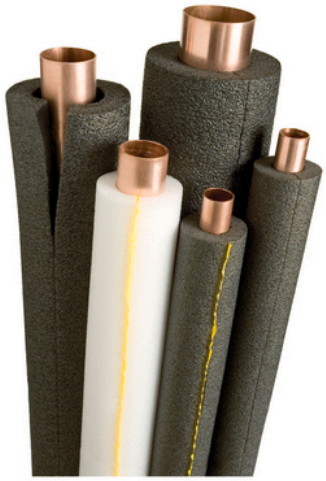
ENERGY SAVINGS

Tubolit

The Tubolit family of products includes closed-cell polyethylene (PE) foam insulation for use in residential, light commercial, and light industrial projects to prevent heat loss and protect pipes from freezing.

// Easy to cut and install
// Available in semi-slit tubes or self-seal closure
// Flexible sheets and rolls for large pipes or equipment

www.armacell.com



armacell®
ArmaLight®

TECHNICAL DATA - TUBOLIT

Brief description	Tubolit® is 100% non-particulating polyethylene foam pipe insulation. Its closed-cell structure won't wick moisture and helps prevent the absorption of condensation that could cause mold to develop over time. The SS options have an easy-to-install self-seal closure system. Choose sheets or rolls when you need to insulate large pipes or vessels.
Product color range	Dark gray, White, White not available in Rolls and Sheets
Product range	Available in Tube/Sheet/Roll. Tubolit wall thickness (nominal): 3/8", 1/2", 3/4", 1", and 1-1/2" (10, 13, 19, 25, and 38 mm) Tubolit inside diameter, tubular: 3/8" to 2-5/8" ID (10 mm to 67 mm) Tubolit length of sections, tubular: 6' (1.83m) Tubolit SS wall thickness (nominal): 3/8", 1/2", 3/4" and 1" (10, 13, 19, 25 mm) Tubolit SS inside diameter, tubular: 3/8" to 4" IPS ID (10 mm to 114 mm ID) Tubolit SS length of sections, tubular: 6' (1.83m) Tubolit sheets: 3' x 4' (0.92 m x 1.22 m), thickness: 1/4", 3/8", 1/2", 3/4", 1" , 1 1/2", 2" and 2 1/2" ((6 mm, 10 mm, 13 mm, 19 mm, 25 mm, 38 mm, 51 mm, 64 mm) Tubolit rolls: 4' x 50' (1.22 m x 15.3 m), thickness: 3/8", 1/2", 3/4", 1", 1-1/2", 2", 2-1/2" (10 mm, 13 mm, 19 mm, 25 mm, 38 mm, 51 mm, 64 mm)
Applications	Tubolit is used to retard heat loss on hot water pipes and to prevent freezing of all water pipes. It is available in a wide range of wall and sheet thicknesses. Tubolit has a low thermal conductivity and very low water vapor transmission rate. This low density product demonstrates excellent thermal, physical and chemical resistant properties and has a broad service temperature range between -297°F and 200°F (-183°C and 93°C). It is ideal for residential applications, but can be installed in light commercial and light industrial projects as well. It is acceptable for use with heat tracing/heat tape.

Approvals and compliance

Specification compliance	• All Armacell facilities in North America are ISO 9001 certified • Title 24 California Building Energy Efficiency Standards • Manufactured without CFCs, HFCs, HCFCs, PBDEs, or Formaldehyde	• GREENGUARD Gold Certified • Conforms to International Mechanial Code (IMC)	• ASTM C1427 Type I (tubes) and Type II (sheets) • Conforms to International Residential Code (IRC)	• Conforms to ASHRAE 90.1 energy standards • Conforms to International Energy Conservation Code (IECC)

Property	Value / Assessment				Standard / Test method
Temperature range					
Service temperature[1]	Min. °C	Min. °F	Max. °C	Max. °F	ASTM C1427
	-183	-297	93	200	
Thermal conductivity					
1 - Declared thermal conductivity W/(m·K)	θm	50 °F (10 °C)	75 °F (24 °C)	100 °F (38 °C)	ASTM C518, ASTM C177
	λd ≤ [W/(m·K)]	0.038	0.039	0.040	
	k ≤ [Btu·in/(h·ft²·°F)]	0.265	0.270	0.280	

Property	Value / Assessment						Standard / Test method
R-Value for tubes[2]	ID / Wall thickness	3/8" (10mm)	1/2" (13mm)	3/4" (19mm)	1" (25mm)	1-1/2" (38mm)	
	3/8" (10 mm)	2.7	3.7	6.0	8.6		
	1/2" (13 mm)	2.4	3.4	5.6	7.9		
	5/8" (16 mm)	2.4	3.3	5.3	7.4		
	3/4" (19 mm)	2.3	3.2	5.1	7.1		
	7/8" (22 mm)	2.2	3.0	4.8	6.8		
	1-1/8" (29 mm)	2.1	2.9	4.5	6.3	10.4	
	1-3/8" (35 mm)	1.7	2.5	3.9	5.8	9.5	
	1-5/8" (41 mm)	2.0	2.7	4.3	5.9	9.5	
	2-1/8" (54 mm)	2.0	2.7	4.1	5.6		
	2" IPS (60 mm)	1.8	2.5	3.9	5.4		
	2-5/8" (67 mm)	2.0	2.6	4.0	5.4		
	2-1/2" IPS (73 mm)	1.8	2.4	3.7	5.0		
	3-1/8" (79 mm)	2.0	2.6	3.9	5.3		
	3-5/8" (92 mm)		2.6	3.9			
	4-1/8" (105 mm)		2.7	3.9	5.2		
	4" IPS (114 mm)		2.3	3.5	4.7		
R-Value for sheets and rolls	Wall thickness			R-value			
	3/8" (10mm)			1.4			
	1/2" (13mm)			1.5			
	3/4" (19mm)			2.8			
	1" (25mm)			3.7			
	1-1/2" (38mm)			5.6			
	2" (50mm)			7.4			
	2-1/2" (63mm)			9.3			
Fire Performance and Approvals							
Surface burning characteristics[3]	Flame Spread Index less than 25 Smoke Developed Index less 50 25/50 rated through 1" thickness						ASTM E84[4]
UL standards							
UL94 HBF[5]	Pass						UL 94 HBF
Resistance to water vapour							
Water vapor permeability	0.02 perm-inch (0.29 x 10^{-13})Kg/(s m Pa)						ASTM E96, procedure A
Resistance to water							
Water absorption	0.2% by volume						ASTM C1763[6]
Physical attributes							
Density	1.5 to 2.0 pounds per cubic feet (24 to 32 kilograms per cubic meter)						ASTM D1667

Property	Value / Assessment				Standard / Test method
Acoustic performance					
Noise reduction coefficient	Thickness (mm)	6	13	25	ASTM C423[7]
	Thickness (inches)	0.25	0.5	1	
	NRC	0.10	0.2	0.35	
Weather and UV resistance					
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.				
Health and environment					
Mold growth	Pass				ASTM C1338, ASTM G21

[1] Please consult Armacell Technical Services for application temperatures below 0°F

[2] Please see technical bulletin #1 for more details.

[3] Cellular plastics and thermoplastics, such as polyethylene/polyolefin insulation, that may drip, melt, delaminate or draw away from the fire, present unique problems and require careful interpretation of the test results.

[4] For up to and including one-inch thickness only

[5] UL 94 HBF, File E55798 (For TUBOLIT only)

[6] Procedure B

[7] Type A Mounting

ArmaLight | Tubolit (AMERICAS) | TDS | 032025 | en-US

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.

armacell®
ArmaLight®

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