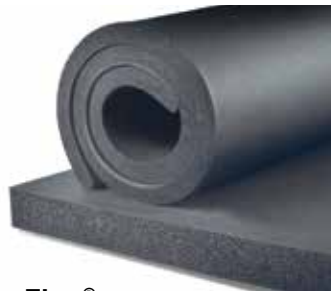
AP ArmaFlex® SA & AP ArmaFlex® FS SA

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



NH ArmaFlex®

Nonhalogen sheet and roll insulation material especially formulated for shipboard use



ProFlex®

Economical flexible foam insulation for HVAC/R applications



Imcoa®, Tubolit®, Tundra®

Economical polyethylene sheet and roll insulation for larger pipes and tanks. Also available in white.



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



Accessories



ArmaFix® EcoLight Pipe Support

Insulated pipe support with self-adhesive closure



Insugard® 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 fittings



ArmaFlex® Pre-fabricated Fittings

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



Insugard® Multi Pipe Saddle

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



ArmaFlex® Ultra Insulation Tape

Pressure sensitive foam tape for insulating pipes and fittings compatible with Ultra pipe insulation



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 Insugard original and Insugard Multi systems



ArmaFlex® Black LapSeal Tape

Low profile tape for AP ArmaFlex Black LapSeal end seams



ShockTech® Shock Detector

Water hammer shock detector with color-coded flags for use with Insugard Multi system only



InsuClip® Pipe Fastener

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



ArmaLight® PE Seam Tape

Butt seam tape for Imcoa, Tundra and Tubolit pipe insulation

Adhesives and Coatings



ArmaFlex® 520 Adhesive

Recommended contact adhesive specially formulated for ArmaFlex insulation



ArmaFlex® 520 Black

Recommended contact adhesive in black color to match black foam insulation



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



ArmaFlex® WB Finish

Acrylic-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.



Common Applications	AIR PLENUMS	REFRIGERATION, HOT & COLD LINES, CHILLED WATER	HVAC VRV/VRF	INTERIOR DUCT SYSTEMS	EXTERIOR DUCT SYSTEMS
Product Requirements	<ul style="list-style-type: none"> UL Classified – Listed and Label 25/50 per UL 723 Conforms to ASTM C534 Grade 1 Condensation Control Thermally Efficient 	<ul style="list-style-type: none"> Microban antimicrobial protection Condensation control GreenGuard Gold Certified Thermally Efficient 	<ul style="list-style-type: none"> 25/50 rating Tough, durable AP Products: Microban antimicrobial protection Condensation control Thermally Efficient 	<ul style="list-style-type: none"> Moisture resistant 25/50 rating Noise blocking Condensation control Microban antimicrobial protection Thermally Efficient 	<ul style="list-style-type: none"> Outdoors Maintenance-free UV-resistant
Recommended Product	<ul style="list-style-type: none"> ArmaFlex Ultra ArmaFlex Ultra Lap Seal ArmaFlex Ultra SA 	<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"> ArmaFlex Ultra ArmaFlex Ultra Lap Seal AP ArmaFlex AC Accoflex AP ArmaFlex Black LapSeal AP Spiralflex ArmaFlex Coil (no added antimicrobial) 	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> ArmaTuff and ArmaTuff SA AP ArmaFlex (with WB Finish)
Common Applications	MECHANICAL SYSTEMS, CHILLERS	SOLAR OR HIGH TEMPERATURE (300°F)	RESIDENTIAL PLUMBING	MARINE & OFFSHORE	LINE SET
Product Requirements	<ul style="list-style-type: none"> Thermally efficient 25/50 rating Sheet & roll forms Microban antimicrobial protection GreenGuard Gold Certified Conforms to ASTM C534 Grade 1 	<ul style="list-style-type: none"> Thermally efficient High temperature range for solar collectors or hot water piping Mold resistant Conforms to ASTM C534 Grade 2 	<ul style="list-style-type: none"> Economical polyethylene insulation 25/50 rating Noise blocking Conforms to ASTM C1427 	<ul style="list-style-type: none"> Non-halogen Meet EB 4013 Specifications Conforms to ASTM C534 Grade 3 	<ul style="list-style-type: none"> Condensation control Continuous lengths Conforms to ASTM C534 Grade 1 Thermally Efficient
Recommended Product	<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"> Imcoa Imcoa SS Tubolit Tubolit SS Tundra Tundra SS 	<ul style="list-style-type: none"> NH ArmaFlex 	<ul style="list-style-type: none"> ArmaFlex Shield ArmaFlex Coil

For technical values on specific products, Armacell Technical Data Sheets are available for download here:
<https://www.armacell.us/solutions-center/document-downloads/mechanical-insulation/submittal-sheets/>



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.*

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
- Email us at: info.us@armacell.com
- 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. Packages offer three levels of cost and service: Standard, High and Superior Performance.

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



Choose the Solutions Package that best meets the performance level and budget of your equipment system.

