



EDITION 2021

# GENERAL CATALOGUE



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This price list supersedes all previous editions. Errors & omissions excepted.

#### THE COMPANY

K-FLEX® is an Italian 100% private owned manufacturing company specialised in the production of thermal and acoustic flexible elastomeric insulation materials. K-FLEX® has production facilities and subsidiary networks around the globe in order to supply their products to a worldwide customer base. Its diversified products range provides solutions for various market sectors, including building, transport, petrochemical and renewable energy. K-FLEX® is a worldwide market leader thanks to its focus on technology innovation and the quality of its products that play an essential role in energy consumption control and reduction of the greenhouse gas emission. K-FLEX® is an example of a successful Italian company that has established itself worldwide. The company is present in 63 countries, with production facilities in all continents and more than 3000 employees. In addition, the company has commercial distribution branches, located all over the world, for the efficient and effective global distribution process of its

products. The original manufacturing plant, located in Roncello (north of Milan), was founded in 1989. UNI EN ISO 9001:2015 and ISO 14001 certified, the company offers a wide range of products that ensure quality, reliability and compliance with market standards. K-FLEX® products also play a very important role in conserving the environment by improving the relationship between energy consumption and pollutant emissions, controlling energy consumption and reducing the release of greenhouse gas in the atmosphere.

# THIRTY YEARS OF HISTORY: SYNONYMOUS WITH QUALITY,

# **PROFESSIONALISM AND PASSION**

#### THE STORY

K-FLEX® was founded in 1989 and, within 30 years, has become one of the most impressive FEF manufacturers in the world. With production plants all over the world and a widespread network of distributors, over time it has ensured a global reputation in terms of quality and services offered to meet the needs of all types of projects. Throughout its history K-FLEX® has understood the market needs by reinventing its product ranges according to the evolution of the markets and the needs of local realities.

More information on our proven experience in our Company profile

#### **PLANT TIMELINE**





#### **BUSINESS AREA**

K-FLEX® is a reference point for excellence in the insulation market through the quality of its processes and products and the continuous search for innovative solutions. K-FLEX® offers a wide range of products to meet the needs of the following areee market:

Air Conditioning and Refrigeration:

Thermal insulation of the machinery (facilities) and pipework (distribution) of

air conditioning and refrigeration units.

#### O. E. M.:

K-FLEX® supplies products to customers who install them in equipment during their own manufacturing processes.

#### **Heating and Plumbing:**

Sold through a structured distribution network, made up of large distribution companies that specialize in thermal, hydraulic and sanitary products.

Beverage:

Wide range of innovative insulated systems products for the beverage industry.

#### **Acoustics:**

K-FLEX® supplies specialised products and solutions to the acoustic markets.

#### **Solar Thermal Market:**

Materials are used for the hydraulic connections from vessels or tanks to the solar panels.

#### Firestopping:

Complete range of solutions for fire protection, that will ensure the compliance with the most stringent regulatory requirements.

#### **Industrial and Commercial:**

Includes both the distribution sales
network for companies that make
thermal insulation materials their core
business (commercial) and specific industrial
segments, which consist of the markets for Oil
and Petrochemical (Oil & Gas), Rail and Ship Building,
Pharmaceutical and other industrial processes.

#### **MISSION**

To be the **market leader** in the production of **insulation materials** and to effectively answer the specific needs of its customers and markets, while providing **advanced technological solutions** and **innovative insulation systems**.



# LOGISTIC AND DISTRIBUTION

The high flexibility of our production structure allows us to up-date our stock rotation based on sales forecasts. Being able to give thorough answers to any request is one of K-FLEX®'s strong points. The K-FLEX® warehouse enables high performance in terms of speed, handling some 4,000 different products with a fast turnover. Our warehouse has a dedicated goods despatch area, especially designed with ergonomics and organisation in mind. This area has been constructed on different levels with lifts to facilitate easy pallet handling. Through these actions the shipping area of our Poland plant warhouse is able to prepare and load a quantity of materials equal to 60 complete trucks per day and more than 52000 complete trucks per year. With our additional national logistic centers K-FLEX® is able to deliver to almost all areas in Europe within 24 hours.





#### IN THE WORLD

K-FLEX® distributes products to over 63 countries. As part of its business strategy, K-FLEX® will continue to seek to expand its sales and market share in various international markets, particularly in emerging regions.

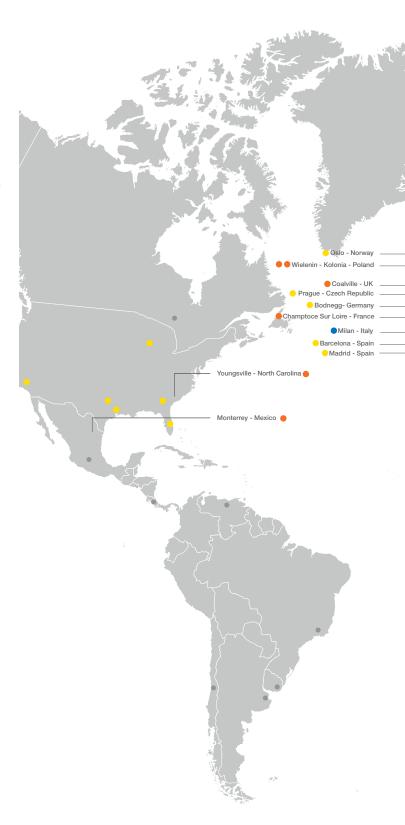
K-FLEX®'s international production network is in response to a rapidly expanding insulation market. Unlike other markets, K-FLEX® does not globalize as a strategy to decrease labour costs, but instead, is expanding in order to more efficiently reach local markets. Thermal insulation materials are high volume products and shipping costs have a strong impact on pricing. Maintaining a close vicinity to the local market and reducing transportation costs are, therefore, important strategic factors in this industry. A close proximity to customers provides K-FLEX® with the flexibility to adapt in this global market that is constantly evolving.

One of the strengths of K-FLEX® is the ability to effectively answer the specific needs of its customers through a particularly flexible production structure, that enables inventory updates based on their sales forecasts. This flexibility allows for a better level of service to the customer.

#### **Further Expansion**

K-FLEX® is focused on continuing to utilize its internationa presence in order to strengthen penetration in the high growth emerging markets. K-FLEX® is particularly focused on pursuing attractive growth opportunities in Asia Pacific, the Middle East, Eastern Europe and North America. The aim of K-FLEX® is to continue expanding its market share in key end markets by further developing its product offer for these markets and by growing relationships with existing and new customers globally.

- ▶ **1989** Year of foundation Roncello Italy
- ▶ 63 Countries with K-FLEX® subsidiaries
- 5 Continents with Logistics centers
- ▶ 14 Plants Worldwide
- ▶ 3.000+ Employees Worldwide
- > 50.000+ Customers Worldwide





# **LOCAL CENTRES FOR**

# **WORLDWIDE DISTRIBUTION**



#### **K-FLEX®** ▶ PRODUCT AND APPLICATIONS





















		0.0	(**)						FREE	RESISTANT
	Heating	Air Conditioning / Ventilation	Refrigeration	Solar	Industrial	Oil & Gas	Ship building	Train	Halogen Free	UV Resistant
K-FLEX® ST	•	•	•		•	•	•	•		
K-FLEX® ST DUCT	•	•	•							
K-FLEX® ST FRIGO		•	•							
K-FLEX® EC	•	•								
K-FLEX® ECO	•	•	•		•	•	•	•	•	
K-FLEX® SOLAR HT	•			•	•	•			•	•
K-FLEX® SRC/SRC ECO	•	•	•						•	
K-FLEX® PE	•	•								
K-FLEX® AL CLAD SYSTEM	•	•	•		•					•
K-FLEX® COLOR SYSTEM	•	•	•							•
K-FLEX® IN CLAD SYSTEM					•	•		•		
K-FLEX® IC CLAD SYSTEM					•	•	•	•		
K-FLEX® SOLAR R				•						•
K-FLEX® TWIN SOLAR SYSTEM				•						•
K-FLEX® TWIN SOLAR SYSTEM SLIM				•						•
K-FLEX® K-ROCK	•	•			•					



			SOUN	D INSUL	_ATION		SOUN	D ABSO	RPTION	N			SYSTEM
	WORK SECTOR	APPLICATIONS	K-FLEX® ST	K-FLEX® K-FONIK ST GK	K-FLEX® K-FONIK GK	K-FLEX® K-FONIK GV	K-FLEX® K-FONIK OPEN CELL160	K-FLEX® K-FONIK OPEN GELL 240	K-FLEX® K-FONIK B	K-FLEX® K-FONIK P	K-FLEX® K-FONIK PE GK	K-FLEX® K-FONIK PU GK	K-FLEX® INDUSTRIAL*
	BUILDING	Floors Walls Structure	•	•	•		•	•	•	•			
(%)	HVAC	Ventilation ducts and drainage pipes		•	•		•	•	•		•	•	
(ZZ)	INDUSTRIAL and OIL & GAS	Piping, equipment and plants			•	•		•					•
OEM OEM	OEM PRODUCTS	Machinery covers, engine compartments		•	•		•	•	•	•	•	•	
	TRAIN & SHIPBUILDING	Engine and frames, partitions, technical installations				•							
	AUTOMOTIVE	Engine noise insulation and frames, sound absorption for roof frames, driver cabins		•	•		•	•					

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CARTONS	PRODUCTS	CAI	RTON DIMENSION	S (CM)	CARTONS/ PALLET	PA	LLET DIMENSIONS	S (CM)	PALLET/ Truck	PALLET**
GANTONS	PRODUCTS	LENGTH	WIDTH	HEIGHT	QUANTITY*	LENGTH	WIDTH	HEIGHT	QUANTITY	FALLEI
-	Tubes 2m: K-FLEX® ST K-FLEX® EC K-FLEX® ECO K-FLEX® SOLAR HT	210	39	32	21 18	210 210	120 120	239 207	12	
-	Tubes 2m: K-FLEX® COLOR	210	39	39	15	210	120	245	12	-
	Tubes 2m: K-FLEX® PE K-FLEX® PE PLUS K-FLEX® PE COLOR K-FLEX® PE PLUS COLOR	208	59	39	10	210	118	223	12	G U
	Tubes 2m: K-FLEX® PE K-FLEX® PE PLUS K-FLEX® PE COLOR K-FLEX® PE PLUS COLOR	208	39	32	18	210	118	223	12	- CALLE
10 mm	Tubes 1m: K-FLEX® COLOR K-FLEX® IC CLAD K-FLEX® IN CLAD K-FLEX® SRC ECO K-FLEX® AL CLAD K-FLEX® K-ROCK****	108	39	39	36	210	120	255	12	
	Tubes in coils: K-FLEX® PE COLOR	105	55	55	16	210	120	235	12	
	Tubes in coils: K-FLEX® SOLAR HT	59	59	40	36 16 30 12	210 120 210 120	120 80 120 80	255 251 215 192	12	
	Tubes in coils: K-FLEX® EC-H K-FLEX® H	49	49	28	72	210	120	250	12	
	Tubes in coils: (industrial): K-FLEX® ST FRIGO	80	80	40	18	210	120	255	12	E-1410
E.B.	Tubes in coils: K-FLEX® ST FRIGO	52	50	21	88 32 72 36	210 120 210 120	120 80 120 80	246 246 204 220	12	
- Carrier	Tubes in coils: K-FLEX® SPLIT	80	80	15	17	120	80	212		Shrine II

	Big dimension	items may use a different packaging	(DOXOOX LUDCIII)								
	K-FLEX® P	ACKAGING > K-FONI	K								
	CARTONS	PRODUCTS	CART	TON DIMENSIONS	(CM)	CARTONS/ PALLET	PAL	LET DIMENSIONS	(CM)	PALLET/ Truck	PALLET**
			LENGTH	WIDTH	HEIGHT	QUANTITY*	LENGTH	WIDTH	HEIGHT	QUANTITY	
100	7	K-FLEX® K-FONIK GK/GV: 1000 mm 1200 mm 1500 mm	102 - -	19 - -	16,5 - -	16 from 1 to 5 1	120 120 130	80 80 110	12 12 12		
A STATE OF THE PARTY OF THE PAR		K-FLEX® K-FONIK OPEN CELL	210	109	16,5	7	210	110	14		
	100	K-FLEX® K-FONIK ST GK	102	19	19	30	110	110	14		

<sup>\*</sup> Maximum number per pallet

\*\* Images for illustration purposes only, the amount of cartons/pallet may differ from that shown.

\*\*\* Maximum height = 265 cm Depending on the thickness of the insulation sheet packing can vary in size, which may affect the overall height.

\*\*\*\* Big dimension items may use a different packaging (55x55x105cm)



K-FLEX® P	ACKAGING > SHEET	S								
CARTONS	PRODUCTS	CAR	TON DIMENSIONS	(CM)	CARTONS/ PALLET	PAL	LET DIMENSIONS	(CM)	PALLET/ Truck	PALLET**
		LENGTH	WIDTH	HEIGHT	QUANTITY*	LENGTH	WIDTH	HEIGHT	QUANTITY	
DD .	Sheets 1m: K-FLEX® ST K-FLEX® ECO K-FLEX® COLOR	104	52	52	16	210	120	235	12	
(age)	Sheets 1m: K-FLEX® AL CLAD K-FLEX® IC CLAD K-FLEX® IN CLAD	105	55	55	16	210	120	235	12	
Lear W.	Sheets 1m: K-FLEX® ST K-FLEX® SRC/SRC ECO	106	40	41	36	210	120	261	12	
	Sheets 1m: K-FLEX® ST	105	73	73	9	216	118	237	12	and the same of th
The same of the sa	Sheets 2x0,5m	215,5	55	16,5	20	210	120	180		
E SE	Sheets 1,5m in bags: K-FLEX® ST K-FLEX® ST DUCT				20	210	120	265***		

<sup>\*</sup> Maximum number per pallet

\*\* Images for illustration purposes only, the amount of cartons/pallet may differ from that shown.

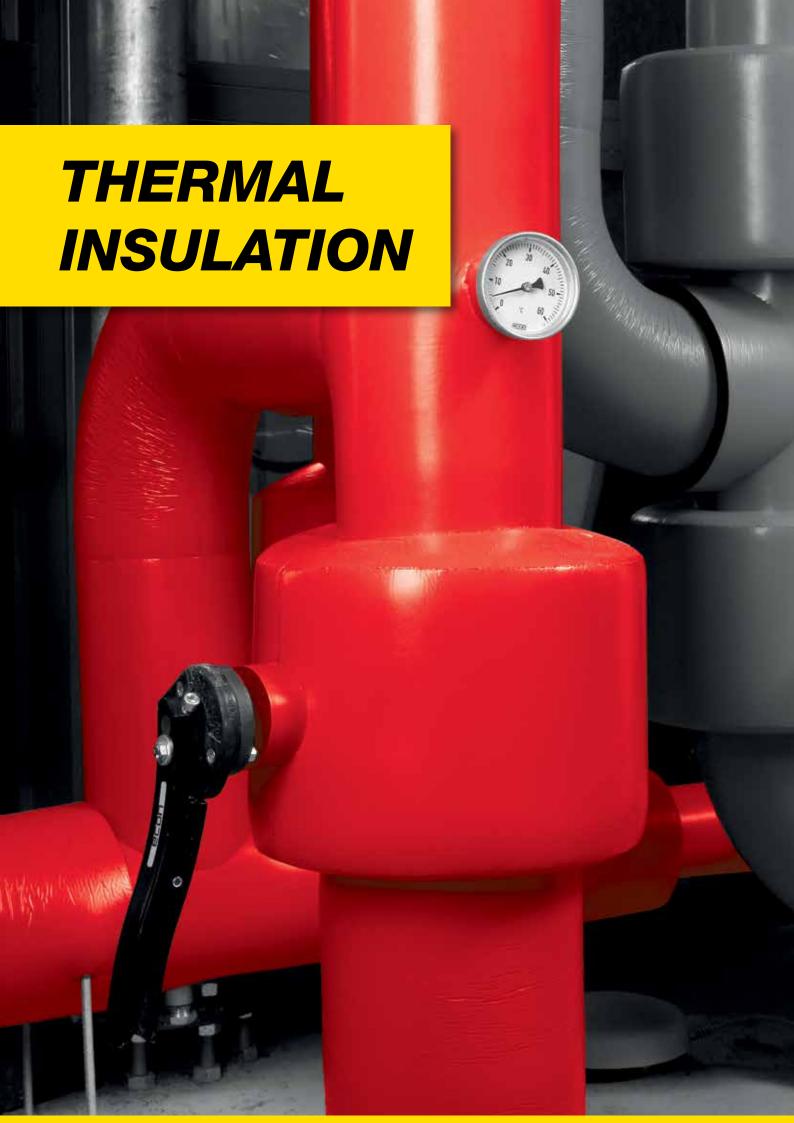
\*\*\* Maximum height = 265 cm Depending on the thickness of the insulation sheet packing can vary in size, which may affect the overall height.

