



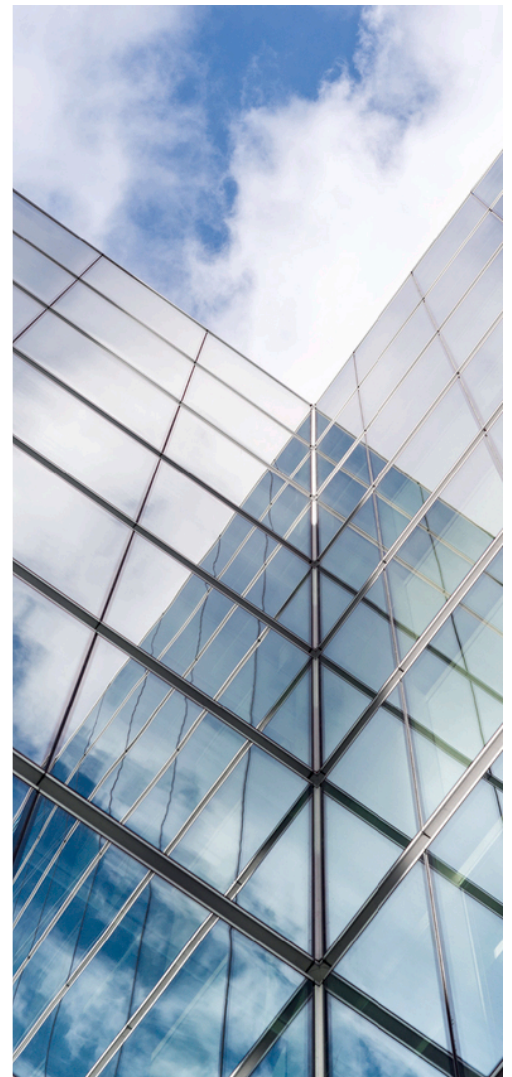
INSTALL IT. TRUST IT.

# NH/ArmaFlex Smart

Halogen-free insulation without compromises

- // Increases equipment life cycle
- // High flexibility and ease of installation
- // Reliable condensation control and prevention of corrosion under insulation (CUI)

[www.armacell.com.au](http://www.armacell.com.au)



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

INSTALL IT. TRUST IT.

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# NH/ArmaFlex<sup>®</sup> Smart

We are taking our halogen-free insulation material to the next level. Our NH/ArmaFlex Smart is a highly flexible elastomeric foam, which is faster and easier to install. A unique new technology which will make a real difference for our customers and the industry.

**NH/ArmaFlex Smart. Innovation reloaded.**



**// Resistant to uv-light and ageing**

NH/ArmaFlex Smart has excellent UV and ageing resistance. The resistance to light ageing was confirmed in accelerated radiation tests. The halogen-free insulation material has outstanding light stability. Indoors it can be exposed to natural and artificial light without the need for additional cladding.

**// Excellent fire behaviour**

NH/ArmaFlex Smart releases 50 percent less smoke than conventional flexible elastomeric foam products. In the event of a fire, smoke hinders visibility, makes it difficult to locate escape and rescue routes. Today, therefore, experts attach greater importance to smoke development and smoke density than to heat release.

**// Less consequential fire damage**

In a fire, NH/ArmaFlex Smart does not release corrosive gases, which in combination with extinguishing water can form aggressive acids. In areas requiring special protection, such as data centres or clean room industries, the consequential fire damage can soon amount to many times the cost of the actual fire damage.

**// Reliable thermal and condensation control**

Thanks to its low thermal conductivity and high resistance to water vapour diffusion, the closed-cell NH/ArmaFlex Smart ensures reliable condensation control and high energy savings in the long-term. This also minimises the risk of corrosion under the insulation. of 25 mm.

