



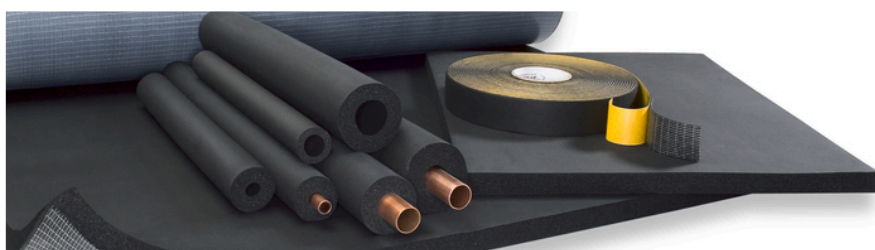
INSTALL IT. TRUST IT.

NH/ArmaFlex

The protective halogen-free insulation to reduce corrosive effects and smoke toxicity in case of fire

- // Halogen-free
- // Reduces toxicity and corrosive effects on people and equipment
- // Fibre dust free material provides low thermal conductivity
- // IMO approved

www.armacell.eu



 **armacell**[®]
ArmaFlex[®]

INSTALL IT. TRUST IT.

NH/ArmaFlex

IN THE NEW DATA CENTRE OF COMARCH AG - DRESDEN, GERMANY

One of the most secure data centres in Central Germany and the heart of the German headquarters of Polish IT company Comarch was constructed in just under twelve months with an investment of 12 million euros.



// Challenge

A consistently low temperature must be guaranteed in order to protect the sensitive electronics in the data centre of Comarch AG in Dresden against overheating and failure. To air-condition the computer centre two water chillers with a cooling capacity of 550 kW each were installed. These cool four cold water storage units with a total water volume of 24,000 litres. The doubled redundant system was constructed with pipes up to DN 300. The cooling requirement in data centres is enormous: if the worst comes to the worst, it can account for more than a third of energy consumption.

// Solution

The main parameter for increasing energy efficiency in refrigeration applications is the insulation. Because optimal insulation can significantly reduce energy losses.

Therefore, NH/ArmaFlex was used to insulate the refrigeration plant and cooling-water lines as well as the ventilation plant and air ducts in Comarch's new building. The closed-cell insulation material has low thermal conductivity and high resistance to watervapour transmission. It provides plant components with long-term protection against condensation and energy losses. The halogen-free NH/ArmaFlex was installed on the pipes in the data centre. In the event of a fire the product minimizes the risk of consequential damage which can cost many times more than the original fire damage. In a fire NH/ArmaFlex does not release corrosive gases which could form aggressive acids in combination with the water used for fighting the fire. Parts of the insulated systems were then clad with Okabell sheets.

Jörg Uhlig, Owner of Uhlig-Isolierung (Lübben):

„The servers in the new data centre emit a lot of heat and must be cooled continuously. Correctly calculated insulation ensures that the required line temperature is maintained as long as possible and the refrigeration machine does not need to start up so often to lower it. With NH/ArmaFlex it's possible to reduce the energy costs. What's more the highly flexible material is very easy to install.“



TECHNICAL DATA - NH/ARMAFLEX

Brief description	NH/ArmaFlex is a halogen free, flexible closed-cell insulation material with certification for use in marine environments.
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 grey
Special features	Halogen-free (chloride, bromide) acc. to DIN / VDE 0472, part 815.
Applications	Insulation/protection for pipes, air ducts, vessels of air-conditioning/refrigeration, ventilation to prevent condensation and save energy.
Installation	Certified and compatible adhesive for a long-term performing system is ArmaFlex 520.

Property	Value / Assessment	Standard / Test method
Temperature range		
Service temperature	Min. °C ¹	Max. °C
	-50	110
	Remarks	+85 °C if sheet or tape is glued to the object with its whole surface
Thermal conductivity		
Declared thermal conductivity	θm	+/- 0 °C
	λd ≤ [W/[m·K]]	0.040
	Formula	[40 + 0,1 · θm + 0,0009 · θm ²]/1000
Fire Performance and Approvals		
Surface flammability	low-flammable - 2010 FTP-Code (MED 96/98/EC, Modul D)	IMO 2010 FTP Code, Part 5 ²
UL standards		
UL 94 HF-1	Passed (tubes ≥ 3.0 mm) Passed (sheets ≥ 3.0 mm)	UL 94, IEC 60695-11-10, 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 ³	Protection against UV radiation is necessary (see Technical Bulletin no. 142)	
Health and environment		
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 temp. (0°C–35 °C).	

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

² According to IMO 2010 FTP Code annex 2, clause 2.2 a fire technical test for smoke density and toxicity is not necessary.