NB: transport volumes are calculated for full loads. This may change according to the size of the truck. Please check with our customer service department on transport volumes valid for the particular job.

K-FLEX® F	PACKAGING > SOLAR	SYSTEM								
CARTONS	PRODUCTS	CART	TON DIMENSIONS	(CM)	CARTONS/ PALLET	PAL	LET DIMENSIONS	(CM)	PALLET/ Truck	PALLET**
0/11/10/10		LENGTH	WIDTH	HEIGHT	QUANTITY*	LENGTH	WIDTH	HEIGHT	QUANTITY	
	K-FLEX® TWIN SOLAR SYSTEM	80 80 80 80	80 80 80 80	29 39 55 65	14 12 8 6	160 160 160 160	80 80 80 80	218 249 235 210		
	K-FLEX® SOLAR R (Tube in coils)	60	60	45	40	212	118	245		
45	K-FLEX® SOLAR R (Standard carton)	39	32	210	21	212	118	245		
	K-FLEX® SOLAR R (Half carton)	39	15,5	210	42	212	118	245		
•	K-FLEX® TWIN SOLAR SYSTEM SLIM	120 120 80 115	120 120 80 115	80 64 82 84	2 2 2 2	120 120 80 120	120 120 80 120	175 143 179 183		

<sup>\*</sup> Maximum number per pallet

<sup>\*\*</sup> Images for illustration purposes only, the amount of cartons/pallet may differ from that shown.







#### K-FLEX® THERMAL INSULATION

The K-FLEX® range of thermal insulation products offers everything necessary to meet the technical insulation demands of both civil and industrial installations, to reduce energy consumption and prevent condensation and corrosion under insulation.

K-FLEX® products cover a range of temperature for applications including cryogenic plants to chilled water systems, and from domestic hot water systems to solar thermal plants. Their high resistance to water vapour diffusion is a key feature of all K-FLEX® closed cell elastomeric insulation materials.

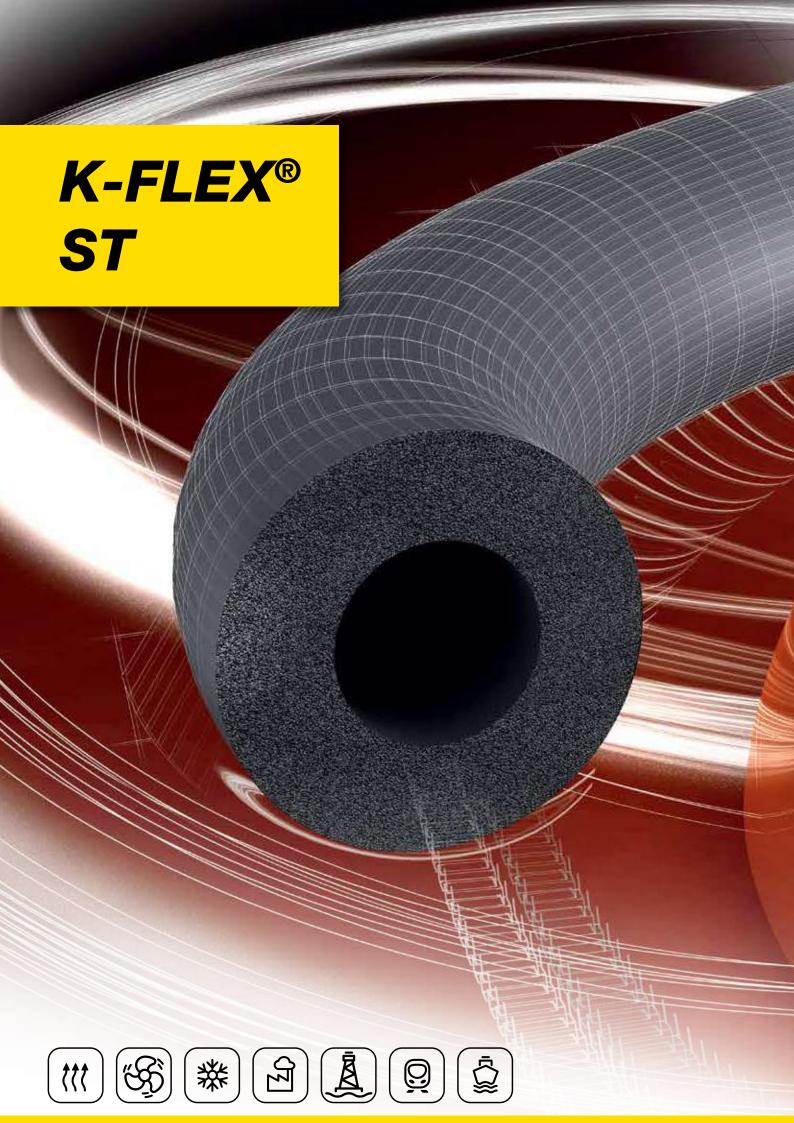
Typical applications include:

refrigeration and air-conditioning systems; plumbing, industrial, chemical and pharmaceutical plant engineering; insulation of pipes, fittings and other equipment; insulation of tanks, solar systems and all OEM applications requiring thermal insulation.

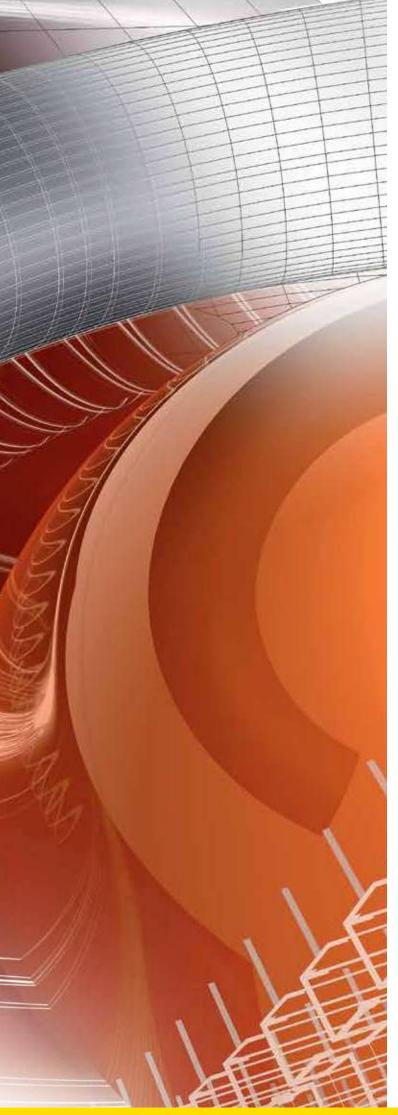
The product range for the civil sector already complies with the current European testing for fire resistance of building elements.

For more specific areas such as marine, rail, oil &gas, K-FLEX® products already have the most important and relevant international approvals and certification in their field. The final choice of a suitable coating completes the insulation system.

The different finishes (cladding) available for K-FLEX® systems conform to industry standards and offer UV protection, mechanical and chemical protection and an aesthetic finish.









# K-FLEX® ST

- ► Elastomeric insulation for all civil and industrial applications
- ▶ High performance for all applications in a temperature range from -165 °C to +110 °C
- Prevents the risk of condensation and improves energy saving
- Class of reaction to fire euroclass B<sub>1</sub>-s2, d0
- Very fine closed cellular structure and high technical performance
- Resistant to mould, fungi and bacteria
- Light and flexible







Property	→ Va	alue 🕶	▼ Test method ▼
emperature range	K-FLEX® ST Tubes: from -165 °C* to +110 K-FLEX® ST/SK: from -40 °C to +85 °C K-FLEX® ST Sheets: from -165 °C* to +85		EN 14706 EN 14707
hermal conductivity λ W/(m∙K)	Thicknesses ≤ 25mm -20 °C = 0,031 0 °C = 0,033 +20 °C = 0,035 +40 °C = 0,037	Thicknesses > 25mm $-20 ^{\circ}\text{C} = 0,034$ $0 ^{\circ}\text{C} = 0,036$ $+20 ^{\circ}\text{C} = 0,038$ $+40 ^{\circ}\text{C} = 0,040$	EN 12667 EN ISO 8497
orrosion prevention	pH neutral (7)		EN 13468
ermeability µ	≥ 10000	≥ 7000	EN 12086
ire rating	K-FLEX® ST Tubes: Euroclass B <sub>L</sub> -s2, d0 K-FLEX® ST/SK: Euroclass B <sub>L</sub> -s2, d0 K-FLEX® ST Sheets: Euroclass B-s3, d0 Class 0		EN 13501-1 EN 13501-1 EN 13501-1 BS 476 Part 6/7
cological data	Without CFCs and HCFCs		
pprovals	Environmental Product Declarations EPD R1-HL2 ECO-BAU and MINERGIE-ECO CE-MARINE (Bureau Veritas) ABS (American Bureau of Shipping) DNV Lloyd's Register UL94 FM Approval		UNI ISO 14025 & EN 15804:2012+A2:2019 EN 45545-2: 2013

K-FLEX® ST ▶ RANGE			
	Length      ✓	▼ Thicknesses ▼	→ Diameters →
K-FLEX® ST - Tubes	2 m	6-9-13-19-25-32-40-50-60 mm	from 6 to 210 mm
K-FLEX® ST/SK - Adhesive tubes	2 m	9-13-19-25-32 mm	from 12 to 114 mm
	<b>▼</b> Thick	inesses •	
K-FLEX® ST - Sheets	3-6-10-13-19-25-32-40-50-60 mm		1000/1500 mm
K-FLEX® ST - Adhesive sheets	3-6-10-13-19-25-32-40-50 mm		1000/1500 mm



#### **GENERAL INFORMATION**



#### K-FLEX® ST TUBES

K-FLEX® ST products meet all the requirements demanded by civil and industrial refrigeration, air conditioning, plumbing, insulation of tanks, fittings, water pipes and all other applications that need thermal insulation.



#### K-FLEX® ST/SK TUBES

K-FLEX® ST/SK TUBES with overlap

K-FLEX® ST/SK is a cut-to-length self-seal elastomeric insulation. This innovative technology includes adhesive tapes which are quick and easy to use for the installer. This new system has been developed to save on installation time and reduce the use of other adhesives to improve working conditions at the construction site. Also available as version with overlap - K-FLEX® ST/SK with overlap.





K-FLEX® ST SHEETS are ideal for sheet metal ducts and large size pipes. The height of 1000/1500 mm minimises segmentation of the coating and simplifies installation, greatly reducing time and labour cost.

Available in standard and adhesive.



#### **PROJECTS**

Germany













# K-FLEX® SRC - SRC ECO

- Products with reaction to fire euroclass B<sub>L</sub>-s1, d0 / B-s2, d0
- Low smoke emission in case of fire
- Excellent thermal conductivity
- ▶ High resistance to water vapour diffusion
- ▶ Application temperatures from -40 °C to +85 °C
- Internal UV-resistance





K-FLEX® SRC ECO > TE	CHNICAL DATA	
▼ Property ▼		▼ Test method ▼
Temperature range	from -40 °C* to +85 °C	EN 14706
Thermal conductivity $\lambda$ W/(m $\bullet$ K)	-20 °C = 0,036 0 °C = 0,038 +20 °C = 0,040 +40 °C = 0,042	EN 12667
Corrosion prevention	pH neutral (7)	EN 13468
Water permeability	WS < 0.1%	EN 13472
Permeability μ	≥ 3000	EN 12086
Fire rating	Tube: B <sub>L</sub> -s1,d0 Sheet: B-s2,d0 Tape: B-s1,d0	EN 13501-1
Leacheable chloride	< 500 ppm	EN 13468
Ecological data	Without halogens, PVC, CFCs, HCFCs and Formaldehyde	
Approvals	Environmental Product Declarations EPD	UNI ISO 14025 & EN 15804:2012+A2:2019
* For applications below -40 °C please con-	tact our Technical Department	
K-FLEX® reserves the right to change data	and technical requirements without notice.	



K-FLEX® SRC ▶ TECHNICAL DA	NTA CONTRACTOR OF THE CONTRACT	
Property		▼ Test method ▼
Temperature range	from -40 °C* to +85 °C	EN 14706
Thermal conductivity λ W/(m•K)	$-20 ^{\circ}\text{C} = 0.031$ $0 ^{\circ}\text{C} = 0.033$ $+20 ^{\circ}\text{C} = 0.035$ $+40 ^{\circ}\text{C} = 0.037$	EN 12667
Corrosion prevention	pH neutral (7)	EN 13468
Water permeability	WS < 0.1%	EN 13472
Permeability μ	≥ 10000	EN 12086
Fire rating	B-s2,d0	EN 13501-1
Leacheable chloride	< 500 ppm	EN 13468
Ecological data	Without CFCs and HCFCs	
Approval	FM Approval	
*For applications below -40 °C please contact our Techn	nical Department	
K-FLEX® reserves the right to change data and technica	I requirements without notice.	



#### **GENERAL INFORMATION**

Insulation sheets with reduced smoke emission.

#### **DESCRIPTION**

**K-FLEX® SRC**'s innovative design combines the high thermal performance of a rubber based flexible elastomeric foam with a reduced smoke emission coating.

#### **APPLICATIONS**

**K-FLEX® SRC** sheet is ideal for thermal insulation of pipes, ducting and technical systems in public buildings.

#### **CLASSIFICATION**

**K-FLEX® SRC** sheet has been tested according to the current European Standard EN 13501-1 for fire classification of construction products, and is classified B-s2, d0.

The main advantages of K-FLEX® SRC are:

- Retarded ignition of the flame
- Reduced flame propagation.
- Low thermal conductivity.
- High resistance to water vapour diffusion.
- Wide range of operating temperatures.
- Consistent performance.
- Higher mechanical properties with respect to uncoated elastomeric insulation.
- Quick and easy installation.

HALOGEN FREE Insulation with reduced smoke emission.

#### **DESCRIPTION**

**K-FLEX® SRC ECO** is an insulating product comprising a layer of closed cell elastomeric foam and a protective jacket. The special **K-FLEX® SRC ECO** configuration offers a unique product which, in case of fire, retards the emission of smoke and fumes which are also free of hydrohalic acids and organochlorine compounds.

#### **APPLICATIONS**

**K-FLEX® SRC ECO** is ideal for thermal and acoustic insulation of walls and technical installations where low smoke emission is required in case of fire.

#### CLASSIFICATION

**K-FLEX® SRC ECO** has been tested according to the current European standard EN 13501-1, for fire classification of construction products, and is classified B<sub>1</sub>-s1, d0/ B-s2, d0.

The main advantages of K-FLEX® SRC ECO are:

- No halogen in the composition or expansion of the elastomeric material.
- No smoke containing hydrohalic acids and organochlorine compounds in case of fire.
- Retarded ignition of the flame.
- Retarded flame propagation.
- Reduced emission of smoke.
- Higher mechanical properties with respect to an uncoated elastomeric insulation foam.
- Quick and easy installation.