**Pascal Beuing**

**Insulator at Schmengler Dämmtechnik Havixbeck (Germany)**

*"Wow! That's how flexible a halogen-free insulation tube can be. The new material feels completely different. The surface is much smoother and the product is altogether more stable. Armacell has reinvented NH/ArmaFlex."*



50%  
LESS  
SMOKE

# Halogen-free insulation without compromises.

## // Prevents stress corrosion cracking

Stress corrosion cracking can occur on austenitic stainless steels when stresses, moisture and chlorine ions occur simultaneously. As a halogen-free product, NH/ArmaFlex Smart can minimise the risk of stress corrosion cracking.

Armacell has developed the new ArmaFlex 750 adhesive to be used with NH/ArmaFlex Smart.



## // System solution for maximum reliability

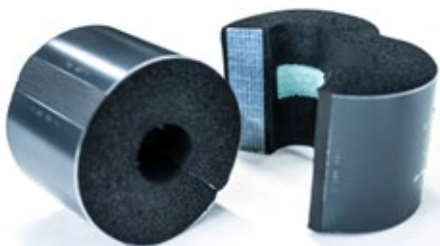
The ArmaFix NH Smart pipe support thermally isolates the pipe and its fixing from each other and, together with the adjoining NH/ArmaFlex Smart insulation, forms an insulation system for refrigeration equipment which is reliable in the long-term.

## // High environmental sustainability

NH/ArmaFlex Smart is halogen-free, it contains neither PVC nor chlorinated polyethylene. It is produced without adding brominated flame retardants and is free of chlorinated paraffins. Short-chain chlorinated paraffins are considered hazardous to health and the environment and their production has been discontinued in Europe. NH/ArmaFlex Smart contains neither short-, medium- nor long-chain chlorinated paraffins. The product meets the German Sustainable Building Council's highest quality level for flame-retardant building products.

## // NH/ArmaFlex Smart C. Flame-retardant sheets

With our new NH/ArmaFlex Smart C, we now offer halogen-free, flame-retardant and low-smoke insulation sheets. Especially engineered for the insulation of airducts and tanks, this pre-covered material provides a high level of protection against mechanical impact and is easy to clean. Unlike traditional insulation materials and jackets, the pre-covered sheets can be applied cost-efficiently in a single step. What's more, the black surface is highly absorptive and thinner insulation thicknesses can be installed to control condensation.



The load-bearing segments are based of environmentally friendly, recycled PET.

C-s2,d0



## TECHNICAL DATA - NH/ARMAFLEX SMART

Brief description	NH/ArmaFlex Smart is the new generation halogen-free, flexible closed-cell insulation material with certification for use in any building and construction types.
Material type	Flexible elastomeric foam based on synthetic rubber (NBR). Factory-made flexible elastomeric foam (FEF), according to EN 14304.
Additional material information	Self-adhesive coating: pressure-sensitive adhesive coating on modified acrylate basis with mesh structure, covered with polyethylene foil. Traces of silicon can be found on the protection paper/foil used to protect self-adhesive closures.
Product colour range	Black
Special features	Halogen-free (chloride, bromide) acc. to DIN / VDE 0472, part 815.
Applications	Insulation/protection for pipes, air ducts, vessels (including elbows, fittings, flanges, etc.) of air-conditioning/refrigeration, ventilation and process equipment to prevent condensation and save energy.
Installation	ArmaFlex 750 adhesive is a certified and compatible adhesive for a long-term performing system.