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

Tube – standard

9 mm				13 mm				19 mm			
Pipe Ø [mm]	Item	EAN	Primary content [metric]	Pipe Ø [mm]	Item	EAN	Primary content [metric]	Pipe Ø [mm]	Item	EAN	Primary content [metric]
10	NH-09X010	7612207130317	266 m	10	NH-13X010	7612207130478	156 m	15	NH-19X015	7612207130645	78 m
12	NH-09X012	7612207130324	200 m	12	NH-13X012	7612207130485	162 m	18	NH-19X018	7612207130669	60 m
15	NH-09X015	7612207130331	192 m	15	NH-13X015	7612207130492	120 m	22	NH-19X022	7612207130683	56 m
18	NH-09X018	7612207130348	166 m	18	NH-13X018	7612207130508	112 m	28	NH-19X028	7612207130690	48 m
22	NH-09X022	7612207130355	136 m	22	NH-13X022	7612207130515	98 m	35	NH-19X035	7612207130706	36 m
28	NH-09X028	7612207130362	98 m	28	NH-13X028	7612207130522	78 m	42	NH-19X042	7612207130713	32 m
35	NH-09X035	7612207130379	76 m	35	NH-13X035	7612207130539	56 m	48	NH-19X048	7612207130720	24 m
42	NH-09X042	7612207130386	60 m	42	NH-13X042	7612207130546	48 m	54	NH-19X054	7612207130737	24 m
48	NH-09X048	7612207130393	50 m	48	NH-13X048	7612207130553	40 m	60	NH-19X060	7612207130744	18 m
-	NH-09X015/E550	7612207415711	-	54	NH-13X054	7612207130560	34 m	76	NH-19X076	7612207130751	12 m
-	-	-	-	60	NH-13X060	7612207130577	32 m	89	NH-19X089	7612207130768	12 m
-	-	-	-	76	NH-13X076	7612207130584	22 m	114	NH-19X114	7612207130775	8 m
-	-	-	-	89	NH-13X089	7612207130591	18 m	-	NH-19X300	7612207422634	-
-	-	-	-	-	NH-13X300	7612207422627	-	-	-	-	-
-	-	-	-	-	NH-13X048-A	7612207293319	-	-	-	-	-

Tube – standard

25 mm				32 mm			
Pipe Ø [mm]	Item	EAN	Primary content [metric]	Pipe Ø [mm]	Item	EAN	Primary content [metric]
12	NH-25X012	7612207389715	50 m	15	NH-32X015	7612207405026	32 m
15	NH-25X015	7612207130812	40 m	18	NH-32X018	7612207393576	28 m
18	NH-25X018	7612207130829	40 m	22	NH-32X022	7612207393583	24 m
22	NH-25X022	7612207362473	40 m	28	NH-32X028	7612207326864	24 m
28	NH-25X028	7612207240986	32 m	35	NH-32X035	7612207316919	22 m
35	NH-25X035	7612207130850	24 m	42	NH-32X042	7612207316926	16 m
42	NH-25X042	7612207130867	22 m	48	NH-32X048	7612207326871	12 m
48	NH-25X048	7612207130874	18 m	54	NH-32X054	7612207316933	12 m
54	NH-25X054	7612207130881	16 m	60	NH-32X060	7612207316940	10 m
60	NH-25X060	7612207130898	12 m	76	NH-32X076	7612207405033	8 m
76	NH-25X076	7612207130904	10 m	89	NH-32X089	7612207300499	6 m
89	NH-25X089	7612207130911	8 m	108	NH-32X108	7612207422559	4 m
114	NH-25X114	7612207345384	6 m	114	NH-32X114	7612207300482	4 m

Tube – standard

25 mm				32 mm			
Pipe Ø [mm]	Item	EAN	Primary content [metric]	Pipe Ø [mm]	Item	EAN	Primary content [metric]
125	NH-25X125	7612207422566	4 m	125	NH-32X125	7612207422610	4 m
	NH-25X168	7612207454260		140	NH-32X140	7612207345391	4 m
-	-	-	-		NH-25X300	7612207422641	

13 mm			19 mm			19 mm		
Pipe Ø [mm]	Item	EAN	Pipe Ø [mm]	Item	EAN	Pipe Ø [mm]	Item	EAN
	NH-13X060-A	7612207293333		NH-19X035-A	7612207293401		NH-25X089-A	7612207293654
	NH-13X015-A	7612207293258		NH-19X015-A	7612207293364		NH-25X076-A	7612207293647
	NH-13X018-A	7612207293265		NH-19X060-A	7612207293449		NH-25X042-A	7612207293517
	NH-13X022-A	7612207293272		NH-19X048-A	7612207293425		NH-25X060-A	7612207293630
	NH-13X028-A	7612207293289		NH-19X022-A	7612207293388	-	-	-
	NH-13X054-A	7612207293326		NH-19X018-A	7612207293371	-	-	-
	NH-13X042-A	7612207293302		NH-19X054-A	7612207293432	-	-	-
	NH-13X035-A	7612207293296		NH-19X028-A	7612207293395	-	-	-
-	-	-		NH-19X076-A	7612207293456	-	-	-
-	-	-		NH-19X089-A	7612207293463	-	-	-
-	-	-		NH-19X042-A	7612207293418	-	-	-