K-FLEX® SRC/SRC ECO > RANGE			
	<b>→</b> Th	icknesses 🕶	→ Height →
K-FLEX® SRC - Sheets	6-9-13-19-25-32 mm		1000 mm
K-FLEX® SRC - Adhesive sheets	6-9-13-19-25-32 mm		1000/1500 mm
	Length      ✓	▼ Thicknesses ▼	→ Diameters →
K-FLEX® SRC ECO - Tubes	1 m	9-13-19-25-32 mm	from 15 to 160 mm
	<b>▼</b> Th	icknesses 🕶	
K-FLEX® SRC ECO - Sheets	9-13-19-25-32 mm		1000 mm
K-FLEX® SRC ECO - Adhesive sheets	9-13-19-25-32 mm		1000 mm

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# K-FLEX® ST DUCT

- ▶ Elastomeric insulation sheets for air ducting
- ▶ Specially designed for isolation of ventilation ducts
- ▶ 1.5m width reduces installation times
- Adhesive coating





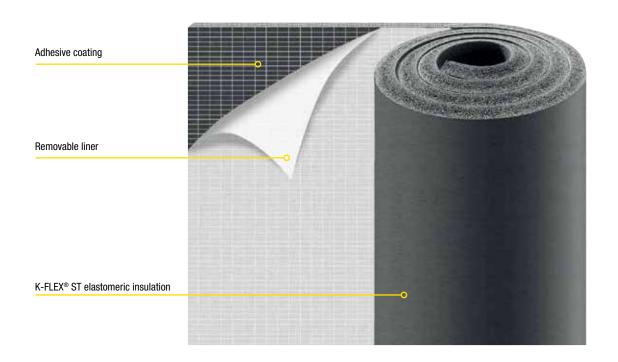






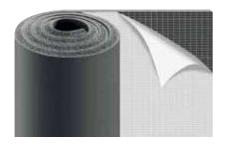
	•	Value -	▼ Test method ▼
Temperature range	from -40 °C to +85 °C		EN 14706 EN 14707
Thermal conductivity $\lambda$ W/(m $\bullet$ K)	Thicknesses $\leq 25$ mm $-20 ^{\circ}\text{C} = 0,031$ $0 ^{\circ}\text{C} = 0,033$ $+20 ^{\circ}\text{C} = 0,035$ $+40 ^{\circ}\text{C} = 0,037$	Thicknesses > 25mm $-20 ^{\circ}\text{C} = 0,034$ $0 ^{\circ}\text{C} = 0,036$ $+20 ^{\circ}\text{C} = 0,038$ $+40 ^{\circ}\text{C} = 0,040$	EN 12667
Corrosion prevention	pH neutral (7)		EN 13468
Permeability µ	≥ 7000		EN 12086
Fire rating	K-FLEX® ST DUCT AL CLAD: Euroclass D	K-FLEX® ST DUCT: Euroclass B-s3, d0 K-FLEX® ST DUCT ALU: Euroclass D-s3, d0 K-FLEX® ST DUCT AL CLAD: Euroclass D-s3, d0 K-FLEX® ST DUCT COLOR: Euroclass C-s3, d0	
Ecological data	Without CFCs and HCFCs		
* For industrial applications, product can be applied down to	o -198°C; for applications below -40°C please contact our tecl	hnical department.	
K-FLEX® reserves the right to change data and technical re	quirements without notice.		

# **PRODUCT FEATURES**





#### **GENERAL INFORMATION**





#### K-FLEX® ST DUCT

**K-FLEX® ST DUCT** is specifically produced for the insulation of ventilation and air-conditioning ducts, meeting all the necessary requirements in terms of structure and dimensions. Economical: flexible and easy to handle, it is made in measurements of 1500 mm in width to ensure easy installation on ducts.

Pratical: the self-adhesive surface has been made rougher to improve its grip on the metal ducts.

Convenient: its 1500 mm width cuts down on application time, reducing the final cost of pre-fabricated ducts.

Flexible: high elasticity helps attenuate vibrations that occur where there are joints and suspensions.

#### K-FLEX® ST DUCT + FINISHES

#### K-FLEX® ST DUCT ALU

Elastomeric self-adhesive sheet with reinforced mesh and a smooth aluminium 80  $\mu$  thick covering. Width: 1500 mm.

**K-FLEX® ST DUCT AL CLAD SYSTEM** Elastomeric self-adhesive sheet, with reinforced mesh and AL CLAD covering. Width: 1500 mm.

**K-FLEX® ST DUCT COLOR SYSTEM** Elastomeric self-adhesive sheet, with reinforced mesh and COLOR coating. Width: 1500 mm.

K-FLEX® ST DUCT > RANGE		
	▼ Thicknesses ▼	
K-FLEX® ST DUCT - Sheets	6-8-10-12-15-20-30 mm	1500 mm



#### **PROJECTS**

Italy, Rimini Mall "Le Befane"





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# K-FLEX® ST FRIGO

- Elastomeric insulation for specialists in cold temperatures
- Practical packaging
- Easy to apply
- ▶ High performance
- ▶ Suitable for OEM applications









K-FLEX® ST FRIGO > TECHNICAL DATA		
▼ Property ▼	▼ Value ▼	▼ Test method ▼
Temperature range	from -40 °C to +110 °C	EN 14706 EN 14707
Thermal conductivity λ W/(m•K)	Thicknesses $\le 25$ mm $-20  ^{\circ}\text{C} = 0,031$ $0  ^{\circ}\text{C} = 0,033$ $+20  ^{\circ}\text{C} = 0,035$ $+40  ^{\circ}\text{C} = 0,037$	EN ISO 8497
Corrosion prevention	pH neutral (7)	EN 13468
Permeability µ	≥ 10000	EN 12086
Fire rating	Euroclass B <sub>L</sub> -s3, d0	EN 13501-1
Ecological data	Without CFCs and HCFCs	
K-FLEX® reserves the right to change data and technical requirements	without notice.	

# THE FUNCTIONAL AND USEFUL COOLING SOLUTION





#### **GENERAL INFORMATION**



The revolutionary and exclusive packaging offers practical and economic benefits for both usage and distribution.

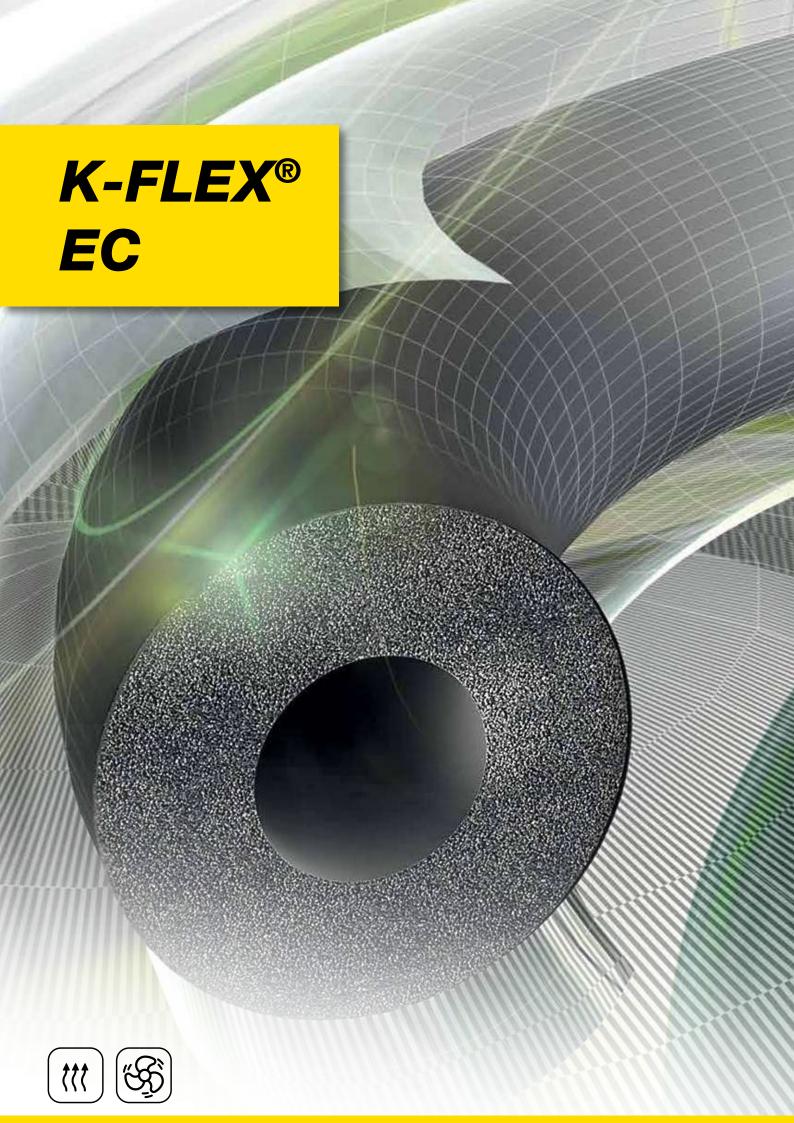
User-friendly: An aperture in the box lid allows easy removal of the insulation whilst keeping the remaining product intact and in place.

Precision cutting: The ruler printed on the edge of the box facilitates accurate measurement and precise cutting of the insulation required for the job. No more waste product; less use of glue and tape.

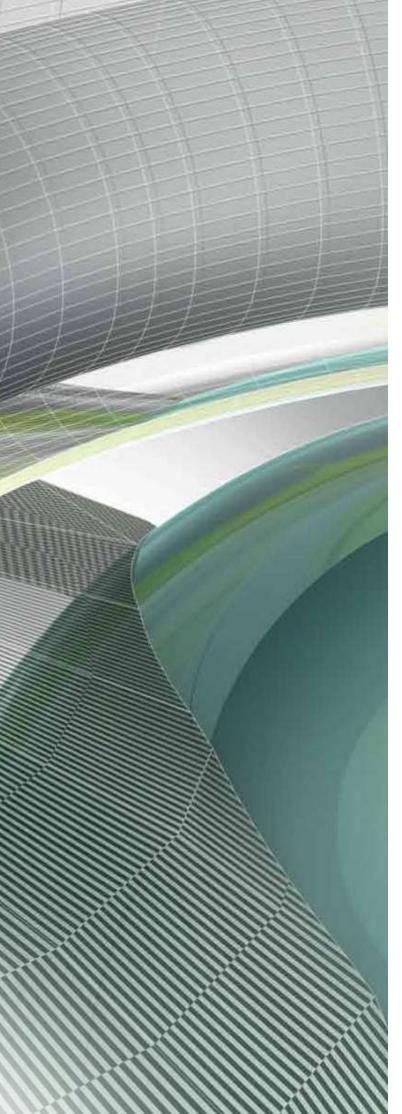
Easy to trasport: On request we can also supply **K-FLEX® ST FRIGO** in industrial sized cartons: 800 x 800 x 400 mm

K-FLEX® ST FRIGO	RANGE			
		▼ Thickne	sses -	■ Diameters       ■
K-FLEX® ST FRIGO Carton 500x500x200		6-9-13 mm		from 6 to 28 mm
K-FLEX® ST FRIGO Carton 800x800x400		6-9 mm		from 6 to 28 mm
	K-FLEX® ST FRIGO ▼ Ø tube inches/mm ▼	6 mm	9 mm → m/Carton →	13 mm → m/Carton →
1/4"	6	50	40	26
5/16"	8	48	37	26
3/8"	10	46	34	23
1/2"	12	40	31	18
5/8"	15	38	27	17
3/4"	18	30	23	15
7/8"	22	23	19	14
1 1/8"	28	20	14	10

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# K-FLEX® EC

- Ideal for heating and plumbing systems
- Flexible and easy to work with









K-FLEX® EC > TECHNIC	CAL DATA		
→ Property →	▼ Value ▼		▼ Test method ▼
Temperature range	K-FLEX® EC: from -40 to +110 °C		EN 14706 EN 14707
Thermal conductivity $\lambda$ W/(m*K)	Thicknesses $\leq 25$ mm $-20 ^{\circ}\text{C} = 0,031$ $0 ^{\circ}\text{C} = 0,033$ $+20 ^{\circ}\text{C} = 0,035$ $+40 ^{\circ}\text{C} = 0,037$	Thicknesses > 25mm $-20 ^{\circ}\text{C} = 0,034$ $0 ^{\circ}\text{C} = 0,036$ $+20 ^{\circ}\text{C} = 0,038$ $+40 ^{\circ}\text{C} = 0,040$	EN 12667 EN ISO 8497
Corrosion prevention	pH neutral (7)		EN 13468
Permeability µ	≥ 7000		EN 12086
Fire rating	Euroclass B <sub>L</sub> -s3, d0 Class 1		EN 13501-1 BS 476 Part 6/7
Ecological data	Without CFCs and HCFCs		
Approvals	Environmental Product Declarations EPD		UNI ISO 14025 & EN 15804:2012+A2:2019
K-FLEX® reserves the right to change data	a and technical requirements without notice.		

#### **GENERAL INFORMATION**



K-FLEX® EC TUBES

**K-FLEX® EC** offers all the requirements to meet the demands of civil and industrial installations that require the use of insulation material.



K-FLEX® EC/H ROLLS

#### Ease of use

An aperture in the box lid allows easy removal of the insulation whilst keeing the remaining product in place.

#### **Precision cutting**

The ruler printed on the edge of the box facilitates accurate measurement and precise cutting of the insulation required for the job. No more waste product; less use of glue and tape.

Better protection for the insulation in the work place No more wasted material caused by breakage or damage during transport.



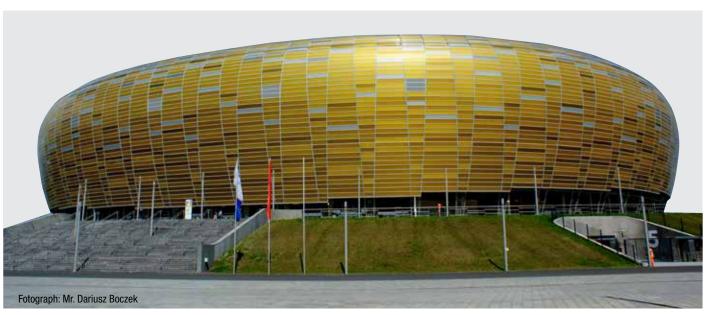
K-FLEX® EC > RANGE			
	Length      ✓	▼ Thicknesses ▼	→ Diameters →
K-FLEX® EC - Tubes	2 m	6-9-13-19-25-40-50-60 mm	from 10 to 168 mm
K-FLEX® EC/H Rolls		6-9-13 mm	from 6 to 35 mm
K-FLEX® EC/H Rolls ▼ Ø tube mm ▼	6 mm → m/Carton →	9 mm	13 mm
6	90	60	
8	80	56	
10	70	51	35
12	60	50	30
15	57	41	26
18	45	35	25
20	45	35	23
22	35	29	21
25	32	25	20
28	30	21	15
35			12



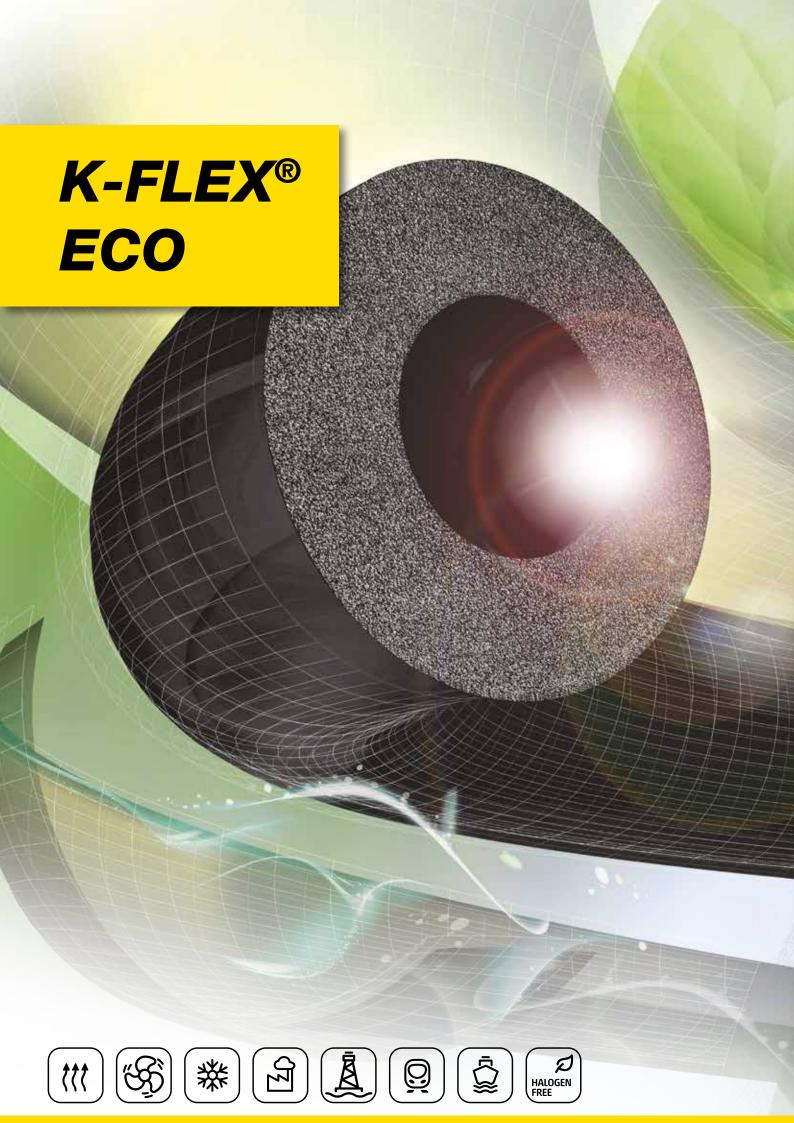
# **PROJECTS**

PGE Arena, Polen

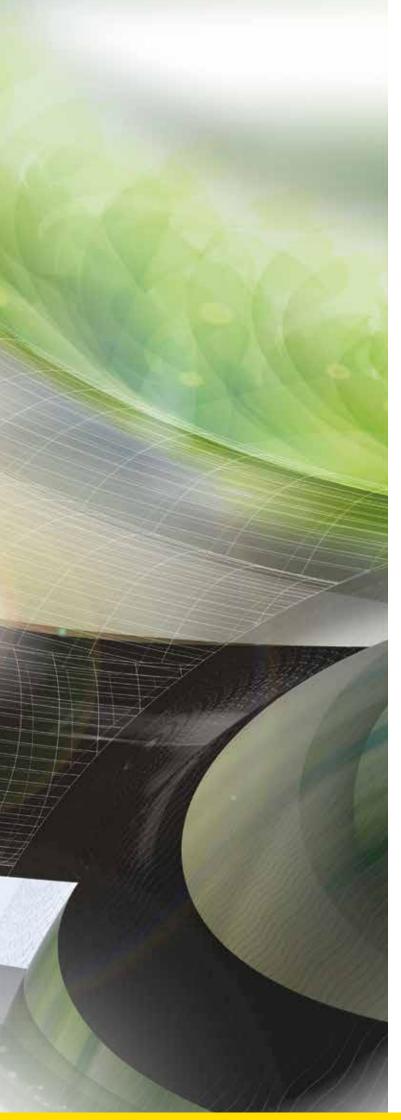




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# K-FLEX® ECO

- ► Elastomeric insulation formulated and manufactured without the use of halogens
- Designed for areas with special safety requirements
- ▶ Approved for use in rail and marine industries
- Also available in green color.
   Request to our sales office the specific price list for the green version