Property	Value / Assessment	Standard / Test method
<b>Temperature range</b>		
Service temperature	Min. °C <sup>1</sup>	Max. °C <sup>2</sup>
	-50	110
<b>Thermal conductivity</b>		
Declared thermal conductivity	θm	+/- 0 °C
	λd ≤ [W/(m·K)]	0.040
	Formula	[40 + 0,1· θm + 0,0009 · θm <sup>2</sup> ]/1000
<b>Fire Performance and Approvals</b>		
Reaction to fire	Tubes, open tubes: D(L)-s2, d0 Sheets, tape: E	EN 13501-1, EN 13823, EN ISO 11925-2
<b>UL standards</b>		
UL 94 HBF	Pass	ISO 9772, UL 94, UL 746B
<b>Fire performance</b>		
Practical fire behaviour	self-extinguishing, does not drip, does not spread flames	
<b>Resistance to water vapour</b>		
Water vapour diffusion resistance factor	μ ≥ 2000	EN 12086, EN 13469
<b>Physical attributes</b>		
Dimensions and tolerances	In accordance with EN 14304, table 1	EN 822, EN 823, EN 13467
<b>Weather and UV resistance</b>		
UV resistance <sup>3</sup>	High. (see Technical Bulletin no. 142)	
<b>Health and environment</b>		
Volatile organic compounds (VOC) content	Fulfills all VOC requirements (French, Italian, Belgian, German AgBB, Blauer Engel and Eurofins Indoor Air Comfort GOLD).	ISO 16000 Parts 3, 6 & 9
Environmental Product Declaration (EPD)	Type III Environmental Product Declaration (EPD): Declaration number "EPD-ARM-20220037-IBB1-EN", Institut Bauen und Umwelt e.V. (IBU)	ISO 14025, EN 15804+A2
Green building assessment	Meets the sustainable construction requirements for LEED v4.1, BREEAM international and DGNB.	
Additional features	SCCP, MCCP, LCCP-free	

Property	Value / Assessment	Standard / Test method
<b>Other technical features</b>		
Shelf life	Self-adhesive tapes, self-adhesive sheets: 1 year	
Storage	Can be stored in dry, clean rooms at normal relative humidity (50% to 70%) and ambient temperature (0 °C – 35 °C).	

<sup>1</sup>For temperatures below -50 °C please contact our Customer Service Center to request for the corresponding technical information.

<sup>2</sup>+85 °C, for products with a self-adhesive layer.

<sup>3</sup>If ArmaFlex is used outdoors or in applications under UV radiation, it should be protected with ArmaFinish Paint, or a covering such as ArmaClad Arma-Chek within 3 days of installation.

Tube – standard

9 mm			13 mm			19 mm			25 mm		
Pipe Ø [mm]	Item	Content [metric]	Pipe Ø [mm]	Item	Content [metric]	Pipe Ø [mm]	Item	Content [metric]	Pipe Ø [mm]	Item	Content [metric]
10	NHS-09X010	192 m	10	NHS-13X010	140 m	15	NHS-19X015	64 m	12	NHS-25X012	50 m
12	NHS-09X012	172 m	12	NHS-13X012	130 m	18	NHS-19X018	58 m	15	NHS-25X015	40 m
15	NHS-09X015	144 m	15	NHS-13X015	112 m	22	NHS-19X022	50 m	18	NHS-25X018	36 m
18	NHS-09X018	130 m	18	NHS-13X018	98 m	28	NHS-19X028	48 m	22	NHS-25X022	36 m
22	NHS-09X022	108 m	22	NHS-13X022	84 m	35	NHS-19X035	32 m	28	NHS-25X028	32 m
28	NHS-09X028	82 m	28	NHS-13X028	64 m	42	NHS-19X042	24 m	35	NHS-25X035	24 m
35	NHS-09X035	60 m	35	NHS-13X035	50 m	48	NHS-19X048	22 m	42	NHS-25X042	20 m
42	NHS-09X042	50 m	42	NHS-13X042	40 m	54	NHS-19X054	18 m	48	NHS-25X048	16 m
48	NHS-09X048	42 m	48	NHS-13X048	32 m	60	NHS-19X060	18 m	54	NHS-25X054	16 m
-	-	-	54	NHS-13X054	32 m	76	NHS-19X076	16 m	60	NHS-25X060	16 m
-	-	-	60	NHS-13X060	28 m	89	NHS-19X089	16 m	76	NHS-25X076	12 m
-	-	-	76	NHS-13X076	24 m	114	NHS-19X114	8 m	89	NHS-25X089	12 m
-	-	-	89	NHS-13X089	18 m		NHS-19X035/ E160		114	NHS-25X114	6 m
-	-	-	-	-	-	-	-	-	125	NHS-25X125	4 m

