

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)

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ArmaFlex®

INSTALL IT. TRUST IT.

NH/ArmaFlex® 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/AmaFlex 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."



Halogen-free insulation without compromises.

// Prevents stress corrosion cracking

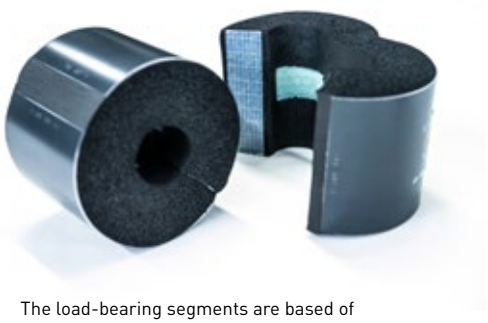
Stress corrosion cracking can occur on austenitic stainless steels when stresses, moisture and chlorine ions occur simultaneously. As a halogen-free product, NH/ArmaFlex Smart can minimise the risk of stress corrosion cracking.

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.



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

// 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.



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	Factory-made flexible elastomeric foam based on ethylene propylene diene methylene (EPDM), 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
Temperature range			
Service temperature	Min. °C[1]	Max. °C[2]	EN 14706, EN 14707, EN 14304
	-50	110	
Thermal conductivity			
Declared thermal conductivity	θm	+/- 0 °C	EN ISO 13787, EN 12667, EN ISO 8497
	λd ≤ [W/(m·K)]	0,040	
	Formula	[40 + 0,1· θm + 0,0009 · θm²]/1000	
Fire Performance and Approvals			
Reaction to fire	Tubes, open tubes: D(L)-s2, d0 Sheets, tape: E		EN 13501-1, EN 13823, EN ISO 11925-2
UL standards			
UL 94 HBF[3]	Pass		ISO 9772, UL 94, UL 746B
Fire performance			
Practical fire behaviour	self-extinguishing, does not drip, does not spread flames		
Physical attributes			
Dimensions and tolerances	In accordance with EN 14304, table 1		EN 822, EN 823, EN 13467
Weather and UV resistance			
UV resistance[4]	High. (see Technical Bulletin no. 142)		
Health and environment			
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		
Other technical features			
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).		

[1] For temperatures below -50 °C please contact our Customer Service Center to request for the corresponding technical information.

[2] +85 °C, for products with a self-adhesive layer.

[3] Only for products without self-adhesive-layer.

[4] 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. Black / Anthracite. Length: 2.0m

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	-	-	-	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. Black / Anthracite. Length: 2.0m

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 m²	NHS-19X300	19	6	5.72 m²	NHS-25X300	25	4	3.81 m²

Tube – open

Item	Thickness [mm]	Length [m]	Content [metric]
NHS-32X300	32	3	2.86 m²

Roll - standard. Black / Anthracite

Item	Insulation thickness [mm]	Length [m]	Content [metric]
NHS-03-99/E	3	30	30 m²
NHS-06-99/E	6	15	15 m²
NHS-10-99/E	10	10	10 m²
NHS-13-99/E	13	8	8 m²
NHS-19-99/E	19	6	6 m²
NHS-25-99/E	25	4	4 m²
NHS-32-99/E	32	3	3 m²
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		
Length tolerance	1,5 % - + 5%		

Roll - standard self-adhesive. Black / Anthracite

Item	Insulation thickness [mm]	Length [m]	Content [metric]
NHS-03-99/EA	3	30	30 m²
NHS-06-99/EA	6	15	15 m²
NHS-10-99/EA	10	10	10 m²
NHS-13-99/EA	13	8	8 m²
NHS-19-99/EA	19	6	6 m²
NHS-25-99/EA	25	4	4 m²
NHS-32-99/EA	32	3	3 m²
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		
Length tolerance	1,5 % - +5%		

Tape – insulation. Black / Anthracite

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

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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