

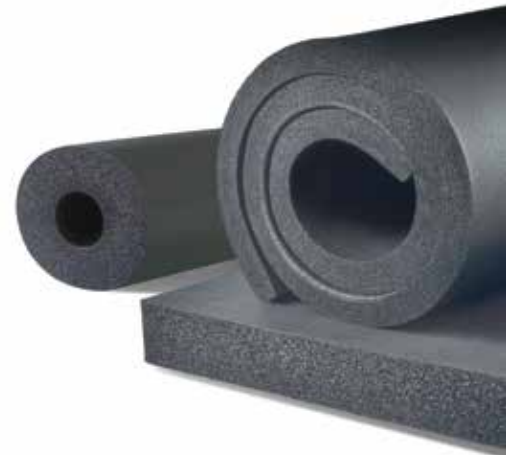
INSULATION THAT'S SHIP SHAPE

# NH ArmaFlex

NH ArmaFlex® is the halogen-free, flexible elastomeric insulation material with certification for use in marine and offshore environments. Specify for applications requiring protection against toxic smoke containing chlorine, bromine or halogen gasses.

- // Protective, halogen-free performance in flexible tubes, sheets and rolls
- // Protects personnel and sensitive equipment
- // Formulated especially for shipboard use
- // Meets requirements of US Navy, Electronic Boat Corporation and others

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



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

# NH/ArmaFlex

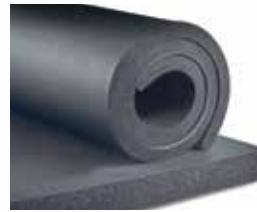
Engineered for New and Existing Pipework in Shipboard Use

NH ArmaFlex® is a nonhalogen elastomeric insulation developed for condensation control in environments that require specific protection against smoke containing acid gases. It is the first nonhalogen flexible insulation introduced for shipboard use to protect shipboard personnel or sensitive electronic equipment from the effects of chlorines, bromines and halogen gasses.

Tube



Sheet and Roll



Tape



[Learn more.](#)

## MOISTURE RESISTANCE

The closed cell structure of NH ArmaFlex resists moisture ingress and controls condensation. For most applications no vapor retarder is required. An additional vapor retarder may be necessary when exposed to continuous high humidity.

## APPLICATIONS

NH ArmaFlex is used as insulation and protection for piping, tanks, and air ducts, and to prevent stress corrosion with stainless steel pipes in US Navy applications, general shipbuilding, IMO (International Maritime Organization) and other areas where nonhalogenated or chlorine-free materials may be required.

## INSTALLATION

Supplied in tube, sheet and roll form, NH ArmaFlex is easy to snap on or sleeve over pipework for new or existing piping applications. In sheet form, NH ArmaFlex installs quickly on large flat or curved surfaces using ArmaFlex 520, 520 Black, 520 BLV or Low VOC Spray Contact Adhesive. For pipes and fitting covers, only seams and joints require adhesive. See the ArmaFlex Installation Manual for details.

## Technical Data: NH ArmaFlex

### Description

NH ArmaFlex is a nonhalogen elastomeric insulation developed for sweat control in environments that require specific protection against smoke containing acid gases. NH ArmaFlex is an engineered closed-cell material that eliminates the toxic gases that may threaten personnel and sensitive electronic equipment including effects from chlorines, bromines or PVC. The closed cell structure makes NH ArmaFlex an efficient thermal insulation and provides resistance to water vapor migration. For most applications, NH ArmaFlex requires no supplemental vapor retarder.

### Approvals, Certifications, Compliances

- |   |  |   |
|---|--|---|
| <ul style="list-style-type: none"> <li>• Manufactured without CFCs, HFCs, HCFCs, PBDEs, or Formaldehyde.</li> <li>• GREENGUARD Gold Certified.</li> </ul> | ASTM C 534 Type I (tubular) Grade 3<br>ASTM C 534 Type II (sheet) Grade 3<br>EB 4013 Rev B | <ul style="list-style-type: none"> <li>• NH Sheet and Roll is 3rd party certified by FM Approvals through 1" thickness.</li> <li>• All Armacell facilities in North America are ISO 9001 certified</li> </ul> |
|---|--|---|

### Typical Properties

Specifications	Values	Test Method
<b>Thermal Conductivity:</b> Btu • in/h • ft <sup>2</sup> • °F (W/mK)		
32°F mean temperature [0°C]	0.248 [0.036]	ASTM C 177 or C 518
75°F mean temperature [24°C]	0.27 [0.039]	
90°F mean temperature [32°C]	0.282 [0.041]	
<b>Water Vapor Permeability:</b> Perm-in. [Kg/(s•m•Pa)]	0.05 [0.725 x 10 <sup>-13</sup> ]	ASTM E 96, Procedure A
<b>Mold Growth:</b>	UL181	Meets requirements
<b>Fungi Resistance:</b>	ASTM G21/C1338	Meets requirements
<b>Water Absorption, % by Volume:</b>	0.2%	ASTM C 209 or ASTM C 1763
<b>Maximum Service Temperature:</b>	250°F [120°C]	—
<b>Minimum Service Temperature:</b> <sup>(1)</sup>	-297°F [-183°C] <sup>(1)</sup>	—
<b>Toxicity</b>	Free from Halogen/Dioxin/CFC/Mercury/ Carbon Black/Heavy Metal	—
<b>IMO (International Organization)</b>	Combustion gas concentration    Pass Smoke density                            Pass Heat release rate                        Pass Flame spread                              Pass	Navy Large Maritime Scale pipe insulation room/corner test
<b>Behavior in Fire</b> <sup>(2)</sup>	Does not support progressive flaming, will not melt and drip.	Meets EB 4013 Meets IMO SOLAS requirements
<b>Density, Typical Range, lbs/ft<sup>3</sup></b> <sup>(3)</sup>	3.0 - 6.0	ASTM D 1622 or D 1667

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.

2 Numerical flammability ratings alone may not define the performance of products under actual fire conditions. They are provided only for use in the selection of products to meet limits specified.

3 Reference Only

Tube	6' [1.8 m] length	1/2" [13 mm] thickness Pipe Sizes: 3/8" to 5"	3/4" [19 mm] thickness Pipe Sizes: 3/8" to 8"	1" [25 mm] thickness Pipe Sizes: 5/8" to 6"
<b>Sheet</b>	3' x 4' [0.915 m x 1.22 m] width x length	1/2" [13 mm] thickness	3/4" [19 mm] thickness	1" [25 mm] thickness
<b>Roll</b>	4' [1.22 m] width	Thickness x length 1/4" x 140' [6 mm x 42.8 m]	Thickness x length 1/2" x 70' [13 mm x 21.4 m]	Thickness x length 3/4" x 50' [19 mm x 15.2 m]
<b>Tape</b>	1/8" [3 mm] thickness x 2" [50 mm] width x 30 feet [9.1 m] length			

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

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