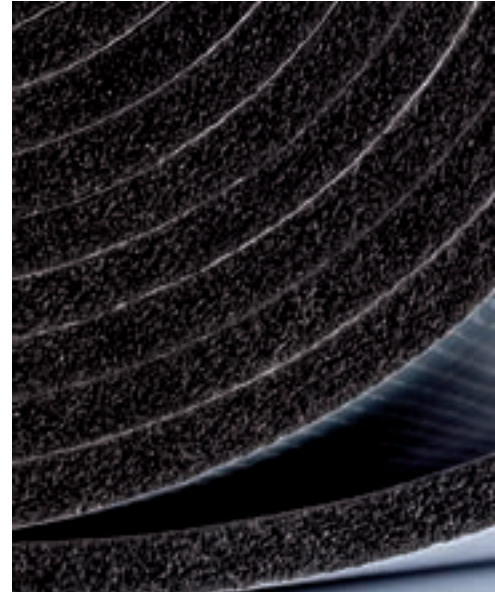




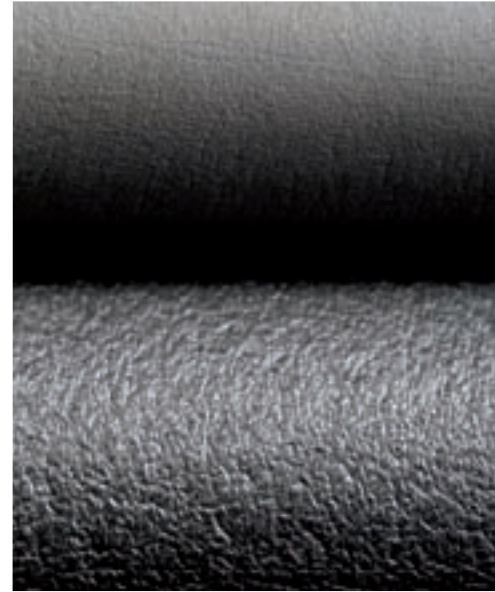
*insulation technologies*







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**NMC**  
All round comfort and security



People have always had a need for warmth and security. This is why fire meant survival for our ancestors. Today, in a time of scarcity of resources, hectic lifestyles and anonymity, we feel like a raw wind is blowing against us everyday. We are left with a longing for protection and safety.

The future of the earth, and therefore of humanity, basically depends on how prudently we use the remaining energy sources and what innovations are implemented in the area of energy production and use. Use of environmentally sound, energy-efficient building materials makes an important contribution to this. Intelligent materials and their environmentally sound production have the goal of dramatically extending the energy life cycle. In this way the world will continue to be habitable for us and our children.

For the past half-century, we at NMC have persistently sought to make our customers feel good with innovative products and highly developed technology. Our core skill lies in the development, production and international marketing of technical foams. We have mastered the required technological methods in order to process raw materials and combine them in a highly complex and precise production process. The resulting solutions offer protection and innovation, aesthetics and comfort or are simply just for having fun.

NMC offers security and comfort – in the area of expertise of building services engineering we create solutions, which, after being installed in many and diverse areas of application over decades, effectively separate or combine in the optimum ratio with each other cold, warmth, dampness and dryness, noise and quiet. Consequently, they make a considerable contribution to balancing out the basic elements of fire, water, earth and air in the living environment of people. Our insulation solutions for heating and plumbing, refrigeration and air conditioning, solar and high-temperature heating systems form a central product segment.

In order to meet the many and diverse needs in the insulation industry, we have two different product lines: CLIMAFLEX, the polyethylene-based expert concept for plumbing and heating applications, which stands out due to its low acquisition price and polyvalent usage, and the synthetic rubber INSUL-TUBE® professional concept with specific and reliable solutions for all application areas.

*NMC – creates security through technology.*



# CLIMAFLEX®

The expert concept



If you expect high dimensional stability and quality, an optimum cost/performance ratio and simple installation from insulation, then polyethylene-based CLIMAFLEX® is the right choice.

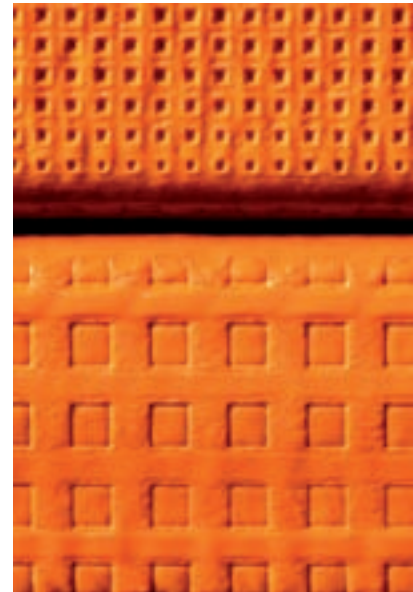
CLIMAFLEX®, the expert concept for perfect plumbing and heating pipe insulation, made of CFC-free compact and closed-cell polyethylene foam, is resistant to age and is very easy to install. The variety of products and forms opens up unforeseen possibilities, in such a way that complex solutions also become feasible. With its national and international inspection certificates, CLIMAFLEX® is the ideal material for plumbing insulation.

