

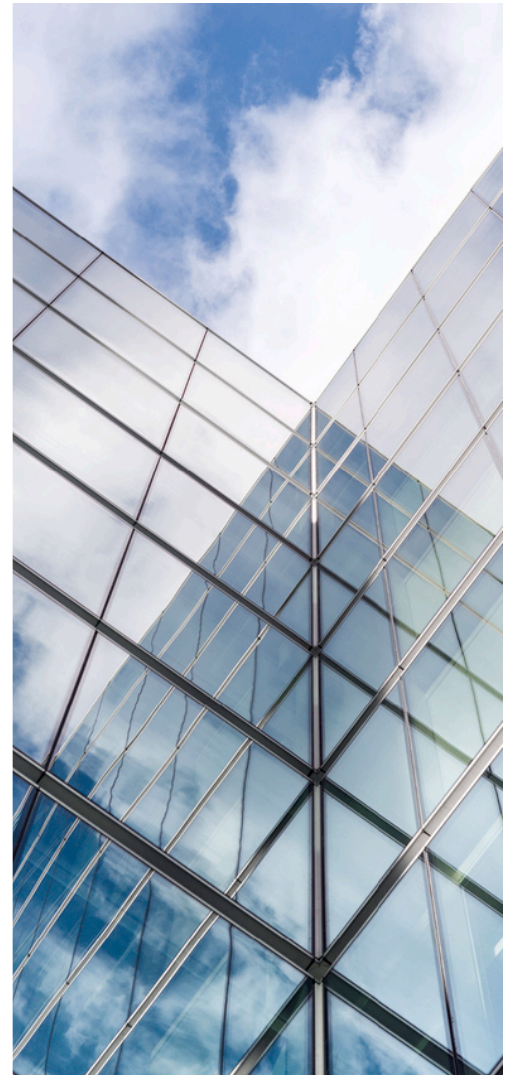


INSTALL IT. TRUST IT.

# 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)



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

INSTALL IT. TRUST IT.

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# 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/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**

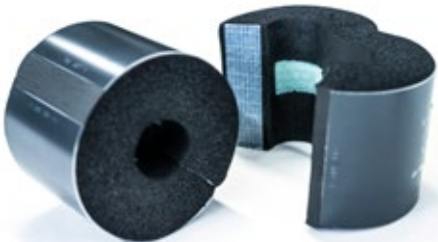
The ArmaFix NH Smart pipe support thermally isolates the pipe and its fixing from each other and, together with the adjoining NH/ArmaFlex Smart insulation, forms an insulation system for refrigeration equipment which is reliable in the long-term.

**// 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	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.
Declaration of performance	Declaration of Performance in accordance with Article 7(3) of Regulation (EU) No 305/2011 is available at <a href="http://www.armacell.com/DoP">www.armacell.com/DoP</a> .

Property	Value / Assessment	Standard / Test method
<b>Temperature range</b>		
Service temperature	Min. °C <sup>1</sup> -50	Max. °C <sup>2</sup> 110
		EN 14706, EN 14707, EN 14304
<b>Thermal conductivity</b>		
Declared thermal conductivity	$\theta_m$ $\lambda d \leq [W/(m \cdot K)]$ Formula	+/- 0 °C 0.040 [40 + 0,1 · $\theta_m$ + 0,0009 · $\theta_m^2$ ]/1000
		EN ISO 13787, EN 12667, EN ISO 8497
<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 <sup>3</sup>	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	$\mu \geq 2000$	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>4</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> Only for products without self-adhesive-layer.

<sup>4</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.

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.

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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 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.



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