Other information

**Thickness tolerance** 9 mm, 13 mm : ±1,5 mm  
19 mm, 25 mm, 32 mm : ±2,5 mm

**Length tolerance** ±1,5%

Tube – standard

32 mm		
Pipe Ø [mm]	Item	Content [metric]
15	NHS-32X015	32 m
18	NHS-32X018	30 m
22	NHS-32X022	28 m
28	NHS-32X028	24 m
35	NHS-32X035	18 m
42	NHS-32X042	16 m
48	NHS-32X048	12 m
54	NHS-32X054	12 m
60	NHS-32X060	10 m
76	NHS-32X076	8 m
89	NHS-32X089	6 m
108	NHS-32X108	4 m
114	NHS-32X114	4 m
125	NHS-32X125	4 m
140	NHS-32X140	4 m

Other information

**Thickness tolerance** 9 mm, 13 mm : ±1,5 mm  
19 mm, 25 mm, 32 mm : ±2,5 mm

**Length tolerance** ±1,5%

Tube – open

Item	Thickness [mm]	Length [m]	Content [metric]	Item	Thickness [mm]	Length [m]	Content [metric]	Item	Thickness [mm]	Length [m]	Content [metric]
NHS-13X300	13	8	7.62 m <sup>2</sup>	NHS-19X300	19	6	5.72 m <sup>2</sup>	NHS-25X300	25	4	3.81 m <sup>2</sup>

Tube – open

Item	Thickness [mm]	Length [m]	Content [metric]
NHS-32X300	32	3	2.86 m <sup>2</sup>

Roll - standard

Item	Insulation thickness [mm]	Length [m]	Content [metric]
NHS-03-99/E	3	30	30 m <sup>2</sup>
NHS-06-99/E	6	15	15 m <sup>2</sup>
NHS-10-99/E	10	10	10 m <sup>2</sup>
NHS-13-99/E	13	8	8 m <sup>2</sup>
NHS-19-99/E	19	6	6 m <sup>2</sup>
NHS-25-99/E	25	4	4 m <sup>2</sup>
NHS-32-99/E	32	3	3 m <sup>2</sup>

Other information

Thickness tolerance	3 mm - 6 mm : ±1,0 mm 9 mm - 19 mm : ±1,5 mm 25 mm - 32 mm : ±2,0 mm
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Width tolerance	1,5 % - + 5%
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Roll - standard self-adhesive

Item	Insulation thickness [mm]	Length [m]	Content [metric]
NHS-03-99/EA	3	30	30 m <sup>2</sup>
NHS-06-99/EA	6	15	15 m <sup>2</sup>
NHS-10-99/EA	10	10	10 m <sup>2</sup>
NHS-13-99/EA	13	8	8 m <sup>2</sup>
NHS-19-99/EA	19	6	6 m <sup>2</sup>
NHS-25-99/EA	25	4	4 m <sup>2</sup>
NHS-32-99/EA	32	3	3 m <sup>2</sup>

Other information

Thickness tolerance	3 mm - 6 mm : ±1,0 mm 9 mm - 19 mm : ±1,5 mm 25 mm - 32 mm : ±2,0 mm
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Length tolerance	1,5 % - +5%
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Tape – insulation

Item	Thickness [mm]	Width [mm]	Length [m]	Content [quantity]
NHS-TAPE	3	50	15	12 roll

Adhesives and Cleaners

Item	Description	Content [quantity]
ADH750/0,5	ArmaFlex 750 Adhesive, 0,5 Litre	12 tin

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## ABOUT ARMACELL

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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 27 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.



For more information, please visit:  
[www.armacell.com](http://www.armacell.com)