Not only cost effectiveness, but also environmental aspects are the focal point of CLIMAFLEX®. If the heating and hot water pipes in a detached house are insulated with CLIMAFLEX®, under realistic conditions, 1.21 litres of fuel oil can be saved per square metre of living space over a year. In a detached house with 170 m<sup>2</sup> of living space as much as 200 litres of fuel oil can be saved, and consequently valuable energy. At a price per litre of 0.65 euros, this results in an annual potential saving of over 130 euros – a significant contribution to reducing CO<sub>2</sub> emissions and therefore to protecting the environment. Just this one measure could prevent 562 kilograms of CO<sub>2</sub> being released into the atmosphere each year. Pipe insulation is therefore not an expense, but rather an investment in our future.

The following pages give you an overview of the multitude of variations and application areas of CLIMAFLEX®: from the timesaving CLIMAFLEX® XT pipe insulation with self-adhesive closing system to CLIMAFLEX® STABIL, the insulation with protective coating against mechanical and climatic stress, and CLIMAFLEX® SPIRAL, for large and self-supporting ventilation pipes.

*CLIMAFLEX® – protects the environment and saves money.*

- extremely economical
- easy to install
- resistant
- dimensionally stable



## CLIMAFLEX®



Polyethylene-based closed-cell foam pipe insulation for heating and plumbing.

- Building Regulations (UK) Part L Compliant
- $\lambda = 0.038 \text{ W/mK}$  at  $40^\circ\text{C}$
- Fire performance: B1
- Temperature range:  $-40^\circ\text{C}$  to  $+100^\circ\text{C}$
- Damping of structure-borne noise:
  - Reduction of up to 23 dB (A)
  - Density: approx.  $30 \text{ kg/m}^3$

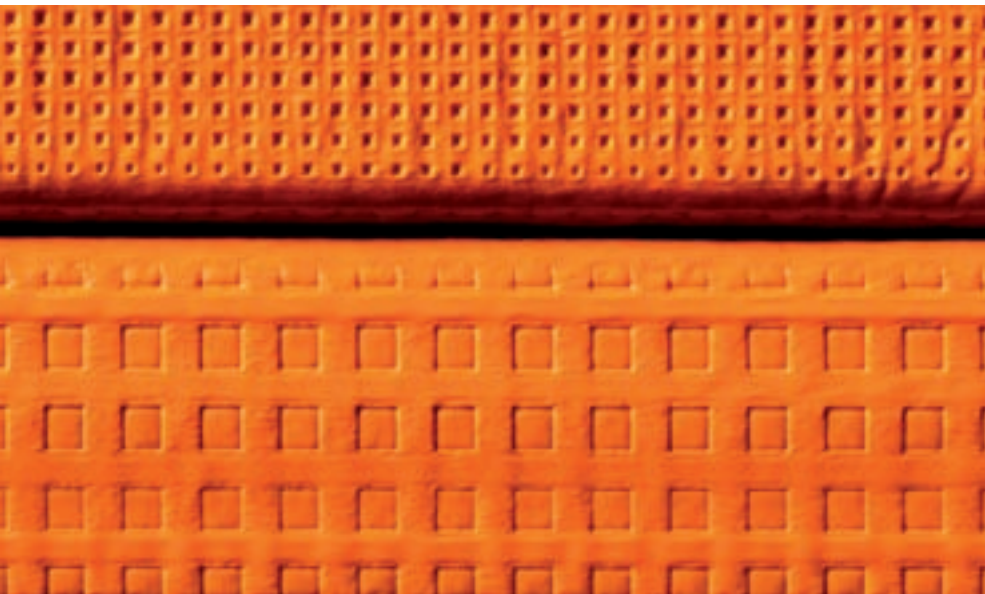
## CLIMAFLEX® XT



Polyethylene pipe insulation for heating and plumbing, equipped with two self-adhesive strips, whose special glue guarantees fast and durable installation. Simply peel off the protection film, press down and it's done.

### Like CLIMAFLEX®, but

- Up to 50% time saving due to reliable closing system
- Temperature range:  $-40^\circ\text{C}$  to  $+85^\circ\text{C}$



## CLIMAFLEX® STABIL



The focal point of CLIMAFLEX® STABIL, except for the excellent product quality of CLIMAFLEX®, is its special PE protective coating. This prevents external mechanical damage and effectively protects against dampness. In short, excellent quality as well as clean and secure installation.

### Like CLIMAFLEX®, but

- Hard-wearing against mechanical stress and dampness

## EXZENTROFLEX®



EXZENTROFLEX®, the solution for small floor panel thicknesses. The excentric, extruded polyethylene pipe insulation with robust PE-shell for insulating floor pipes, in accordance with the German Energy Saving Act (EnEV), offers high tilt stability due to its design.