Sheet – standard

Item	Insulation thickness [mm]	Length [m]	EAN	Primary content [metric]
NH-03-99/E	3	30	7612207130256	30 m ²
NH-06-99/E	6	15	7612207130294	15 m ²
NH-10-99/E	10	10	7612207130447	10 m ²
NH-13-99/E	13	8	7612207130607	8 m ²
NH-19-99/E	19	6	7612207130782	6 m ²
NH-25-99/E	25	4	7612207130935	4 m ²
NH-32-99/E	32	3	7612207130966	3 m ²
NH-32-99/E				

Sheet – self-adhesive

Item	Thickness [mm]	Length [m]	EAN	Primary content [metric]
NH-03-99/EA	3	30	7612207130263	30 m ²
NH-06-99/EA	6	15	7612207130300	15 m ²
NH-10-99/EA	10	10	7612207130454	10 m ²
NH-13-99/EA	13	8	7612207130614	8 m ²
NH-19-99/EA	19	6	7612207130799	6 m ²
NH-25-99/EA	25	4	7612207130959	4 m ²
NH-32-99/EA	32	3	7612207130973	3 m ²

Tape – insulation

Item	Thickness [mm]	Width [mm]	Length [m]	EAN	Primary content [pieces]
NH-TAPE	3	50	15	7612207130225	12 roll

Item	EAN
NH-19-244/ZS	7612207450514
NH-19-S217/ZS	7612207373950
NH-19-S226/ZS	7612207390780
NH-19-S227/ZS	7612207390797
NH-19-S228/ZS	7612207455526
NH-25-S207/ZS	7612207419245
NH-25-S208/ZS	7612207419269
NH-25-S209/ZS	7612207419276
NH-25-S210/ZS	7612207419252
NH-25-S211/ZS	7612207419283
NHD-25-S206/ZS	7612207453232
NHD-25-S207/ZS	7612207453249

OUR CUSTOMERS EXPECT THE BEST. WE WORK HARD TO GO BEYOND THAT AND EXCEED THEIR EXPECTATIONS.

At Armacell we want to create a unique customer experience. We understand the challenges of today's construction industry and support you in the successful delivery of your projects. From planning to delivery, our 360° service supports you throughout the entire process.



SERVICE AND TECHNICAL INFORMATION AVAILABLE 24/7

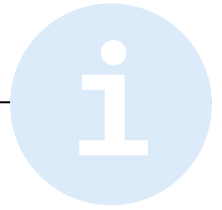
At Armacell, we do everything we can to ensure your project runs smoothly. This is why the information about the Armacell services you benefit from is available 24/7 from Armacell.com website as well as from our planning tools (BIM, specification documents, ArmaWin, as well as our sustainable building policy)

DEDICATED LOCAL CONTACTS

We aim to create open lines of communication with our customers. From on-site trainings and webinars by our Armacell technical experts advising on project planning and safety instructions to our local dedicated sales and customer services, your local Armacell dedicated team is working in partnership with you to achieve more together.

DIGITAL INFORMATION FLOWS

From order to delivery, we also provide you with digital information flows such as EDI and other well-known data formats that are widely used in the construction sector worldwide.



OUR STANDARD LOGISTICS SERVICES INCLUDE

- // Material ordered will be shipped from our facilities within 48 hours after order confirmation
- // Full truck loads and full pallets (not mixed – 1 SKU per pallet)
- // List prices in this document are based on Ex Works
- // Container loading with standard goods
- // Customs clearance (including documentation) for standard deliveries outside EU
- // Dangerous goods process for road freight

WE GO BEYOND STANDARD SERVICES AND ALSO PROPOSE YOU ADDITIONAL SERVICES*

OPIMISED PACKAGING

- Edge protection
- Strapping
- Doubled stretching
- Reinforced cardboard with extra layer
- Additional warning tape

LABELLING

- Extra label for transport instructions

EXTRA DELIVERY SERVICES

- Just in time delivery
- Delivery with lifting platform for partial or complete load
- Express and direct shipments
- Booking a delivery time slot via your EDP system
- Forklift truck for unloading at construction site
- Air and sea freight deliveries
- Dangerous goods shipment process for air and sea freight



To mitigate cost increases and reduce waste generation, we also propose a pallet return service* by which pallets can be handed at Armacell collection points.

* Please contact your local Customer Service Centre to see which of these services apply to your country.

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.

At Armacell, your trust means everything to us, so we want to let you know your rights and make it easier for you to understand what information we collect and why we collect it. If you would like to find out about our processing of your data, please visit our Data Protection Policy.

© Armacell, 2022. All rights reserved. Trademarks followed by ® or ™ are trademarks of the Armacell Group.

Microban is a registered trademark of Microban Products Company.

ArmaFlex | NH/ArmaFlex (EMEA) | Brochure | 012023 | en-IN

ABOUT ARMACELL

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 more than 3200 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 high-tech and lightweight applications and next generation aerogel blanket technology.



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