Property	▼ Value ▼	▼ Test method ▼
Temperature range	from -165 °C* to +150 °C	EN 14706 EN 14707
Thermal conductivity λ W/(m∙K)	-20 °C = 0,036 0 °C = 0,038 +20 °C = 0,040 +40 °C = 0,042	EN 12667 EN ISO 8497
Corrosion prevention	pH neutral (7)	EN 13468
Permeability μ	≥ 3000	EN 12086
Fire rating	K-FLEX® ECO Tubes: Euroclass D <sub>L</sub> -s2, d0 K-FLEX® ECO Sheets: Euroclass E Class 1	EN 13501-1 EN 13501-1 BS 476 Part 6/7
Ecological data	Halogen free - PVC - CFC - HCFC Free	
Fume classification (toxicity)	IMO Resolution MSC 307 (88)	
Fume density (NBS room)	≤ Dm 200	
Color	Black	
Approvals	Environmental Product Declarations EPD R1-HL2 ECO-BAU and MINERGIE-ECO CE-MARINE (Bureau Veritas) ABS (American Bureau of Shipping) DNV Lloyd's Register UL94	UNI ISO 14025 & EN 15804:2012+A2:2019 EN 45545-2: 2013

K-FLEX® reserves the right to change data and technical requirements without notice.



## **GENERAL INFORMATION**

Manufacturing without thought for the resultant environmental impact is no longer acceptable. This attitude of awareness, now largely rooted in all areas of modern society, has triggered a significant innovation in models of development and consumerism.

**K-FLEX® ECO**, formulated and manufactured without halogens is a real solution to the reduction of energy consumption with respect to the environment. The composition of **K-FLEX® ECO** renders any fumes released during a fire, transparent and nontoxic.

K-FLEX® ECO ▶ RANGE			
		▼ Thicknesses ▼	→ Diameters →
K-FLEX® ECO - Tubes	2 m	9-13-19-25-32 mm	from 10 to 114 mm
	▼ Th	icknesses 🕶	→ Height →
K-FLEX® ECO - Sheets	6-10-13-19-25-32-40-50 mm		1000 mm
K-FLEX® ECO - Adhesive sheets	6-10-13-19-25-32-40-50 mm		1000 mm

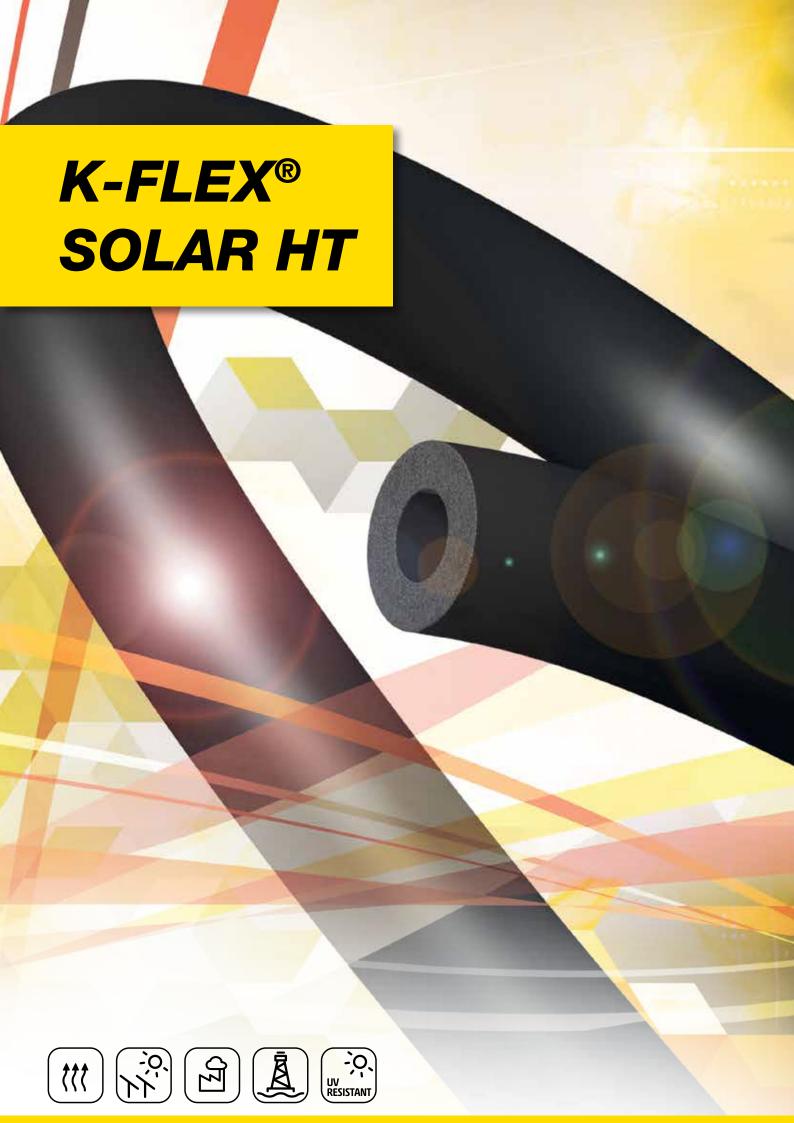


## **PROJECTS**

Italy













# K-FLEX® SOLAR HT

- ▶ Elastomeric insulation for high temperatures
- Ideal solution for industrial and solar systems
- Increased energy efficiency
- ▶ EPDM with UV protection
- Also available with protective coatings for adverse weather conditions







K-FLEX® SOLAR HT > TECHNICAL DATA			
▼ Property ▼	→ Value →	▼ Test method ▼	
Temperature range	from -40 °C to +150 °C	EN 14706 EN 14707	
Thermal conductivity λ W/(m⋅K)	0 °C = 0,040 40 °C = 0,044	EN 12667 EN ISO 8497	
Corrosion prevention	pH neutral (7)	EN 13468	
Fire rating	Euroclass E	EN 13501-1	
Ecological data	Without CFCs and HCFCs		
Approvals	Environmental Product Declarations EPD	UNI ISO 14025 & EN 15804:2012+A2:2019	
K-FLEX® reserves the right to change data and technical requirements without notice.			

## **GENERAL INFORMATION**

Elastomeric EPDM (Ethylene-Propylene Diene Monomer) rubber based insulation with excellent mechanical properties suitable for high temperatures. Good UV resistance.

The rational and convenient solution for solar panels and industrial processes up to 150 °C. A new, revolutionary box, tailor-made for the client, offering practical and economical advantages for use and distribution.





K-FLEX <sup>®</sup> SOLAR HT ▶ RANGE			
		▼ Thicknesses ▼	→ Diameters →
K-FLEX® SOLAR HT - Tubes	2 m	13-19-25 mm	from 10 to 89 mm
K-FLEX® SOLAR HT - Tubes in coils		13-19 mm	15-18-22 mm
	<b>▼</b> 1	Thicknesses -	→ Height →
K-FLEX® SOLAR HT - Sheets	10-13-19-25-32 mm		1000 mm









# **PROJECTS**

Zamo, Poland









# K-FLEX® PE

- Manufactured specifically for insulation of heating/ air conditioning pipes and underfloor installations
- Excellent mechanical strength and resistance to compression
- > Tear resistant
- Quick to install

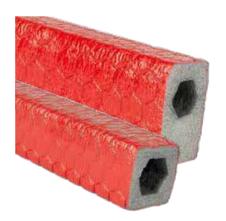




K-FLEX® PE/PE PLUS	TECHNICAL DATA	
	✓ Value   ✓	▼ Test method ▼
Temperature range	+100°C	EN 14707
Thermal conductivity $\lambda$ W/(m $\bullet$ K)	+10 °C = 0,036 +40 °C = 0,040	EN ISO 8497
Corrosion prevention	pH neutral (7)	
Fire rating	K-FLEX® PE: Euroclass D <sub>L</sub> -s1, d0 K-FLEX® PE PLUS: Euroclass B <sub>L</sub> -s1, d0	EN 13501-1
Ecological data	Without CFCs and HCFCs	
K-FLEX® reserves the right to change da	ta and technical requirements without notice.	



Property		▼ Test method ▼
Temperature range	+100°C	EN 14707
Thermal conductivity λ W/(m•K)	+10 °C = 0,036 +40 °C = 0,040	EN ISO 8497
Corrosion prevention	pH neutral (7)	
Fire rating	K-FLEX® PE COLOR: Euroclass D <sub>L</sub> -s1, d0 K-FLEX® PE PLUS COLOR: Euroclass B <sub>L</sub> -s1, d0	EN 13501-1
Ecological data	Without CFCs and HCFCs	



K-FLEX® PE QUADRO/R	ECTANGULAR > TECHNICAL DATA	1	
Property	▼ Value ▼	▼ Test method ▼	
Temperature range	+90°C	EN 14707	
Thermal conductivity $\lambda$ W/(m $\bullet$ K)	$+10 ^{\circ}\text{C} = 0,036$ $+40 ^{\circ}\text{C} = 0,040$	EN ISO 8497	
Corrosion prevention	pH neutral (7)		
Fire rating	K-FLEX® PE QUADRO: Euroclass E <sub>L</sub> K-FLEX® PE RECTANGULAR: Euroclass E <sub>L</sub>	EN 13501-1	
Ecological data	Without CFCs and HCFCs		
K-FLEX® reserves the right to change data and technical requirements without notice.			



K-FLEX® FONOMETAL > TECHNICAL DATA			
		▼ Test method ▼	
Temperature range	+90°C	EN 14707	
Thermal conductivity λ W/(m•K)	$+10  ^{\circ}\text{C} = 0.036$ $+40  ^{\circ}\text{C} = 0.040$	EN ISO 8497	
Corrosion prevention	pH neutral (7)		
Fire rating	Euroclass E	EN 13501-1	
Ecological data	Without CFCs and HCFCs		
K-FLEX® reserves the right to change data	and technical requirements without notice.		



### GENERAL INFORMATION

K-FLEX® PE is an extruded polyethylene closed cell insulation tube, available in different diameters and thickness K-FLEX® PE is ideal for heat insulation of pipelines of heating systems, cold and hot water supply, ventilation and air conditioning, and equipment.

K-FLEX® PE PLUS is an extruded polyethylene closed cell insulation tube with an improved fire classification rating. This product fulfils all the highest building standards in term of fire reaction.

K-FLEX® PE PLUS is ideal for heat insulation of pipelines of heating systems, cold and hot water supply, ventilation and air conditioning, and equipment.

K-FLEX® PE QUADRO/ RECTANGULAR The specific hexagonal shape of the hole can support the installer pulling the pipe easier trough the insulation keeping at the same time the pipe well constrained in the quadro tube.

K-FLEX® FONOMETAL is a polyethylene insulating product designed to insulate pipes in masonry works by reducing the noise transmitted by vibration.

K-FLEX® PE COLOR is a coextruded polyethylene closed cell insulation tube, available in different diameters and thickness, specifically designed for all that applications where an additional mechanical protection is required.

K-FLEX® PE COLOR is ideal for heat insulation of pipelines of heating systems, cold and hot water supply, ventilation and air conditioning, equipment and underfloor applications.

K-FLEX® PE PLUS COLOR is a coextruded polyethylene closed cell insulation tube with an improved fire classification rating, available in different diameters and thickness, specifically designed for all that applications where an additional mechanical protection is required. This product fulfils all the highest building standards in term of fire reaction.

K-FLEX® PE PLUS COLOR is ideal for heat insulation of pipelines of heating systems, cold and hot water supply, ventilation and air conditioning, equipment and underfloor applications.

K-FLEX® PE QUADRO/ RECTANGULAR is ideal for heat insulation pipelines, cold and hot water supply and equipment. Specifically designed for under floor application.

K-FLEX® FONOMETAL is designed to reduce the noise transmission of exhaust pipes in civil and industrial construction.

K-FLEX® PE ▶ RANGE			
		▼ Thicknesses ▼	→ Diameters →
K-FLEX® PE - Tubes	1 - 2 m	6-9-13-20-25-30 mm	from 15 to 114 mm
K-FLEX® PE PLUS - Tubes	2 m	6-9-13-20-25-30 mm	from 15 to 114 mm
K-FLEX® PE COLOR - Tubes and coils	2 m	4-6-9-13-20-25 mm	from 15 to 42 mm
K-FLEX® PE PLUS COLOR - Tubes	2 m	6-9-13-20-25 mm	from 15 to 42 mm
K-FLEX® PE QUADRO - Tubes	2 m	7 mm	from 15 to 35 mm
K-FLEX® PE RECTANGULAR - Tubes	2 m	25-26-27-38-46 mm	from 15 to 42 mm
K-FLEX® FONOMETAL - Tubes in coils	from 45 to 150 m	5-9 mm	from 42 to 160 mm

### K-FLEX® ACCESSORIES









K-FLEX® K 420 Glue





K-FLEX® CLOTH DUCT TAPE

K-FLEX® GLUE DISPENSER

K-FLEX®
PE COLOR

available in COILS format for 4-6 mm

thickness









# K-FLEX® K-ROCK

- Products with uniform thickness in mineral wool
- ▶ Also available with ALU finishing
- Thermal and acoustic insulation in industrial applications
- Suitable for high and low temperatures for boilers, ducts, ovens and other industrial equipment







K-FLEX® K-ROCK ▶ TECH	NICAL DATA		
Property	▼ Value	•	▼ Test method ▼
Maximum service temperature	+600 °C		EN 14706
Thermal conductivity λ W/(m•K)	+50 °C = 0,039 +100 °C = 0,046 +150 °C = 0,056 +200 °C = 0,067	+250 °C = 0,081 +300 °C = 0,096 +350 °C = 0,115 +400 °C = 0,135	EN ISO 8497
Water absorption	WS01 ( $\leq 1.00 \text{ kg/m}^2$ )		EN 13472
Fire rating	Euroclass A1L		EN 13501-1
Silicon free	Manufactured without addition	n of silicone oil	
K-FLEX® reserves the right to change data and technical requirements without notice.			

K-FLEX® K-ROCK ALU ▶ TE	CHNICAL DATA			
		▼	▼ Test method ▼	
Maximum service temperature	+600 °C		EN 14706	
Thermal conductivity λ W/(m•K)	+50 °C = 0,039 +100 °C = 0,046 +150 °C = 0,056 +200 °C = 0,067	+250 °C = 0,081 +300 °C = 0,096 +350 °C = 0,115 +400 °C = 0,135	EN ISO 8497	
Water absorption	WS01 ( $\leq 1.00 \text{ kg/m}^2$ )		EN 13472	
Fire rating	Euroclass A2L-s1, d0		EN 13501-1	
Silicon free	Manufactured without addition	n of silicone oil		
K-FLEX® reserves the right to change data and technical requirements without notice.				