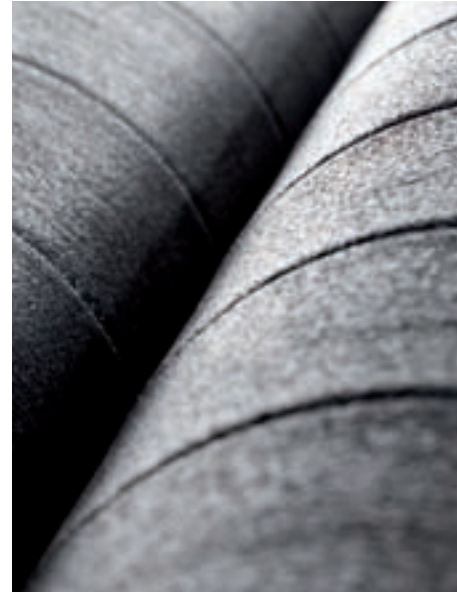
- $\lambda = 0.040 \text{ W/mK}$  at  $40 \text{ }^\circ\text{C}$
- Density: approx.  $35 \text{ kg/m}^3$
- Fire performance: B1
- Temperature range:  $-40 \text{ }^\circ\text{C}$  to  $+100 \text{ }^\circ\text{C}$
- Damping of structure-borne noise
- Reduced floor panel thickness due to excentric profile
- Increased foot fall sound protection
- Hard-wearing against mechanical stress and dampness
- German Energy Saving Act (EnEV) Appendix 5, line 7

## EXZENTROFLEX® COMPACT

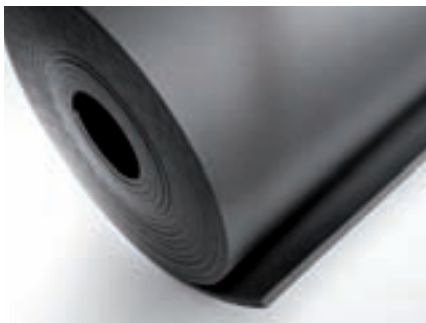


EXZENTROFLEX® COMPACT, the intelligent progression from EXZENTROFLEX®, enables insulation with an even lower panel thickness and even narrower pipe laying. Due to the rectangular, tilt-resistant design, weak spots and therefore sound bridges in the floor are avoided.

- $\lambda = 0.040 \text{ W/mK}$  at  $40 \text{ }^\circ\text{C}$
- Density: approx.  $35 \text{ kg/m}^3$
- Fire performance: B2
- Temperature range:  $-40 \text{ }^\circ\text{C}$  to  $+100 \text{ }^\circ\text{C}$
- Damping of structure-borne noise
- Minimal floor panel thickness due to compact profile
- Increased foot fall sound protection
- Hard-wearing against mechanical stress and dampness
- German Energy Saving Act (EnEV) Appendix 5, line 7



## CLIMAFLEX® ROLL



Closed-cell and cross-linked polyethylene foam insulation sheets for insulation of air ducts, tanks or large pipes.

- $\lambda = 0.039 \text{ W/mK}$  at 40 °C
- Fire class: B1
- Temperature range:  
– 40 to +100 °C
- Density: approx. 30 kg/m<sup>3</sup>
- Accurate installation

## CLIMAFLEX® LS



Flexible polyethylene hose for insulation of sewage systems. CLIMAFLEX® LS effectively and durably protects against structure-borne noise transfer, condensation and corrosion.

- Fire class: B1
- Temperature range:  
– 40 to +100 °C
- Density: approx. 40 kg/m<sup>3</sup>
- Damping of structure-borne noise

## CLIMAFLEX® STABIL FOR DRAINPIPES



Closed-cell flexible foam polyethylene with robust shell and easy to install inner gliding foil ensures damping of structure-borne noise in cast iron pipes (SML) and synthetic pipes (HT) for plumbing.

- Fire class: B2
- Temperature range:  
– 45 to +95 °C
- Damping of structure-borne noise
- Robust shell protects against mechanical stress, condensation and corrosion.



## CLIMAFLEX® CABLE PROTECTIVE TUBE



Closed-cell flexible foam polyethylene with robust shell and inner gliding foil.

Suitable for cold water pipes in accordance with DIN 1988 Part 2 and applications without specifications in accordance with the German Energy Saving Act (EnEV).

- $\lambda = 0.040 \text{ W/mK}$  at  $40^\circ\text{C}$
- Fire class: B2
- Temperature range:  
–  $40$  to  $+95 \text{ }^\circ\text{C}$
- Damping of structure-borne noise
- Robust shell protects against mechanical stress, condensation and corrosion.

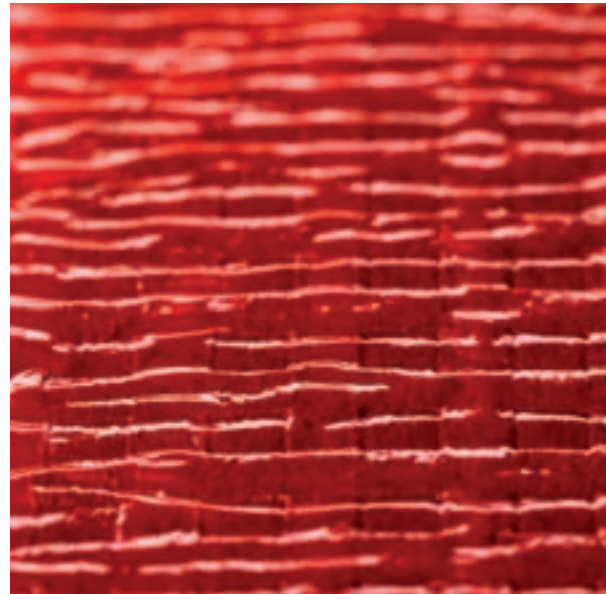
## CLIMAFLEX® SPIRAL



CLIMAFLEX® SPIRAL, the patented spiral system from NMC, opens up new dimensions in insulation technology for plumbing and heating. Due to CLIMAFLEX® SPIRAL, extreme pipe cross sections can be insulated quickly and without the usual laborious task of cutting out and fitting.