Solutions Package 1 Solutions Package 2 Solutions Package 3

Application	Core Performance Requirements	Superior Performance	High Performance	Standard Performance
Air Plenum Piping and Duct Insulation	<ul style="list-style-type: none"> Class A - Flame-spread 0-25, smoke developed 50 UL Classified to UL 723 (Listed and Labeled) Energy Efficient & Low Total Install Costs Low Dust or Fiber Emitting Properties Mold and Mildew Resistance Tough & Durable Compliant to all State and City Building Codes 	<ul style="list-style-type: none"> ArmaFlex Ultra Pipe Insulation ArmaFlex Ultra Lap Seal Insulation ArmaFlex Ultra Sheet/Roll Insulation ArmaFlex Ultra Fittings 	<ul style="list-style-type: none"> ArmaFlex Ultra Pipe Insulation ArmaFlex Ultra Lap Seal Insulation ArmaFlex Ultra Sheet/Roll Insulation ArmaFlex Ultra Fittings 	<ul style="list-style-type: none"> ArmaFlex Ultra Pipe Insulation ArmaFlex Ultra Lap Seal Insulation ArmaFlex Ultra Sheet/Roll Insulation ArmaFlex Ultra Fittings
HVAC/R & Mechanical Piping	<ul style="list-style-type: none"> Class A - Flame-spread 0-25, smoke developed 0-450 Energy Efficient & Low Total Install Costs Low Dust or Fiber Emitting Properties Mold and Mildew Resistance Tough & Durable Compliant to all State and City Building Codes 	<ul style="list-style-type: none"> ArmaFlex Ultra Pipe Insulation ArmaFlex Ultra Lap Seal Insulation ArmaFlex Ultra Sheet/Roll Insulation ArmaFlex Ultra Fittings ArmaFlex Shield Pipe Insulation 	<ul style="list-style-type: none"> AP ArmaFlex Pipe Insulation AP ArmaFlex Lap Seal Insulation AP ArmaFlex Sheet/Roll Insulation AP ArmaFlex Fittings 	<ul style="list-style-type: none"> ProFlex Pipe Insulation ProFlex Lap Seal Insulation ProFlex Sheet/Roll Insulation ProFlex Fittings
Central Utility Plant Operations: Chilled Water and Hydronic Heating	<ul style="list-style-type: none"> Class A - Flame-spread 0-25, smoke developed 0-450 Energy Efficient & Low Total Install Costs Low Dust or Fiber Emitting Properties Mold and Mildew Resistance Tough & Durable Compliant to all State and City Building Codes 	<ul style="list-style-type: none"> ArmaFlex Ultra Lap Seal Insulation ArmaFlex Ultra Sheet/Roll Insulation ArmaFlex Ultra Fittings 	<ul style="list-style-type: none"> AP ArmaFlex Pipe Insulation AP ArmaFlex Lap Seal Insulation AP ArmaFlex Sheet/Roll Insulation AP ArmaFlex Fittings 	<ul style="list-style-type: none"> ProFlex Pipe Insulation ProFlex Lap Seal Insulation ProFlex Sheet/Roll Insulation ProFlex Fittings
Plumbing	<ul style="list-style-type: none"> Class A - Flame-spread 0-25, smoke developed 0-450 Energy Efficient & Low Total Install Costs Low Dust or Fiber Emitting Properties Mold and Mildew Resistance Tough & Durable Compliant to all State and City Building Codes 	<ul style="list-style-type: none"> Tundra Insulation (Canada) IMCOA SS Insulation or Tubolit SS Insulation PE Fittings 	<ul style="list-style-type: none"> Tundra Insulation (Canada) IMCOA SS Insulation or Tubolit SS Insulation PE Fittings 	<ul style="list-style-type: none"> Tundra Insulation (Canada) IMCOA SS Insulation or Tubolit SS Insulation PE Fittings
Accessories & Supports	<ul style="list-style-type: none"> Class A - Flame-spread 0-25, smoke developed 0-450 Energy Efficient & Low Total Install Costs Low Dust or Fiber Emitting Properties Mold and Mildew Resistance Tough & Durable Compliant to all State and City Building Codes 	<ul style="list-style-type: none"> Insuguard Multi Saddles & Shields ArmaFix Ecolight Pipe Supports Armacell Insulation Tape Armacell 520 Adhesives 	<ul style="list-style-type: none"> Insuguard Multi Saddles & Shields ArmaFix Ecolight Pipe Supports Armacell Insulation Tape Armacell 520 Adhesives 	<ul style="list-style-type: none"> Insuguard Multi Saddles & Shields ArmaFix Ecolight Pipe Supports Armacell Insulation Tape Armacell 520 Adhesives
Warranty		<ul style="list-style-type: none"> 15-Year Limited Warranty 	<ul style="list-style-type: none"> 10-Year Limited Warranty 	<ul style="list-style-type: none"> 5-Year Limited Warranty



PRODUCT
SPOTLIGHT

NEW AIR PLENUM SOLUTION

ArmaFlex[®] Ultra

with FlameDefense[™] technology — the first elastomeric insulation Classified by UL to UL 723 at 25/50. In an emergency, **it gives you time.**

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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 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 3,135 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:
www.armacell.us