### **DESCRIPTION**

**K-FLEX® K-ROCK** is a pipe made of uncoated mineral wool, 1000mm in length. The product is fireproof and has a high geometric accuracy. The pipes are made with a longitudinal slit on one side and are semi-cut on the opposite inner side to facilitate mounting onto pipes.

**K-FLEX® K-ROCK ALU** fireproof mineral wool pipes, protected by an outer coating of reinforced aluminum with high resistance to water vapour. **K-FLEX® K-ROCK ALU** is recommended for thermal insulation of pipes conveying hot and cold fluids in buildings in residential, service and industrial sectors.

### **APPLICATIONS**

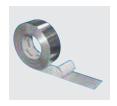
**K-FLEX® K-ROCK** pipes are ideal for thermal and acoustic insulation applications and protection against fire. **K-FLEX® K-ROCK ALU** pipes are ideal for pipework carrying hot and cold fluid in building facilities.

### HANDLING AND STORAGE

**K-FLEX® K-ROCK** products are packaged to facilitate easy handling on most construction sites. They can be cut, made into pieces and easily assembled using standard tools. Do not store outside.

▼ Thicknesses ▼	→ Diameters →
-25-30-40-50-60-70-80-100-120 mm	from 15 to 273 mm
-25-30-40-50-60-70-80-100-120 mm	from 15 to 273 mm
-	25-30-40-50-60-70-80-100-120 mm

### K-FLEX® ACCESSORIES



K-FLEX® ALU AR CW TAPE
Foil-Scrim backing, combined with cold
weather solvent acrylic adhesive, protected by
an easy-release silicone release paper. Cold
Weather version (low temperatures).









# K-FLEX® AL CLAD SYSTEM

- Versatile and flexible
- ▶ Reduced installation costs
- ► Economic system management
- Aesthetic finish
- > UV and weather resistant
- Can be applied to any insulation system







K-FLEX® AL CLAD JACK	ETING (COVERING FOIL) > TECHNICAL	DATA	
Weight	Approx.	388 g/m²	EN 22 286
Thickness	Approx.	280 μm	DIN 53 370
Traction resistance	longitudinal transverse	175 N/15 mm 175 N/15 mm	ISO 527- 3 ISO 527- 3
Breaking strain	longitudinal transverse	35 % 40 %	ISO 527- 3 ISO 527- 3
Resistance to tearing	longitudinale trasversale	155 N/25 mm 182 N/25 mm	ISO 527- 3 ISO 527- 3
Resistance to bending	longitudinal transverse	90 N/mm2 90 N/mm2	DIN 53 864 DIN 53 864
Permeability to vapour	0,052 g/m²/d		DIN 53 122
Fire rating (with K-FLEX® ST)	Sheet: Euroclass D-s3, d0 Tube: Euroclass C <sub>L</sub> -s3, d0 Class 0		EN 13501-1 EN 13501-1 BS 476 Part 6/7

RESISTANCE CHARACTERISTICS OF	THE AL CLAD SHEET TO ATMOSPHERIC AGENTS > TECHNICAL DATA
UV resistance	>2000 hours 500 W/m² (Atlas Suntest XLS+ QUV, internal test)
Radiation resistance	>3.600.000 kJ/m <sup>2</sup>
Resistance to humidity	>2000 hours UVC (internal test)

K-FLEX® AL CLAD: RESISTAN	ICE OF THE SURFACE TO A	GGRESSIVE CHEMIC	ALS > TECHNIC	CAL DATA	
Acids	acetic acid (max concentration) 50% formic acid 10% hydrochloric acid 30% hydrochloric acid 10% and 35% hydrofluoric acid 10% nitric acid 65% and 100% nitric acid 30% and 85% phosphoric acid 20% sulphuric acid	resistant resistant resistant partially resistant resistant resistant partially resistant resistant partially resistant partially resistant	Hydrocarbons	Aliphatic hydrocarbon Benzene Petroleum Mineral oil Toluene Xylene	resistant resistant resistant resistant resistant resistant
Aldehydes	Acetaldehyde Formaldehyde	resistant resistant	Other organic substances	Acetone Ether	resistant resistant
Alcohols	Benzyl alcohol Cyclohexanol Ethyl alcohol Glycerine Glycol Isopropyl alcohol Methyl alcohol	partially resistant resistant resistant resistant resistant resistant resistant resistant	Salt solutions	Bichromates Cyanides Fluorides	resistant resistant resistant
Alkaline solutions	Ammonium hydroxide Calcium hydroxide	partially resistant partially resistant	Esters	Ethyl acetate	resistant
Chlorinate solvents	Chloroform Trichloroethylene	partially resistant partially resistant			
K-FLEX® reserves the right to change data and technology	nical requirements without notice.				



### **GENERAL INFORMATION**



### K-FLEX® AL CLAD SYSTEM TUBES

Tubes have a coating system with a high performance adhesive overlap coupled to **K-FLEX® ST** insulation. Suitable for both indoor and outdoor use, the **AL CLAD** foil has an aesthetic finish and forms an impermeable barrier protecting the insulation from UV radiation and adverse weather. The complete system is easily installed with a significant reduction in labour time.

Matching pre-formed trims complete the range.



### K-FLEX® AL CLAD SYSTEM SHEETS

Sheets are composed of the **AL CLAD** coating system coupled with **K-FLEX® ST** insulation. Available in standard or self-seal, they are designed for use with conduits, ventilation ducts and large pipes. Their flexibility and ease of processing make this material especially suitable for awkward configurations and trims

K-FLEX® AL CLAD SYSTEM ▶ RANGE							
	Length	1 🕶	▼ Thicknesses ▼	→ Diameters    →			
K-FLEX® AL CLAD - Tubes	1 m	▼ Thickness	9-13-19-25-32-40-50 mm ses ▼	from 15 to 160 mm <b>→ Height →</b>			
K-FLEX® AL CLAD - Sheets	6-9-13-19-25-32-40-50 m	ım		1000/1500 mm			
K-FLEX® AL CLAD - Adhesive sheets	6-9-13-19-25-32-40-50 m	nm		1000/1500 mm			

### **ACCESSORIES**



Preformed K-FLEX® AL CLAD elbows



Preformed elastomeric K-FLEX® elbows coupled with AL CLAD foil



Preformed "T" connections with AL CLAD foil



Preformed elastomeric K-FLEX® "T" connections coupled with AL CLAD foil



Preformed elastomeric K-FLEX® elbows



Preformed elastomeric K-FLEX® "T" section in standard sizes



AL CLAD foil, with or without adhesive



AL CLAD adhesive tape



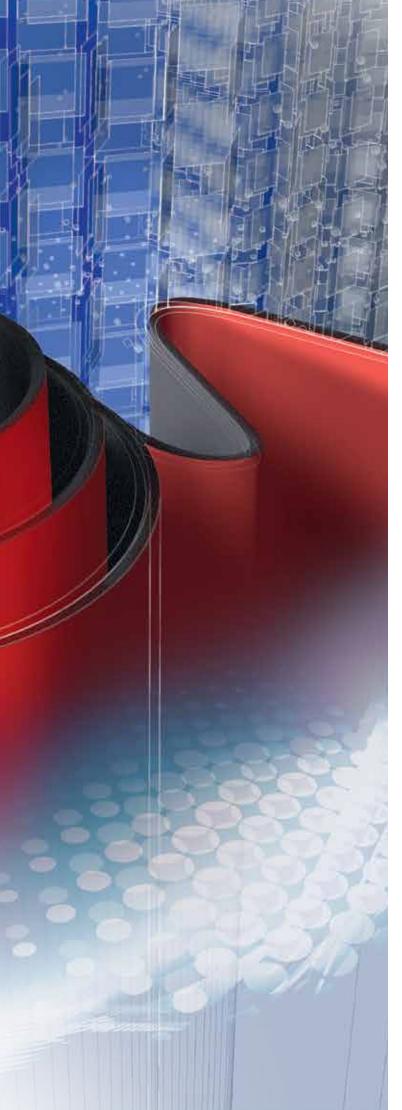
K-FLEX® AL CLAD system pipe insulated supports



K-FLEX® AL CLAD system pipe insulated supports with collar









# K-FLEX® COLOR SYSTEM

- Colour finished insulation
- Aesthetic design
- Flexibile and easy of application
- ► Colour coding for different services
- UV protection









→ Property →	→ Value →	▼ Test method ▼
WOM 2000 hours	No significant alteration	DIN 53231
Humidistat 800 hours	Elasticity remains the same	DIN 53231
Adhesion 24 hours after humidistat	Adhesion remains intact	
UVC 2000 hours QUV/SE	No blistering, no separation, no significant alterations	
Wash H20	No alterations	
Wash H20 plus soap for hands	No alterations	
Test with solution 1	Elasticity and adhesion remain the same	DIN 53160/UAN-D1235/01
Test with solution 2	Elasticity and adhesion remain the same	DIN 53160/UAN-D1235/01
Immersion in water 60 °C 800 hours	No blistering, no separation	
Caustic soda contact to 5% 2 hours	No alterations	
Fire rating (with K-FLEX® ST)	Sheet: Euroclass C-s3, d0 Tube: Euroclass $C_L$ -s3, d0	EN13501-1 EN13501-1
Fire rating (facing only)	Class 0	BS 476 Part 6/7

### **GENERAL INFORMATION**



# K-FLEX® COLOR SYSTEM TUBES

Insulation tube with a protective factoryapplied coating. The thin layer of colour coating offers protection against UV rays and facilitates cleaning and maintenance of the insulation. Flexible, easy to work with and install.



K-FLEX® COLOR SYSTEM SHEETS

K-FLEX® COLOR SYSTEM sheets are available in standard or self-seal. They are designed for use with conduits, ventilation ducts and large pipes. Their flexibility and ease of processing make this material especially suitable for awkward configurations and trims.





# K-FLEX® COLOR SYSTEM ACCESSORIES

**K-FLEX®** offers a range of accessories especially for use with **K-FLEX® COLOR SYSTEM**. In addition to the standard pieces, curves, couplings and supports, adhesive tapes and coloured paints are available for re-touching and repairs.



K-FLEX® COLOR SYSTEM > RANGE						
	Length      ✓		▼ Thicknesses ▼	■ Diameters       ■		
K-FLEX® COLOR - Tubes	2 m		9-13-19-25-32 mm	from 10 to 54 mm		
K-FLEX® COLOR - Tubes	1 m		9-13-19-25-32 mm	from 57 to 160 mm		
		▼ Thickness	ses ▼	→ Height →		
K-FLEX® COLOR - Sheets	6-10-13-19-25-32-40-50 mm			1000/1500 mm		
K-FLEX® COLOR - Adhesive sheets	6-10-13-19-25-32-40-50 mm			1000/1500 mm		

# **COLOR RANGE**

Stock colour range and product codes

RAL 7035 grey - Colour code **G0** RAL 9002 white - Colour code **G1** RAL 9011 black - Colour code **N0** 

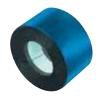
For the minimum order quantity per colour listed below, contact your sales office

RAL 5012 blue - Colour code **B0** RAL 6032 green - Colour code **V0** RAL 3000 red - Colour code **R0** 

# **ACCESSORIES**













K-FLEX® COLOR preformed "T" fittings

K-FLEX® COLOR preformed elbows

K-FLEX® COLOR pipe support

K-FLEX® COLOR pipe support with collar

K-FLEX® COLOR paint

K-FLEX® COLOR anticonsation tape

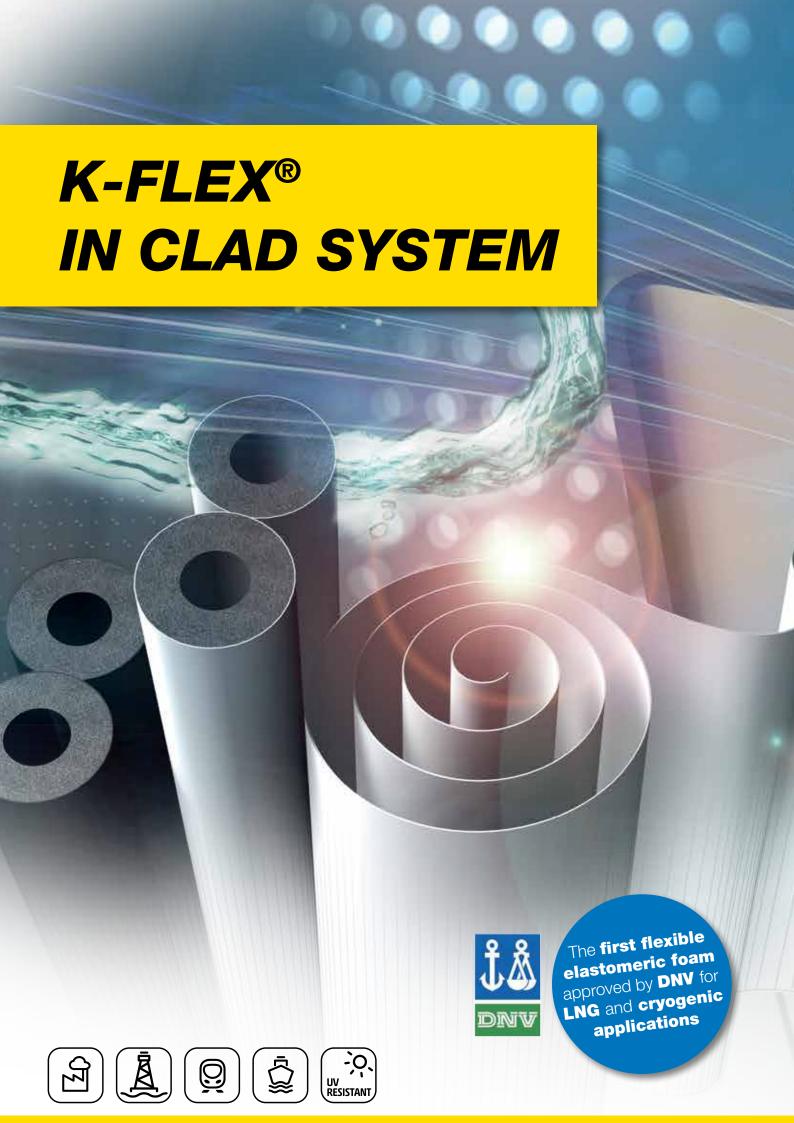


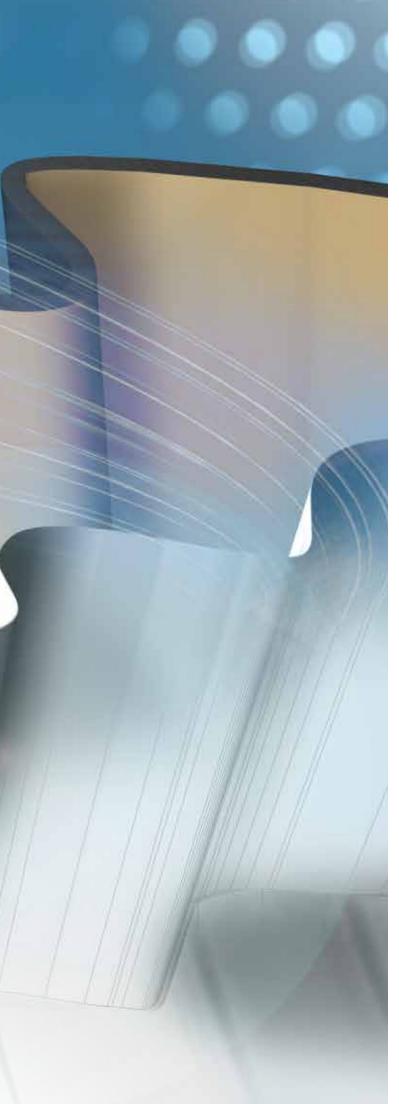
# **PROJECTS**

Germany













# K-FLEX® IN CLAD SYSTEM

- Non-metallic flexible coating
- Designed for oil & gas and industrial use
- Developed for the most challenging environments
- ▶ High mechanical and chemical resistance
- Resistance to uv, sea salt, oil and other atmospheric agents
- Easy to install without special tools
- Full range of accessories
- Can be applied to any insulation system





Property		▼ Test method ▼
Material	Flexible polymeric barrier	
Colour	Grey and Black	
Thickness	1.2 mm (± 0.2)	
MAX Surface Temperature	80°C (176°F)	
MAX application temperature, IN CLAD System	105°C (221°F) 120°C (248°F)	IN CLAD with K-FLEX® ST IN CLAD with K-FLEX® ECO
MIN application temperature, IN CLAD System	-200°C (-328°F)	IN CLAD System with K-FLEX® ST tested at -163°C (-260°F) and approved with a statement of feasibility by DNV
Water Vapour Permeability	$\mu > 90.000$	EN12086
Specic weight	1,8 (± 0.1 g/cm3)	
Tensile Strength	>=6,9 MPa	ISO 37 (Typical value 7.5 MPa)
Elongation to break	>100%	ISO 37 (Typical value: elongation at 70%, elongation to break 300%)
Elastic Modulus	>=60 MPa	ISO 37 (Typical value 70 MPa)
Modulus 10%	>1.5 MPa	ISO 37
Peel adhesion	>50 KPa	ISO 2411
Shear strength	>20 N/25mm	ISO 34-1
Hardness	>=80 ShA	ISO 7619, ASTM D2240
UV Resistance	Extremely good	2 years of exposure in New River, Arizona (Stati Uniti d'America), come per ASTM G 7-97, no pitting, no cracking, no blistering
Salt Spray resistance	Extremely good	ISO 3768 / ASTM B 117-73, 480 hours. No color shade, no scaling, no blistering
Ozone resistance	Extremely good	ASTM D1171 72h 50ppmh 20%, no oxidation
Resistance to aging	Extremely good	ISO 4982, after 360h, 72MJ, elongation to break and modulus conform to specification
Resistance to oil	Extremely good	ISO 1817; after 72h immersion in oil IRM 903, elonga tion to break and modulus conform to specification
Impact resistance	Extremely good	EN12691; 1 kg, 20mm, 600mm
Health aspects	Dust and fiber free	
Spread o flame	Pass Pass	BS 476 pt 7 NF 92501
Fire propagation	Pass	BS 476 pt 6
Fire requirements for shipbuilding	Pass	IMO 61/67 pt 2 and 5
Approvals and Supervisions	CE Marine Mark Approved (MED, module B) Type approval by American Bureau of Shipping Type approval by Det Norske Veritas Type approval by Lloyd's Register	DNV LNG Statement of Feasibility ABS Approval
Other properties	The product is compliant to the requirements of Nors Application: Product is flexible down to -20°C Fixing: neoprenic glue (K-FLEX® K414, K-FLEX® K420 Sealing: SMP sealant (Bostik Findley / Simson ISR 70	,



### **GENERAL INFORMATION**



### K-FLEX® IN CLAD SYSTEM TUBES

Insulation system specifically designed for aggressive environments such as offshore platforms, industrial, oil and petrochemical plants exposed to the sun and sea water and in situations where a high performance material is required.