- $\lambda = 0.045 \text{ W/mK}$  at  $40^\circ\text{C}$
- Fire class: B1
- Density: approx.  $30 \text{ kg/m}^3$
- Low weight
- Airtight
- Corrosion-free

Due to its lightness, its air impermeability, the fact that it is corrosion-free and its highly flexible laying, CLIMAFLEX® SPIRAL is also an ingenious solution for ventilation applications. In contrast to conventional metal technology, fast and inexpensive installation is feasible.

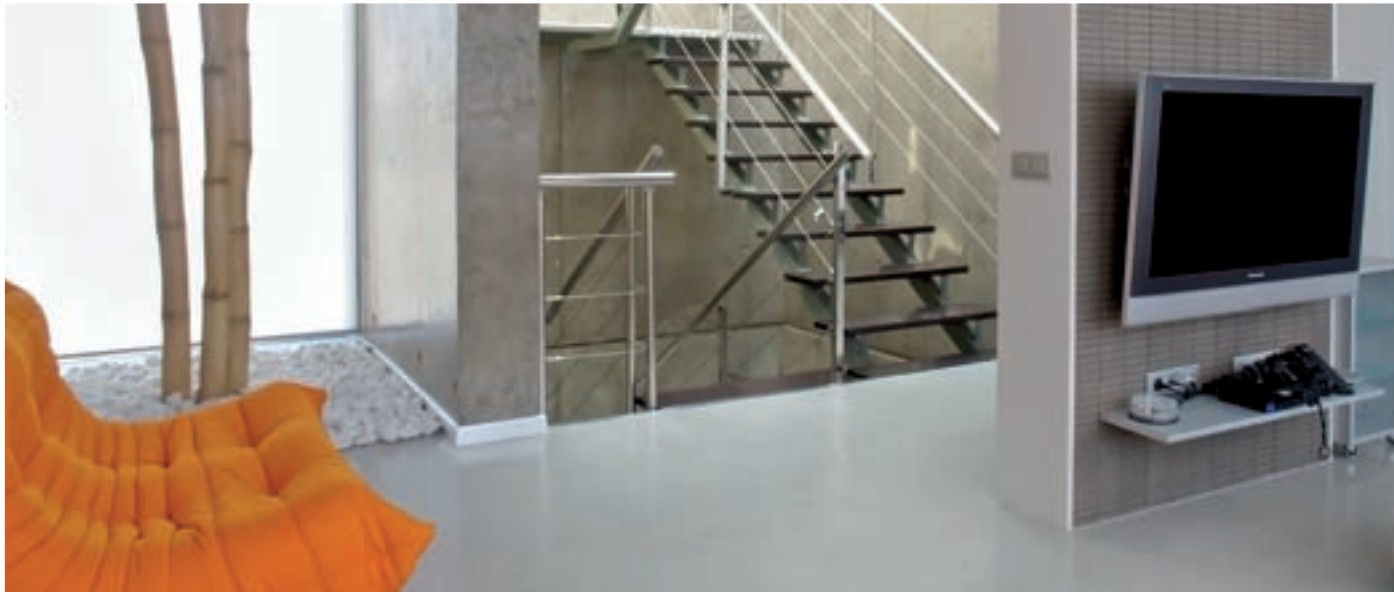
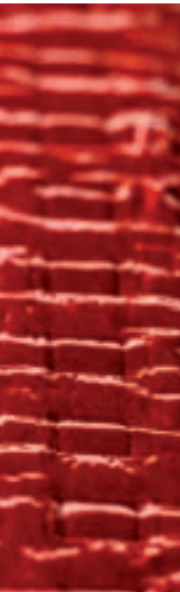


## Accessories



- 1 NMC-FIX Adhesive
- 2 CLIMAFLEX PVC tape
- 3 Cloth tape
- 4 Tool box

- 5 Self adhesive CLIMAFLEX foam tape
- 6 CLIMAFLEX clips
- 7 NMC Gluemaster
- 8 CLIMAFLEX stop cock cover & T-joint



## Application areas

	Heating pipes (except for flooring)	Waste pipes	Hot and cold water pipes (except for flooring)	Ventilation pipes	Heating pipes for flooring	Hot and cold water pipes for flooring	Large pipes	Pipes without specifications
CLIMAFLEX®	++		++					+
CLIMAFLEX® XT	++		++					+
CLIMAFLEX® ROLL	+	+	+	+			++	+
CLIMAFLEX® STABIL	++		++		+	+		+
EXZENTROFLEX®					++	++		+
EXZENTROFLEX® COMPACT					++	++		+
CLIMAFLEX® LS		++					+	
CLIMAFLEX® STABIL FOR WASTE PIPES		++					+	
CLIMAFLEX® PIPE PROTECTOR								++
CLIMAFLEX® SPIRAL				++			++	

+ Possible application area  
 ++ Ideal application area



# INSUL-TUBE®

The professional concept



If high elasticity and extreme cold or extreme heat resistance is required from insulation, then synthetic rubber NMC INSUL-TUBE® is the right choice.

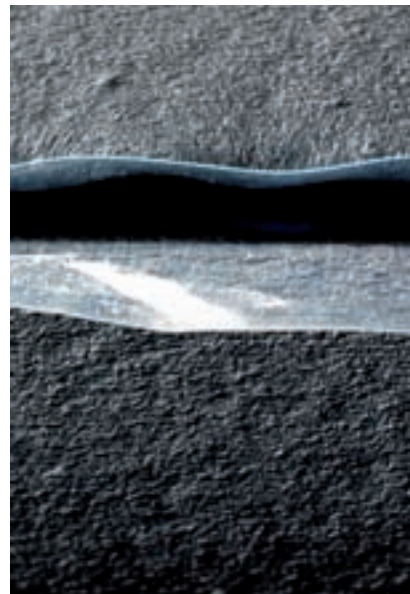
INSUL-TUBE®, the professional concept in our insulation range, made of synthetic, closed-cell rubber, saves time during installation, always fits perfectly and meets the demands of professionals. This is more important in domestic, plant and industrial construction, where the greatest flexibility and a large variety of products are of central importance. INSUL-TUBE® has low heat conductivity in conjunction with high water vapour diffusion resistance, which essentially increases the energy efficiency and durability of the insulated constructions. In addition, INSUL-TUBE® meets the high national standards for fire performance and of course has the required inspection certificates.

Besides the usual plumbing and heating application areas, INSUL-TUBE® provides professional solutions for refrigeration and air conditioning and is excellent for use in the solar and high temperature sector. At temperatures beyond 100 degrees, HT INSUL-TUBE® has outstanding insulation values. Even in extreme cold, at temperatures down to minus 40 degrees Celsius, the highly elastic INSUL-TUBE® K does an excellent job.

Get an overview of the special application areas and options of INSUL-TUBE®: from the off-the-peg INSUL-TUBE® with various installation options, to INSUL® COIL, the hose option that minimises cutting, and the INSUL® ROLL and INSUL® sheet, the rolled or sheet insulation for large-area and specifically shaped components.

*INSUL-TUBE® – highly professional, reliable and fits perfectly.*

- resistant to high and low temperatures
- fast and easy to install



## INSUL H



Flexible rubber pipe insulation for plumbing and heating in accordance with UK Building Regulations Part L. The high elasticity enables the insulation to be simply slipped on to the pipe.

- $\lambda = 0.040 \text{ W/mK}$  at  $40 \text{ }^\circ\text{C}$
- Fire class: B1/B2
- Temperature range:  
–  $40$  to  $+105 \text{ }^\circ\text{C}$
- Damping of structure-borne noise
- Density:  $45 - 80 \text{ kg/m}^3$

## INSUL H XT



High quality INSUL® rubber pipe insulation, additionally equipped with two self-adhesive strips. Particularly suitable for all cases in which insulation has to be fitted after the pipe is installed.

### Like INSUL® H, but

- Up to 50% time saving through integrated self-adhesive closing system

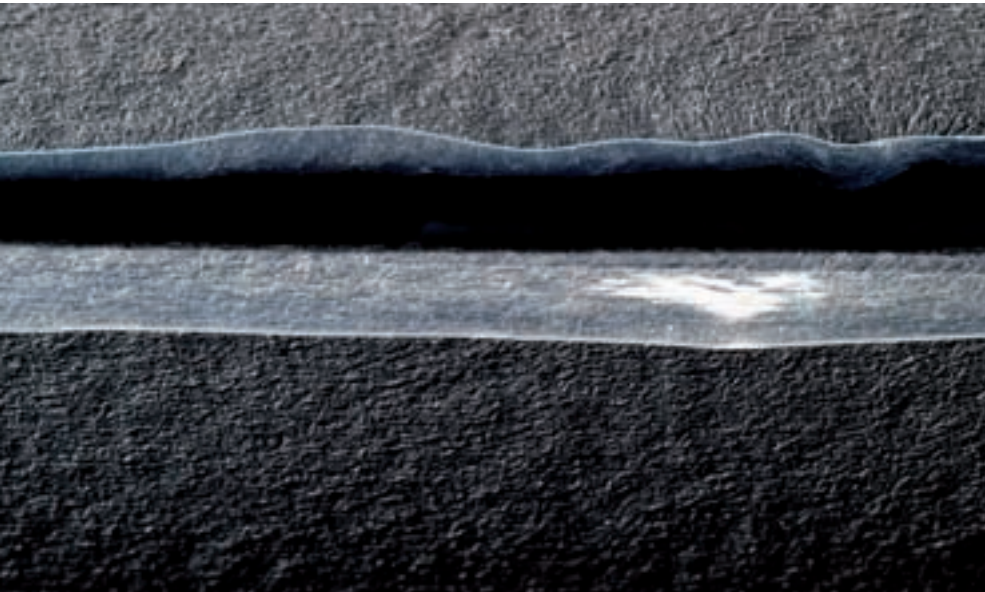
## INSUL H COIL



High quality INSUL® rubber pipe insulation, rolled up in a coil in such a way that cutting and gluing of joints can be reduced to a minimum.