IN CLAD SYSTEM tubes are composed of K-FLEX® ST insulation coated with IN CLAD flexible polmeric film. The overlap facilitates installation and provides the coating system with a weather-proof seal. K-FLEX® IN CLAD SYSTEM prevents corrosion under insulation (CUI) in your installation.



### K-FLEX® IN CLAD SYSTEM SHEETS

K-FLEX® IN CLAD SYSTEM sheets are ideal for insulating large industrial pipes, tanks, silos and awkwardly shaped equipment. The system is flexible, easy to work and does not require special tooling for cutting and gluing. Sealing the joints with silicone ensures total water- and weather-proofing. The protective IN CLAD foil is the ideal solution to protect thermal and acoustic insulation materials. It can be applied on different insulating materials such as mineral wool, PUR/PIR, FOAMGLASS, Aerogel, etc.

K-FLEX® IN CLAD SYSTEM > RANGE						
	Length      ✓	▼ Thicknesses ▼	→ Diameters →			
K-FLEX® IN CLAD - Tubes	1 m	9-13-19-25-32-40-50 mm	from 15 to 168* mm			
	<b>▼</b> 1	Thicknesses ▼				
K-FLEX® IN CLAD - Sheets	6-10-13-19-25-32-40-50 mm		1000 mm			
K-FLEX® IN CLAD - Adhesive sheets	6-10-13-19-25-32-40-50 mm		1000 mm			
* For diameters greater than 168mm, use sheet						

### **ACCESSORIES**



Preformed IN CLAD elbows - Gray



Preformed IN CLAD elbows - Black



Preformed "T" connections IN CLAD - Gray



Preformed "T" connections IN CLAD - Black



IN CLAD foil - Gray



IN CLAD foil - Black



IN CLAD tape - Gray



IN CLAD tape - Black



IN CLAD pipe support



IN CLAD pipe support with



Silicone









# K-FLEX® IC CLAD SYSTEM

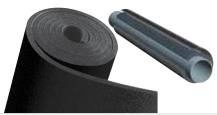
- ► Reinforced fiberglass coating
- ▶ Excellent mechanical resistance
- ▶ Resistant to high temperatures
- Easy to install without special tools
- Full range of accessories





# **K-FLEX®** ► IC CLAD SYSTEM

# TECHNICAL DATA



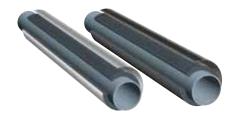
K-FLEX® IC CLAD SYSTEM BLACK (COVERING ONLY) ▶ TECHNICAL DATA						
▼ Property ▼	→ Value →	▼ Tolerance ▼	▼ Test method ▼			
Weave pattern	Plain		DIN ISO 9354			
Area weight	214 g/m²	±5%	DIN EN 12127			
Tensile strenght Warp Weft	500 N/cm 350 N/cm					
Finish content	4,00-6,00 %		DIN ISO 1887			
Thickness	0,18 mm		DIN ISO 4603/E			
Temperature Resistance Continuous load Short time resistance	180 °C 230 °C					
Fire rating (with K-FLEX® ST)	IMO Res. A 653, Class 0 BS 476 Part 6/7					
Certication (with K-FLEX® ST)	CE Marine Mark Approved, DNV, Lloyds Register					
K-FLEX® reserves the right to change data and technical	al requirements without notice.					



K-FLEX® IC CLAD SYSTEM SILVER (COVERING ONLY) > TECHNICAL DATA						
▼ Property ▼	→ Value →	▼ Tolerance ▼	▼ Test method ▼			
Weave pattern	Plain		DIN ISO 9354			
Area weight	204 g/m²	±5%	DIN EN 12127			
Tensile strenght Warp Weft	500 N/cm 350 N/cm					
Finish content	1,00-3,00 %		DIN ISO 1887			
Thickness	0,22 mm		DIN ISO 4603/E			
Temperature Resistance Continuous load Short time resistance	180 °C 230 °C					
Fire rating (with K-FLEX® ST)	IMO Res. A 653, Class 0 BS 476 Part 6/7					
Certication (with K-FLEX® ST)	CE Marine Mark Approved, DNV, Lloyds Register					
K-FLEX® reserves the right to change data and techn	ical requirements without notice.					



### **GENERAL INFORMATION**



### K-FLEX® IC CLAD SYSTEM TUBES

K-FLEX® IC CLAD SYSTEM tubes have an inorganic glass fibre fabric covering which is coupled to K-FLEX® ST insulation

The **IC CLAD** foil is especially resistant to mechanical stress and can withstand temperature peaks up to 230°C. Available in silver (aluminum) or black.



### K-FLEX® IC CLAD SYSTEM SHEETS

**K-FLEX® IC CLAD SYSTEM** sheets have **IC CLAD** foil backing coupled to **K-FLEX® ST** insulation. Available in standard or self-seal, they are designed for use with large pipes, tanks and silos. Their flexibility and ease of processing make this material especially suitable for awkward configurations and trims.

K-FLEX® IC CLAD SYSTEM > RANGE						
	Length      ✓	▼ Thicknesses ▼	→ Diameters →			
K-FLEX® IC CLAD - Tubes	1 m	9-13-19-25-32-40-50 mm	from 15 to 168* mm			
		Thicknesses •				
K-FLEX® IC CLAD - Sheets	6-10-13-19-25-32-40-50 mm		1000 mm			
K-FLEX® IC CLAD - Adhesive sheets	6-10-13-19-25-32-40-50 mm		1000 mm			
* For diameters greater than 168mm, use sheet						

### **ACCESSORIES**



Preformed IC CLAD elbows - Silver



Preformed IC CLAD elbows - Black



Preformed "T" connections IC CLAD - Silver



Preformed "T" connections IC CLAD - Black



IC CLAD tape - Silver



IC CLAD tape - Black



IC CLAD foil - Silver



IC CLAD foil - Black



Silicone







## K-FLEX® SOLAR SYSTEM

K-FLEX® offers a line of products designed specifically for solar heating, renewable energy sources used to produce hot water using solar energy.

The K-FLEX® TWIN SOLAR product range consists of a system to connect the hot water storage tank with the solar panel, composed of two corrugated stainless steel tubes (flow and return) with a sensor cable and a high temperature thermal insulator made of EPDM rubber coated with a film that provides both UV and mechanical protection. A range of fittings and mounting accessories make installation a fast and easy process.









# K-FLEX® TWIN SOLAR SYSTEM

- ▶ Complete range of insulation products
- Fast & easy installation
- UV resistant
- Minimises heat loss





K-FLEX® SOLAR R > TECHNICAL DATA						
▼ Property ▼		✓ Value ✓	▼ Test method ▼			
Temperature range	from -40 °C to +150 °C		EN 14706 EN 14707			
Thermal conductivity $\lambda$ W/(m•K)	0 °C = 0,040		EN ISO 8497			
Fire rating	Euroclass E		EN 13501-1			
UV Resistance	Good		EN 13859-1			
K-FLEX® reserves the right to change data and technic	cal requirements without notice.					

## **GENERAL INFORMATION**

The convenient solution for solar panels and industrial processes.

Recommended for solar panels and low pressure steam or industrial process.

**K-FLEX® SOLAR R** is available in rolls, standard cartons, and half cartons.





K-FLEX® SOLAR R > RANGE								
	INSULATION	TUBE DIA	METER					
	THICKNESS	12 mm	15 mm	18 mm	22 mm	28 mm	35 mm	Length
K-FLEX® SOLAR R Roll	14 mm				•	•	•	
K-FLEX® SOLAR R Roll	20 mm		•	•	•	•	•	
K-FLEX® SOLAR R Standard carton	14 mm				•	•	•	2 m
K-FLEX® SOLAR R Standard carton	20 mm	•	•	•	•	•	•	2 m
K-FLEX® SOLAR R Half carton	14 mm				•	•	•	2 m
K-FLEX® SOLAR R Half carton	20 mm	•	•	•	•	•	•	2 m

# **K-FLEX®** ▶ SOLAR SYSTEM

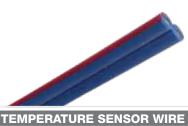
# **TECHNICAL DATA**



K-FLEX® SOLAR R > TECHNICAL DATA						
	▼ Value ▼	▼ Test method ▼				
Temperature range	from -40 °C to +150 °C	EN 14706 EN 14707				
Thermal conductivity $\lambda$ W/(m $\bullet$ K)	0 °C = 0,040	EN ISO 8497				
Fire rating	Euroclass E	EN 13501-1				
UV Resistance	Good	EN 13859-1				
K-FLEX® reserves the right to change data and technical requirements without notice.						



THE COLUMN TEACHER TO THE COLUMN							
ANULAR FLEXIBLE STAINLESS STEEL TUBE > TECHNICAL DATA							
Material		AISI 316 L					
		→ DN →	▼ Thickness (mm) ▼	Max service	Bend radius ▼ (mm) ▼		
21,3 ±0,2		16	0,18	16	25		
26,4 ±0,2		20	0,18	10	30		
31,8 ±0,4		25	0,20	10	35		
K-FLEX® reserves the right to change data and technical requirements without notice.							

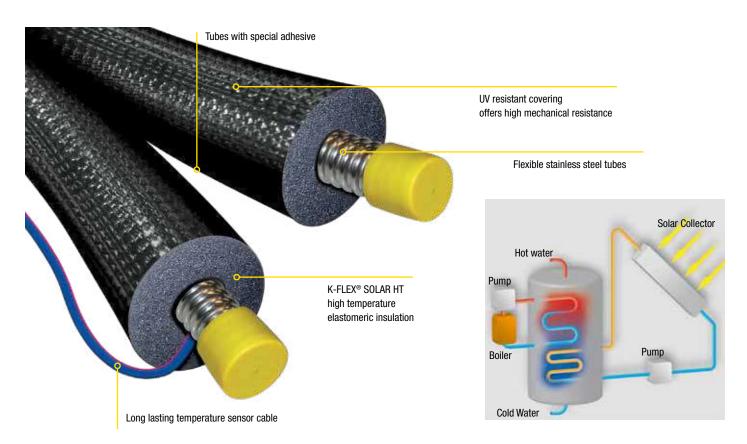


TEMPERATURE SENSOR WIRE > TECHNICAL DATA	
▼ Property ▼	
Temperature range	from -60 °C to +200 °C
Flexible Copper Ø 2x0.75 mm	CEI 20 - 19/15
Wire Insulation	Silicon Rubber
Rated Voltage	300/500 V
Electrical Resistance	26 Ohm/km
K-FLEX® reserves the right to change data and technical requirements without notice.	



### **GENERAL INFORMATION**

**K-FLEX® TWIN SOLAR SYSTEM** Is a solar thermal insulation system which is resistant to high temperatures. It facilitates the connection of a hot water tank to a solar panel; it is designed to minimise heat loss and be resistant to chemicals and weather.



K-FLEX® TWIN SOLAR	SYSTEM > RANGE						
	STEEL TUBES		INSULATIONS	TUBE L	ength		
	0.D.	Wall thickness	Thickness	10 m	15 m	20 m	25 m
K-FLEX® TWIN SOLAR SYSTEM DN16	21,3 ±0,2 mm 21,3 ±0,2 mm	0,18 mm 0,18 mm	14 mm 20 mm	•	•	•	•
K-FLEX® TWIN SOLAR SYSTEM DN20	26,4 ±0,2 mm 26,4 ±0,2 mm	0,18 mm 0,18 mm	14 mm 20 mm	•	•	•	•
K-FLEX® TWIN SOLAR SYSTEM DN25	31,8 ±0,4 mm 31,8 ±0,4 mm	0,20 mm 0,20 mm	14 mm 20 mm		•	•	•

### **COMPRESSION QUICK COUPLING**



Quick assembly without the need for tools or special equipment. Simple metal to metal seal.





**DN 20** 



**DN 16** 

**DN 25** 

Meets safety requirements and enhances performance by eradicating assembly mistakes.



### **EXTERNAL THREAD COUPLING**

External Thread 1/2" DN16

External Thread 3/4" DN16

External Thread 3/4" DN20

External Thread 1" DN20

External Thread 1 1/4" DN25



#### **DOUBLE COUPLING**

Double Coupling system DN 16 - DN 16

Double Coupling system DN 20 - DN 20

Double Coupling system DN 25 - DN 25



### INTERNAL THREAD COUPLING

Internal Thread 1/2" DN16

Internal Thread 3/4" DN16

Internal Thread 3/4" DN20

Internal Thread 1" DN20



### STRAIGHT FITTING

DN 16 - Straight fitting Ø 22 mm

DN 20 - Straight fitting Ø 22 mm

DN 25 - Straight fitting Ø 22 mm

DN 16 - Straight fitting Ø 18 mm

DN 20 - Straight fitting Ø 18 mm

DN 25 - Straight fitting Ø 18 mm



#### **COUPLING WITH CU CLAMPING RING**

**Connection system Steel DN 16 Copper** Ø 15 mm

**Connection system Steel DN 16 Copper** Ø 18 / 22 mm<sup>2</sup>

**Connection system Steel DN 20 Copper** Ø 18 / 22 mm

**Connection system Steel DN 25 Copper** 

Ø 18 / 22 mm

\* Copper connection Ø 18 or 22 mm



### **OLIVE**

Olive for compression coupling DN 16

Olive for compression coupling DN 20

Olive for compression coupling DN 25

### **ACCESSORIES**





Tube Clamp











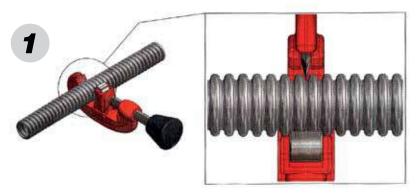
Nipple, Nut, Split Ring and Gasket

Oval Pipe Support



### **COMPRESSION QUICK COUPLING - ASSEMBLING**

Place the blade in the groove perpendicularly the pipe.

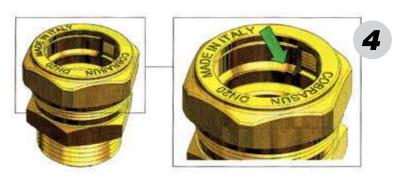




The cut must be clean and



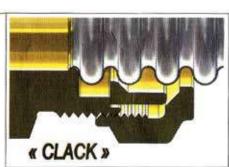
Do not disassemble the fitting: should this accidentally occur, the fool of the inner ring must be rested on the fitting body.

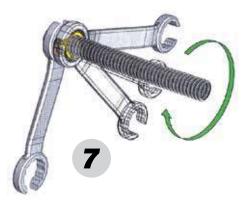


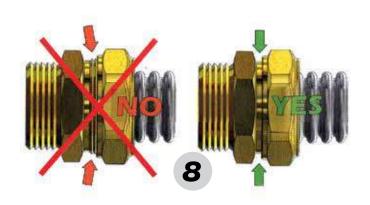
Manually loosen the bolt by approximately 1/2 rev, unless it is not already loose (fig.5) Push the pipe into the fitting until the "CLACK" sounds (fig. 6).











## K-FLEX® TWIN SOLAR SYSTEM SLIM













### K-FLEX® TWIN SOLAR SYSTEM SLIM

- ▶ Specifically designed for solar thermal panels
- UV resistant
- ► Saving on installation time
- Ideal for installations in confined spaces and under tiles



### **TECHNICAL DATA**



K-FLEX® INSULATION > TECH	NICAL DATA		
	→ Value →	▼ Test method ▼	
Temperature range	from -40 °C to +150 °C	EN 14706 EN 14707	
Thermal conductivity $\lambda$ W/(m • K)	0 °C = 0,040	EN ISO 8497	
Fire rating	Euroclass E	EN 13501-1	
UV Resistance	Good	EN 13859-1	
K-FLEX® reserves the right to change data and technical requirements without notice.			



ANULAR FLEXIBLE STAINLESS STE	EL TUBE	TECHNICAL DATA		
Material	AISI 316 L			
	→ DN →	▼ Thickness (mm) ▼	Max service	Bend radius ▼ (mm) ▼
21,3 ±0,2	16	0,18	16	25
26,4 ±0,2	20	0,18	10	30
31,8 ±0,4	25	0,20	10	35
K-FLEX® reserves the right to change data and technical requirements without notice.				

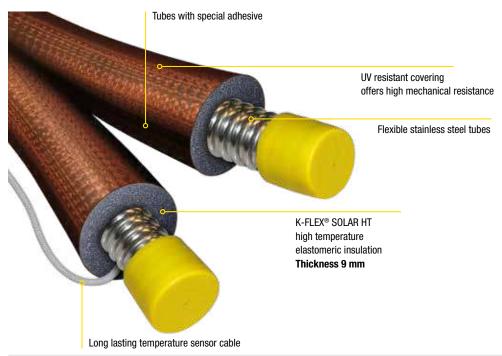


TEMPERATURE SENSOR WIRE > TECHNICAL DATA	
→ Property →	▼ Value ▼
Temperature range	from -60 °C to +200 °C
Flexible Copper Ø 2x0.75 mm	CEI 20 - 19/15
Wire Insulation	Silicon Rubber
Rated Voltage	300/500 V
Electrical Resistance	26 Ohm/km
K-FLEX® reserves the right to change data and technical requirements without notice.	



### **GENERAL INFORMATION**

Thermal insulation systems for solar power with resistance to high temperatures. For connecting the hot water storage tank with the solar panel saving on installation time. Designed to minimise heat loss. Good chemical resistance and weatherproof. Ideal for roof space and passages.



K-FLEX® TWIN SOL	AR SYSTEM SI	IM ▶ RANGE								
	STEEL TUBES	INSULATION	tube Ler	ngth						coils weight
	DN	Thickness	10 m	15 m	20 m	25 m	50 m	100 m	150 m	
K-FLEX® TWIN SOLAR SYSTEM SLIM Tubes	16 20 25	9 mm 9 mm 9 mm	•	•	•	•				
K-FLEX® TWIN SOLAR SYSTEM SLIM Coils	16 20 25	9 mm 9 mm 9 mm					•	•	•	45 - 105 - 135 kg 55 - 110 - 120 kg 55 - 105 kg

### K-FLEX® DE-REELER AND MANUAL DE-REELER

Thermal insulation systems for solar power with resistance to high temperatures. For connecting the hot water storage tank with the solar panel saving on installation time. Designed to minimise heat loss. Good chemical resistance and weatherproof. Ideal for roof space and passages.

De-reeler for the production of K-FLEX® TWIN SOLAR SLIM rolls of variable dimensions. Designed and built for fast and easy operation. An ideal tool for precision cutting; also suitable for use on construction sites, in warehouses and retail outlets.

### MACHINE PARTS:

FRAMEWORK – Designed to use K-FLEX® TWIN SOLAR SYSTEM SLIM drums. CUTTING DISC – to enable the tube to be cut to the desired length.

METRE COUNTER – For accurate measurement of lengths cut to the customer's own specification.

RE-REELER – Ratchet system to facilitate re-coiling the product in the required lengths.

Machine dimensions: 2370 mm x 1200 mm x 1350 mm.

K-FLEX® MANUAL DE-REELER Suitable for rolls up to 150m long. OCTOBER 2021













### K-FLEX® K-FONIK SYSTEM

- Acoustic insulation of waste and rainwater drainage pipes
- Acoustic insulation of industrial pipes, civil and industrial machinery
- Solutions for traditional brick dividing walls and dry construction systems (plasterboard)
- Underfloor solutions
- > Applications in shipbuilding and rail

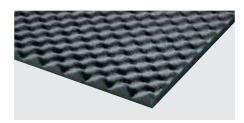


#### **GENERAL INFORMATION**

Whether at home, work or leisure, most of our time is spent inside buildings, so it is important that we feel comfortable. The optimum environment is created from a combination of the correct ambient temperature, humidity and lighting, access to necessary resources and suitable acoustic insulation. All these factors have to be taken into consideration when designing buildings, and will also have a direct bearing on the build cost and final project value.

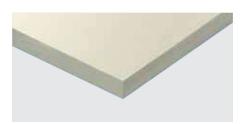
K-FLEX® offers good value high performance acoustic solutions to meet the demands of today's buildings (both new-build and renovation projects) with high quality, excellent durability and optimum design, complying with the required regulations.

K-FLEX® products are manufactured to the highest specifications using high quality durable materials and finishes with excellent performance qualities.



#### **SOUND ABSORPTION MATERIALS**

To absorb and dissipate sound energy reducing its reflection from the source.



#### **SOUND INSULATION MATERIALS**

To isolate airborne noise and prevent its migration.

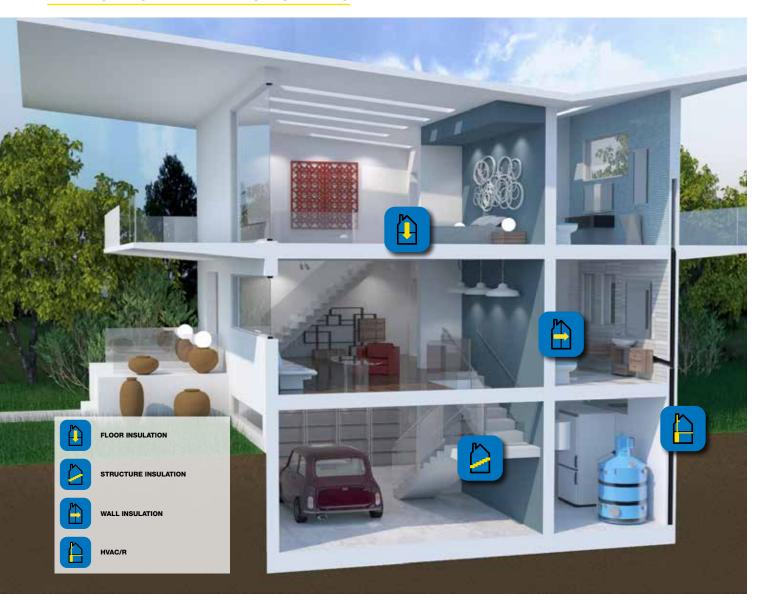


#### **DAMPING MATERIALS**

To dampen noise produced by vibrations from sheets, panels and covers.



### **APPLICATION EXAMPLES BUILDING**





### **PROJECTS**

Poland





## K-FLEX® K-FONIK GK / GV

High-density elastomeric acoustic insulating panel for building, OEM and industrial applications. The product is lead-free and therefore does not represent a health risk.

**K-FONIK GK** is a high density elastomeric material based on partially reticulated polymers with viscoelastic properties designed for acoustic insulation applications. Installed as a mass barrier, its special sound insulation characteristics make it an excellent product for insulation of walls and ceilings in civil applications, pipe insulation in industrial applications and damping reduction in OEM applications.

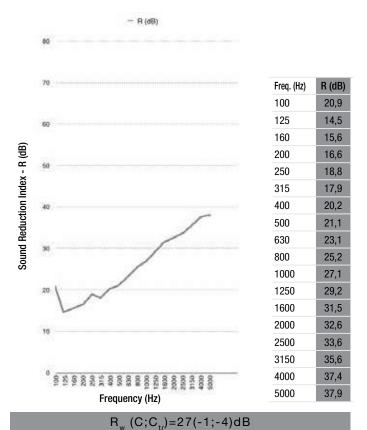
**K-FONIK GV** is a high density elastomeric material based on partially reticulated polymers and fireproof mineral fillers. Its viscoelastic properties make it ideal for acoustic insulation in shipbuilding and railway applications.







### **ACOUSTIC PERFORMANCE**



### **APPLICATION**

**K-FONIK GK** is ideal for sound insulation of walls, ceilings, acoustic cabins, drainage systems, OEM sound insulation applications, etc.

**K-FONIK GV** is ideal for the railway and shipbuilding industries.

#### **RANGE**

K-FONIK GK
from 4 to 8 Kg/m²
High-density
elastomeric material
Please see the price list for the full range

· ·	4
	▼ Test method ▼
High density elastomeric material	
B - s3,d0 <sup>1</sup> , IMO A653 (CE MARINE) <sup>2</sup> , FMVSS 30 <sup>2</sup>	EN 13501 BS 476 Part 6/7
-40 °C +70 °C	DO 47 0 1 art 0/7
1000 x 2000 mm; 1200 x 2000 mm; 1500 x 2000 mm - Roll 25 or 50 m	
Smooth <sup>3</sup>	
from 4 kg/m <sup>2</sup> to 8 kg/m <sup>2</sup>	
Black (GK) White (GV)	
2000 kg/m³ (±10%)	
	High density elastomeric material B - \$3,d0¹, IMO A653 (CE MARINE)², FMVSS 30² Class 0 -40 °C +70 °C 1000 x 2000 mm; 1200 x 2000 mm; 1500 x 2000 mm - Roll 25 or 50 m Smooth³ from 4 kg/m² to 8 kg/m² Black (GK) White (GV)



## K-FLEX® K-FONIK OPEN CELL

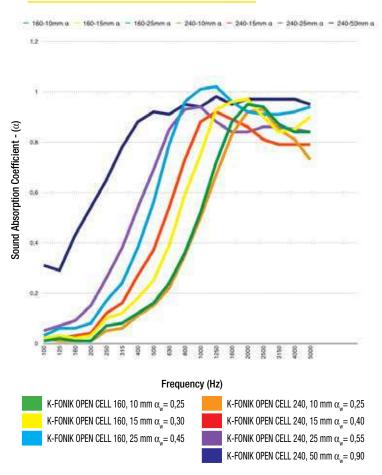
**K-FONIK OPEN CELL** is an open cell Flexible Elastomeric Foam designed for sound absorption.

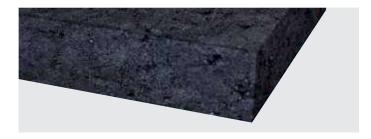
Its viscoelastic properties, open cell structure and good air flow resistance make it excellent for acoustic insulation in building, HVAC/R, pipes and industrial applications. It combines excellent acoustic performances and insulation characteristics.

### **APPLICATION**

**K-FONIK OPEN CELL** is ideal for sound absorption application; industrial pipes, building, OEM products and HVAC/R.

### **ACOUSTIC PERFORMANCE**







### **RANGE**

K-FONIK OPEN CELL 160 - 240

from 10 to 350 mm

Please see the price list for the full range

Property	▼ Value ▼	
Material	Flexible elastomeric foam open cell	
Density	OPEN CELL 160: ≥ 100 kg/m³ OPEN CELL 240: 240 kg/m³ (-20 / +120 kg/m³)	
Thermal conductivity	OPEN CELL 240: 0,056 W/(m•K) OPEN CELL 160: 0,048 W/(m•K)	EN 12667
Fire rating	C-s3,d0 Class 1	EN 13501-1 BS 476 Part 6/7
Temperature	-40 °C +85 °C	
Thickness	from 10 to 500 mm	
Base colour	Black	
Modulus (MPa)	22 ± 3.7 (160) 57.7 ± 8.0 (240)	
Elongation to break (%)	114 ± 33 (160) 140 ± 47 (240)	
Insertion Loss	K-FONIK 160 10mm Rw=5 dB K-FONIK 160 15mm Rw=8 dB K-FONIK 160 25mm Rw=9 dB K-FONIK 240 10mm Rw=8 dB K-FONIK 240 15mm Rw=10 dB K-FONIK 240 25mm Rw=14 dB	

## K-FLEX® K-FONIK ST GK

Smooth elastomeric sound insulation panel in various thicknesses, coupled with a high density elastomeric sheet.

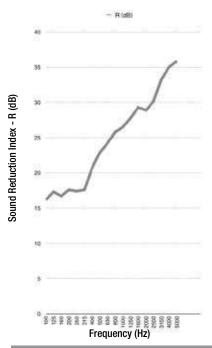
The product is lead-free and therefore does not represent a health risk.

**K-FONIK ST GK** combines the features of K-FONIK GK with a layer of our elastomeric K-FLEX® ST.

### **APPLICATION**

**K-FONIK ST GK** is ideal for sound insulation of walls, ceilings, acoustic cabins, drainage systems, OEM sound insulation applications, etc.

### **ACOUSTIC PERFORMANCE**



Freq. (Hz)	R (dB)
100	16,2
125	17,3
160	16,7
200	17,6
250	17,4
315	17,6
400	20,7
500	22,9
630	24,2
800	25,8
1000	26,5
1250	27,8
1600	29,3
2000	28,9
2500	30,2
3150	33,3
4000	35,0
5000	35,9

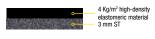
 $R_{w}(C;C_{tr})=26(0;-3)dB$ 



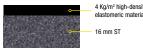


### **RANGE**

#### K-FONIK ST GK 074

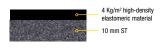


#### K-FONIK ST GK 070

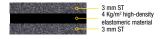


Please see the price list for the full range

### K-FONIK ST GK 072



### K-FONIK ST GK ST 074



Dronorty	Value	Toot mothed
Property	Value ▼	▼ Test method ▼
Material	Flexible elastomeric foam with high-density elastomeric material	
Weight	4,4 kg/m <sup>2</sup> (K-F0NIK ST GK 072)	
Fire rating	B - s3,d0	EN 13501-1
Thermal conductivity	0.036 W/(m•K)	EN 12667
Temperature	-40 °C +70 °C	
Dimensions	2000 x 1000 mm	
Surface	Smooth	
Base colour	Black	



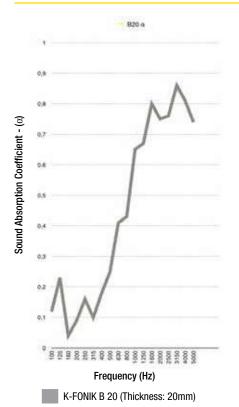
## K-FLEX® K-FONIK B

Embossed surface polyurethane foam sheet ideal for acoustic absorption. **K-FONIK B** material is specifically designed for situations where sound absorption is a priority. It is made of open cell flexible polyurethane foam with a density of 25/30 kg/m³.

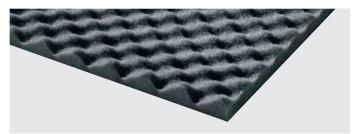


**K-FONIK B** is widely used in gyms, conference rooms, rifle ranges, recording studios, radio/television studios, moveable acoustic panels, engine rooms, etc.