### Like INSUL® H, but

- Minimized cutting and gluing of joints due to use of a coil.



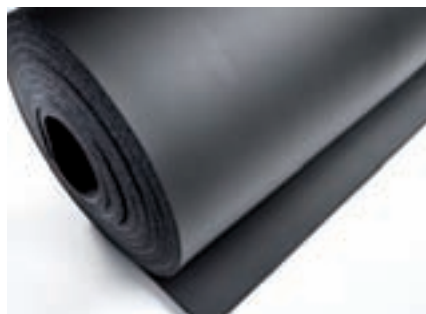
## HT INSUL-TUBE®



Flexible rubber pipe insulation for use in areas with application temperatures of up to 150 °C or for insulation of solar heating systems.

- Temperature range:  
– 40 to +150 °C
- $\lambda = 0.044 \text{ W/mK}$  at 40 °C
- Fire class: B2
- Density: 45 – 80 kg/m<sup>3</sup>
- Designed for high-temperature solar heating systems

## HT INSUL ROLL



Rubber insulation sheets for high-temperature or solar applications.

Like HT INSUL-TUBE®

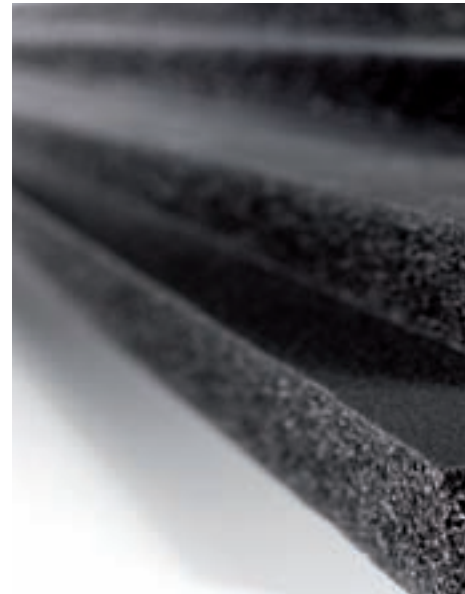
## HT INSUL COIL



Flexible rubber pipe insulation in a practical dispenser for high-temperature and solar applications. Minimises cutting and gluing.

Like HT INSUL-TUBE®, but

- Minimized cutting and gluing of joints due to use of a coil.



## INSUL-TUBE® K



Flexible rubber pipe insulation made of closed-cell foam for refrigeration and air conditioning systems. The closed-cell structure and good water vapour diffusion resistance of the material prevent condensation from forming on cold pipes and guarantee durable energy savings.

- $\lambda = 0.035 \text{ W/mK}$  at  $0 \text{ }^\circ\text{C}$
- $\mu > 5000$
- Fire class: B1/B2
- Temperature range:  
–  $40$  to  $+105 \text{ }^\circ\text{C}$
- Damping of structure-borne noise
- Density:  $45 - 100 \text{ kg/m}^3$

## INSUL-TUBE® K XT



Flexible rubber pipe insulation for air conditioning and refrigeration systems with two self-adhesive strips, which enable simple and fast installation.

Like INSUL-TUBE® K, but

- Up to 50% time saved on installation due to the proven closing system

## INSUL-TUBE® K XT/SK



Rubber pipe insulation. The two self-adhesive strips as well as the additional overlapping with adhesive strips guarantee fast, faultless and completely clean insulation that meets the highest standards.

Like INSUL-TUBE® K, but

- Up to 50% time saved on installation due to the closing system
- Faultless and precisely fitted result



## INSUL COIL K



Flexible rubber pipe insulation with the same insulation properties as INSUL-TUBE® K. The product is rolled up in a practical dispenser. This enables insulation of continuous long pipes with minimum time spent cutting and gluing.

Like INSUL-TUBE® K, but

- Minimized cutting and gluing of joints due to use of a coil.

## INSUL ROLL/ INSUL ROLL XT



Flexible closed-cell rubber rolled insulation for saving energy in refrigeration and air conditioning technology offers the same advantages against the formation of condensation as INSUL-TUBE® K- pipe insulation. INSUL® ROLL XT, with additional high-strength special self-adhesive and grid fortification, for fast and therefore inexpensive installation.

- $\lambda = 0.035 \text{ W/mK}$  at  $0^\circ\text{C}$
- $\mu > 5000$
- Fire class: B1/B2
- Temperature range:  
–  $40$  to  $+105^\circ\text{C}$
- Damping of structure-borne noise
- Density:  $45 - 100 \text{ kg/m}^3$

## INSUL-SHEET®/ INSUL-SHEET® XT



2m long flexible rubber insulation sheets for insulation of refrigeration and air conditioning systems with the same technical properties as INSUL® ROLL.

INSUL® SHEET XT, with additional high-strength special self-adhesive and grid fortification, for fast and therefore inexpensive installation.

Like INSUL® ROLL



## Accessories



- 1 INSUL® slitting knife
- 2 INSUL® HT 3300 adhesive
- 3 PVC tape
- 4 INSUL® paint

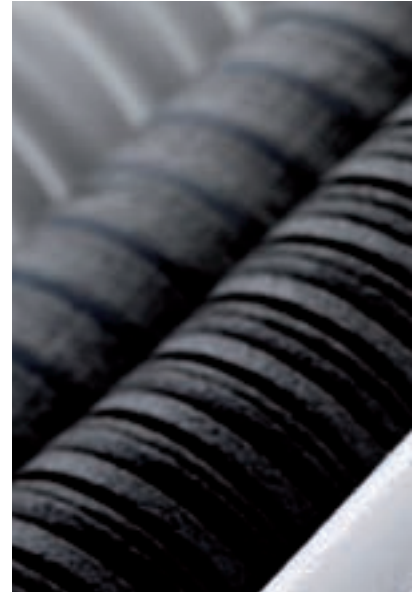
- 5 Self adhesive insul foam tape
- 6 INSUL® adhesive
- 7 INSUL® support



## Application areas

	<i>Pipes for air conditioning and refrigeration</i>	<i>Surfaces and large pipes for air conditioning and refrigeration</i>	<i>Pipes for plumbing and heating</i>	<i>Surfaces and large pipes for plumbing and heating</i>	<i>Pipes for high temperature applications</i>	<i>Surfaces and large pipes for high temperature applications</i>
INSUL-TUBE® K	++		+			
INSUL-TUBE® K XT	++		+			
INSUL-TUBE® SK	++		+			
INSUL COIL K	++		+			
INSUL ROLL	+	++	+	++		
INSUL-SHEET®	+	++	+	++		
INSUL ROLL XT	+	++	+	++		
INSUL H			++			
INSUL H XT			++			
INSUL H COIL			++			
HT INSUL-TUBE®					++	
HT INSUL-SHEET®					+	++
HT INSUL COIL					++	

- + Possible application area
- ++ Ideal application area



# Integrated Solutions

For a successful whole



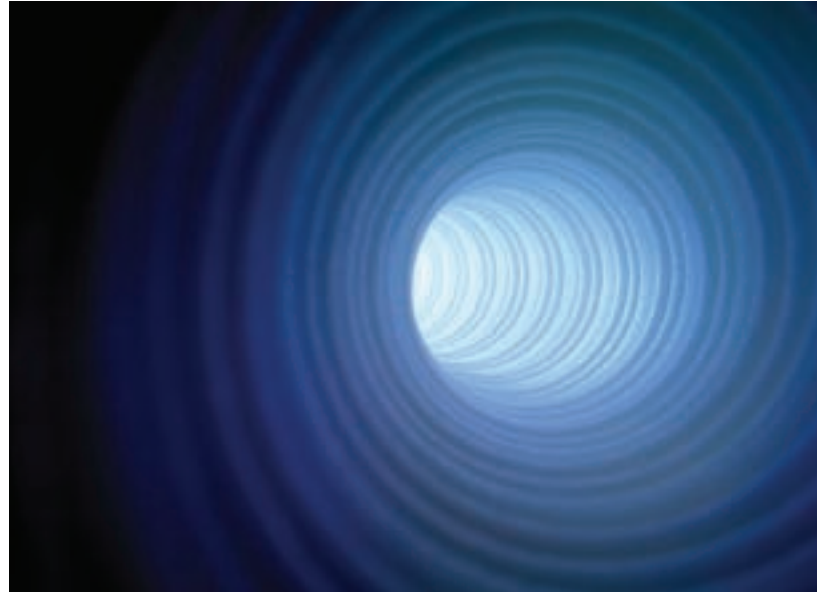
Subcontracting and outsourcing have been familiar words for a long time now. Nowadays, when up to 90% of a product is produced by subcontracting, choosing the right partners can determine the success and future of a company. Suppliers that excel themselves particularly with regard to innovative production processes and complete reliability for logistics, are preferred. The aim, in terms of economic principles, is to shorten the production chain.

NMC supplies manufacturers of worldwide renown from the automotive, traffic engineering, health and leisure sectors as well as the building industry with our high quality products and components. This also includes international brands in the district heating sector and renowned plumbing and heating manufacturers. Our product innovations range from bonded pipe pre-insulation to special applications that are used on oil platforms, and not least, many branded products sold by Europe's leading wholesale chains, contain the finest NMC technology.

A successful partnership is primarily based on trust. Therefore, our developers, engineers and product managers work together intensively with our customers from the start. From open and active communication in conjunction with expertise and dedication arise customized solutions, because the satisfaction of our customers is the greatest compliment for us.

*Integrated Solutions – represented by our components throughout the world.*

- innovative
- suitably priced
- cooperative
- highly specialised
- just-in-time



### Double tubular enclosure



Two centrally welded pipe insulations made of closed-cell polyethylene foam with robust PE shell. This pipe is used for specific applications, so that parallel running cables can be insulated faster.?

### Spiral solutions



These highly flexible ventilation pipes are manufactured using spiral technology developed and patented by NMC. They are particularly suitable for all applications for which installation of rigid ventilation pipes causes a problem. The PE foam gives the product heat insulating and sound absorbing properties.

### Flex solutions



A flexible polyethylene ventilation hose, suitable for many ventilation applications.



## Dogbones



Called "Dogbones" because of their shape, these sections are used in district heating as leads for supply and return in preformed insulation pipe systems.

## Pre-insulation



NMC works together with renowned pipe manufacturers in the plumbing and heating industry and provides those products, which have to meet international standards, with NMC quality PE hose pre-insulation.



NMC supplies several pipe manufacturers in the heating and plumbing industry with large insulating hose coils, some of which are several hundred metres long. The insulating hose is used to manufacture pre-insulated pipes.



Made by NMC  
All round innovation



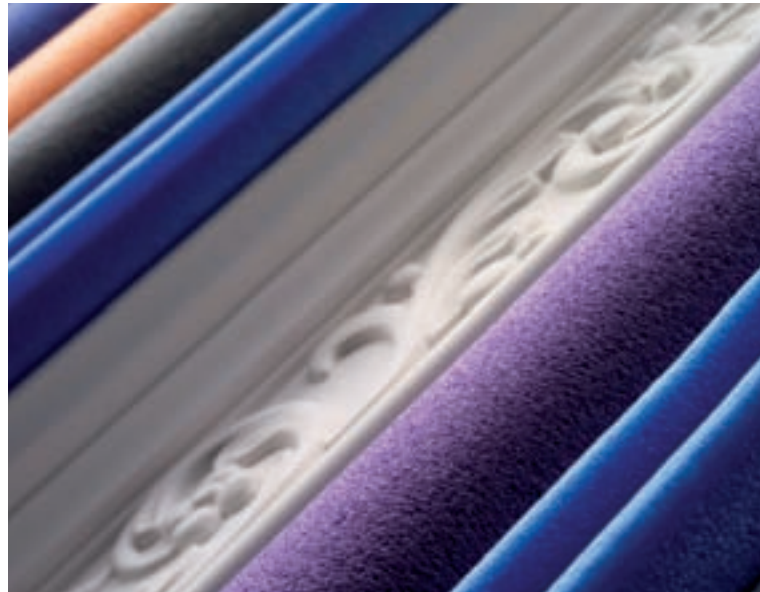
If it involves innovative foam solutions, NMC is the right choice. Polyethylene, rubber, polypropylene, polyurethane and polystyrene and our long-standing know-how form the basis for problem-solving and imaginative solutions.

Over one thousand highly qualified employees guarantee outstanding quality at all levels of the group. From customer advice to order processing and delivery, to faultless customer service.

Self-perception is part of our mission statement: focal aspects such as the most up-to-date technologies, precision, customer requirements, performance, creativity, reliability and employee know-how are tested by a target-oriented management and continuously adapted to future requirements. To achieve this we have at our disposal a state-of-the-art research, development and management centre.

*Made by NMC – High-tech products from A to Z.*

- innovative technology
- near you throughout the world – in 80 countries
- 17 sites
- 72-hour delivery guarantee



# NMC

All round protection, aesthetics and fun



*NMC offers protection and innovation*

We develop integrated special products for high technology industries. NMC special solutions are present every day on the assembly lines of diverse companies. Here they make a decisive contribution to the seamless functioning of products or protect these during transport during or after the production chain. Whether in the automotive industry, architecture or packaging industry – NMC accompanies companies and consumers safely through life.

*NMC creates aesthetics and comfort*

We make aesthetic and imaginative products from synthetic materials; from the ornamental column in your garden to the cornice in your home, from sound insulation under the parquet floor to insulation tubes for home automation.

*NMC helps you have fun*

We use foam in a playful way and develop products for leisure use such as gym mats, swimming aids, cushions, garden items and much more.



# Environmental responsibility

How we think and act



Experts were astonished, when as early as 1988, almost 20 years ago, we switched over our products not only to CFC-free, but also to HCFC-free processes. Even at that time our shareholders, management and engineers could imagine what a serious issue global warming would be in the third millennium.

Today we recycle almost 100 percent of the polyethylene residual and waste material caused by production so that it can be further incorporated into production. Since due to precise technology and the skill of our employees we create very little production waste, we can even offset overcapacities on the free recycling market. In this way we optimise the energy needed, which is minimal anyway, to manufacture our products. In comparison with other building materials such as mineral wool, a material still often used worldwide in the insulation industry and whose production process has a high-energy requirement, raw materials are conserved.

Environmental responsibility will also determine our actions in the future – through the development of future products, through sensible use of logistics systems, but also through boldly scrutinizing well-established processes and habits.

*Environmental responsibility – simply for the sake of our future.*

**nmc (uk) ltd.**

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