### **ACOUSTIC PERFORMANCE**



	B20
Freq. (Hz)	α
100	0,12
125	0,23
160	0,04
200	0,09
250	0,16
315	0,10
400	0,18
500	0,25
630	0,41
800	0,43
1000	0,65
1250	0,67
1600	0,80
2000	0,75
2500	0,76
3150	0,86
4000	0,81
5000	0,74
$\alpha_{_{w}}$	0,28





### **RANGE**

K-FONIK B 20



Please see the price list for the full range

K-FLEX® K-FONIK B > TECHNICAL DATA				
▼ Property ▼		▼ Test method ▼		
Material	Polyurethane foam			
Density	25 ÷ 30 kg/m <sup>3</sup>			
Temperature	-40 °C +70 °C			
Dimensions	1000 x 2000 mm - also available in rolls of different sizes			
Surface	Embossed			
Thickness	20 mm			
Base colour	Black			
K-FLEX® reserves the right to change data and technical requirements without notice.				

## K-FLEX® K-FONIK PU GK

**K-FONIK PU GK** is a sound absorption material with high density elastomeric sheet specifically designed to provide a solution to particular soundproofing problems.

### **APPLICATION**

**K-FONIK PU GK** is ideal for the sound insulation of fixed or false walls, ceilings and false ceilings, garages, acoustic cabins and drainage systems.

### **RANGE**



## K-FLEX® K-FONIK P

**K-FONIK P** is a sound absorption material manufactured with a pyramid-shaped surface, It is the ideal acoustic insulation solution for rooms etc.

#### **APPLICATION**

**K-FONIK P** is widely used in gyms, conference rooms, rifle ranges, recording studios, radio/television studios, moveable acoustic panels, engine rooms, etc.

### **RANGE**

K-FONIK P 50	K-FONIK P 100		
PU 30 mm PU 20 mm	PU 70 mm PU 30 mm		
Please see the price list for the full range			

### **ACOUSTIC PERFORMANCE**

P50 - $\alpha_{w} = 0.34$		
P100 - $\alpha_{\rm w} = 0.82$		



K-FLEX® K-FONIK PU GK > TECHNICAL DATA			
Property		▼ Test method ▼	
Material	Polyurethane foam and high density mass		
Fire rating	Self-extinguishing		
Temperature	-40 °C +70 °C		
Dimensions	1000 x 2000 mm		
Surface	Surface Smooth or embossed		
Base colour	Black		
K-FLEX® reserves the right to change data and technical requirements without notice.			





Example of possible application

K-FLEX <sup>®</sup> K-FONIK P ▶ TECHNICAL DATA		
	▼ Value ▼	▼ Test method ▼
Material	Polyurethane foam	
Density	25 ÷ 30 kg/m <sup>3</sup>	
Fire rating	Self-extinguishing	
Temperature	-40 °C +70 °C	
Dimensions	1000 x 1000	
Surface	Pyramid structure	
Thickness	50 - 100 mm	
Base colour	Dark grey	
K-FLEX® reserves the right to change data and technical requirements without notice.		





**PROJECTS** 

Poland















### K-FLEX® K-FIRE

► K-FLEX® is proud to announce K-FLEX® K-FIRE, the new range of product for passive fire protection. In an ever more evolving world is growing awareness and attention to the protection of people in dangerous situations, such as those resulting from a fire. New bigger, more futuristic and innovative buildings are in the design and/ or construction phase and require solutions for passive protection against fire even more efficient. K-FLEX® wants to provide designers and installers a complete range of solutions for fire protection, capable of ensuring the compliant of the most stringent regulatory requirements. K-FLEX® K-FIRE solutions are economical, versatile, easy to install and, above all, reliable. Each solution of K-FLEX® K-FIRE is tested by independent and recognized laboratories and evaluated according to the current standard of fire resistance test. K-FLEX® constantly develops new products and solutions able to satisfy all the requirements of fire stopping and fire protection.





# K-FLEX® K-FIRE COLLAR



A range of devices designed to be fitted around plastic pipes where they penetrate fire separating structures. Under fire conditions the intumescent material within the collar expands to crush the softening pipe and fill the resultant opening, thereby maintaining the fire integrity and insulation performance of the floor or wall.

CE Marked 0843-CPR-0279 and CE 0843-CPR-0410
ETA 15-0756
ETA-17/1020
ETAG 026-2 (2011) according EN 1366-3 Penetration Seals

K-FLEX® K-FIRE COLLAR > RANGE	3
▼ Type ▼	▼ Thicknesses ▼
K-FLEX® K-FIRE COLLAR-P Is K-FLEX®'s premium solution for protecting combustible pipe penetrations up to DN200* (larger diameter will be soon available) and consists of red painted steel shells secured by a hinge and latch system.	55 - 82 - 110 - 125 - 140 - 160 - 200 mm
K-FLEX® K-FIRE COLLAR-S Represents an ideal solution for protecting penetration of small diameter pipes and comprises stainless steel shells that are secured by interlocking fastening system.	32 - 38 - 42 - 46 - 48 - 50 mm
K-FLEX® K-FIRE COLLAR-Z Represents the economical solution for protecting combustible pipe penetration, made of galvanized steel metal shells and interlocking fastening system.	55 - 65 - 70 - 82 - 90 - 110 - 125 - 140 - 160 mm
K-FLEX® K-FIRE COLLAR-E Is an economical solution that restores the fire resistance of flammable pipe passages, equipped with a cover made of mild galvanized steel painted white protected with a special lock with a blockade.	32 - 40 - 55 - 63 - 75 - 82 - 110 - 125 - 140 - 160 - 200 - 250 - 315 mm





# K-FLEX® K-FIRE PIPE WRAP



K-FLEX® K-FIRE PIPE WRAP is a pipe closure device used to form penetration seals where combustible pipes and insulated metal pipes penetrate walls and floors. K-FLEX® K-FIRE PIPE WRAP is supplied in bags sized according to pipe diameter. The wrap is wrapped around the pipe and pushed into the aperture in the separating element or cast in with K-FLEX® K-FIRE EX MORTAR.



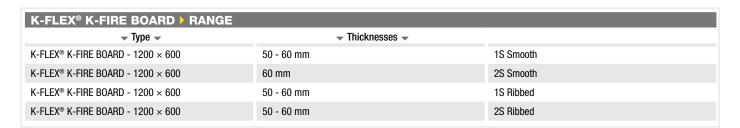
K-FLEX <sup>®</sup> K-FIRE PIPE WRAP ▶ RANGE		
▼ Type ▼	▼ Thicknesses ▼	
K-FLEX® K-FIRE PIPE WRAP - precutted strip	55 - 82 - 110 - 125 - 160 - 200 - 250 - 315 mm	
K-FLEX® K-FIRE PIPE WRAP - roll	25 m $\times$ 50 mm or 25 m $\times$ 75 mm	

## K-FLEX® K-FIRE BOARD



K-FLEX® K-FIRE BORD anti-icing board is made of mineral wool with a density of 160 kg/m³, covered on one or both sides with K-FLEX® K-FIRE COATING acrylic paint. It is used for fire-proof sealing, in walls and ceilings, passages of steel and copper pipes and combined passes with plastic pipes, cables and ventilation ducts.





## K-FLEX® K-FIRE SEALANT A PLUS



K-FLEX® K-FIRE SEALANT A PLUS is a fire resistant water based acoustic acrylic sealant, designed for internal use with fire and smoke resisting gaps and service penetrating capability. K-FIRE SEALANT A PLUS can be used where a low movement fire resistant and/or acoustic joint is required. K-FIRE SEALANT A PLUS provides good adhesion to most common building materials like brick, concrete, plasterboard, wood etc.

→ Approvals →		
CE Marked 0843-CPR-0284		
ETA 15-0818		
ETAG 026-2 (2011) according EN 1366-3 Penetration Seals		
ETA 15-0795		
ETAG 026-3 (2011) according EN 1366-4 Linear Joint and Gap Seals		

K-FLEX® K-FIRE SEALANT A PLUS > RANGE			
▼ Type ▼			
K-FLEX® K-FIRE SEALANT A PLUS - cartridge	310 ml	White	

## K-FLEX® K-FIRE SEALANT A



K-FLEX® K-FIRE SEALANT A is a one part, acrylic emulsion that intumesces and forms a char when exposed to the heat of a fire, preventing the passage of fire and smoke In normal use, it will maintain the sound reduction index of a structure. It does not emit halogenated by-products under fire conditions, and does not contain any hazardous raw material. It has good, unprimed, adhesion to a wide variety of common building substrates, and it is designed to work in combination with K-FLEX® K-FIRE BATT to prevent the passage of fire and smoke between compartimentations whilst still allowing the installation of services.



K-FLEX® K-FIRE SEALANT A > RANGE		
▼ Type ▼	Content ▼	
K-FLEX® K-FIRE SEALANT A - cartridge	310 ml	White or grey



## K-FLEX® K-FIRE SEALANT S PLUS



A one part, fire resistant, neutral curing, silicone sealant to be used in situations where a flexible fire resistant joint is required. Excellent adhesion to most building substrates, including porous materials, without the use of primers. Good durability.



K-FLEX® K-FIRE SEALANT S PLUS > RANGE		
▼ Type ▼	Content	
K-FLEX® K-FIRE SEALANT S PLUS - cartridge	310 ml	White or grey

# K-FLEX® K-FIRE ACRYLIC



K-FLEX® K-FIRE ACRYLIC is an one part acrylic sealant designed to prevent the spread of fire and smoke through joints and openings in fire rated walls and floors including openings formed around building service penetrations. K-FLEX® K-FIRE ACRYLIC will also maintain the acoustic design performance in walls and floors. K-FLEX® K-FIRE ACRYLIC cures when it is subjected to atmospheric conditions and retain a certain elasticity for joint movement. Under fire exposure, K-FLEX® K-FIRE ACRYLIC creates a robust fire seal creating a durable intumescent char. Thermal activation takes place at about 180°C when the material will expand (intumesce) and prevent the passage of fire and smoke for periods up to and beyond 4 hours.







# K-FLEX® K-FIRE HP SEALANT



K-FLEX® K-FIRE HP SEALANT is a is an intumescent pressure sealant which, when exposed to fire, expands protecting penetrations including cables, cable bunches, cable trays, plastic and metallic pipes. K-FLEX® K-FIRE HP SEALANT maintains the integrity and insulation performance of the seal through masonry and plasterboard. The sealant is intended for use in service penetrations through walls and floors where fire integrity and insulation needs to be preserved. Under fire conditions the product swells and exerts pressure to the surrounding substrates leading to closure of the penetration.

→ Approvals →
CE Marked 1121-CPR-JA5097
ETA 15-0778
ETAG 026-2 (2011) according EN 1366-3 Penetration Seals

K-FLEX® K-FIRE HP SEALANT ➤ RANGE			
▼ Type ▼	Content		
K-FLEX® K-FIRE HP SEALANTS - cartridge	310 ml	Grey	





# K-FLEX® K-FIRE EX MORTAR



K-FLEX® K-FIRE EX MORTAR is a gypsum based mortar material, used to reinstate the fire resistance performance of wall and floor constructions where they have been provided with apertures for the penetrations of multiple services. When mixed with water, the compounds form a highly thermally insulating fire sealing compound to prevent the spread of fire and smoke through openings in fire rated walls and floors, including openings formed around building service penetrations. K-FLEX® K-FIRE EX MORTAR will also maintain the acoustic design performance in walls and floors. K-FLEX® K-FIRE EX MORTAR expands approx. 1% by hydraulic action during curing ensuring a very tight seal around the service penetrations and the surrounding opening apertures.



K-FLEX® K-FIRE EX MORTAR > RANGE		
▼ Type ▼		
K-FLEX® K-FIRE EX MORTAR - bag	20 lt	

# K-FLEX® K-FIRE COATING



K-FLEX® K-FIRE COATING is a special developed paint that prevents smoke and fire from entering. Provides up to 120 minutes fire resistance. The product is resistant to weather conditions. The product should be used together with mineral wool density min 80 kg/m³. After drying it remains highly flexible so that the structure moves building.



K-FLEX® K-FIRE COATING ▶ RANGE	
▼ Type ▼	▼ Content ▼
K-FLEX® K-FIRE COATING	8 lt 10,4 / 11,2 kg

# K-FLEX® K-FIRE FLEXI COAT



K-FLEX® K-FIRE FLEXI COAT is an acrylic based sealant used to form linear gap seals where gaps are present in floor constructions and to create seals where penetrations go through walls. The K-FIRE FLEXI COAT is supplied in liquid form contained within 10 kg or 20 kg pail. K-FIRE FLEXI COAT is trowelled or sprayed into the aperture in or between the separating element/elements to a specified depth utilising mineral wool as a backing material.

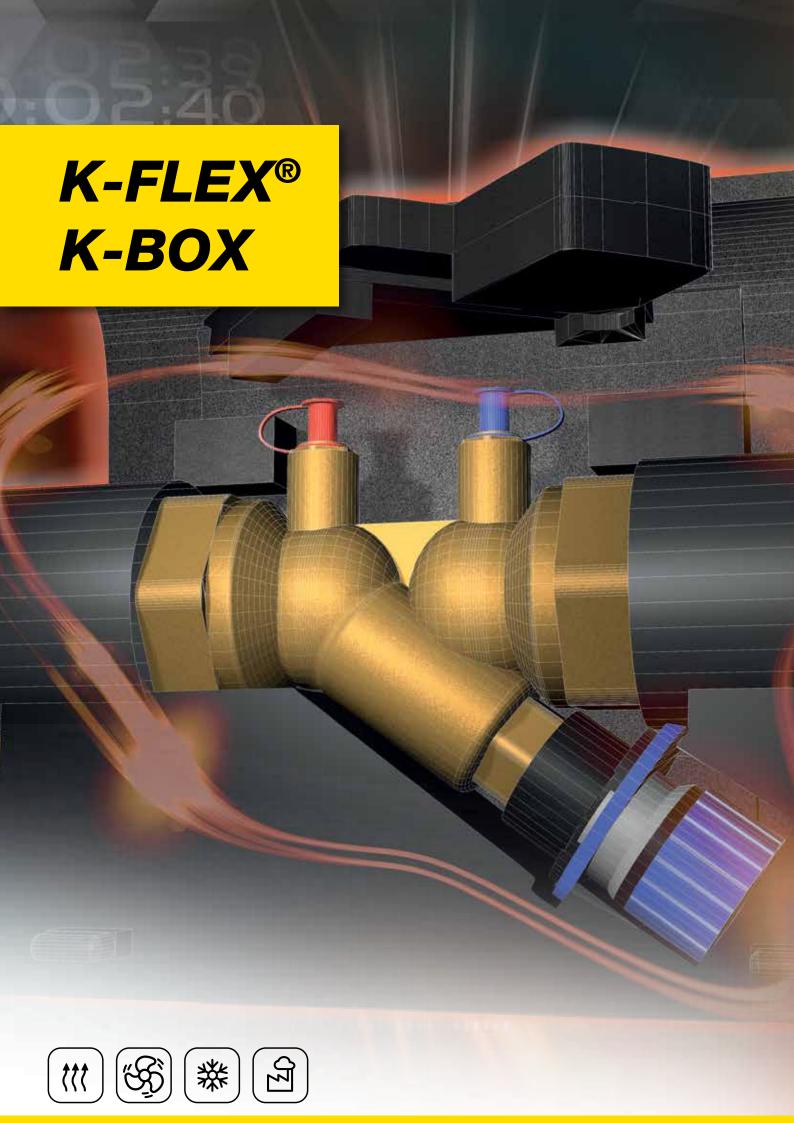


K-FLEX® K-FIRE FLEXI COAT ▶ RANGE		
▼ Type ▼	▼ Content ▼	
K-FLEX® K-FIRE FLEXI COAT	10 -20 kg	





# FIRESTOPPING SOLUTIONS









### K-FLEX® K-BOX

 Preformed insulation boxes suitable for insulation of valves, filters, flanges and other elements in a piping system





### **TECHNICAL DATA**

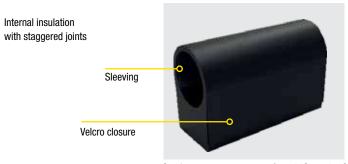


▼ Property ▼	. DATA	
Insulation material	K-FLEX® ST	
Temperature range	K-BOX removable: from 0°C to +85°C K-BOX glued: from -45°C to +85°C	
Storage	from +10°C to +30°C	
Thermal conductivity λ W/(m•K)	0,036 W/mK a 0°C	
Permeability µ	7000	
Corrosion properties	pH neutral (7)	
Resistance to mould, fungi and bacteria	Excellent	
Odour	Neutral	
Colour	Black	
Use	Internal	
K-FLEX® reserves the right to change data and techni	cal requirements without notice.	

### **GENERAL INFORMATION**

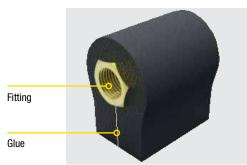
K-FLEX® K-BOX are available in removable or non removable versions.

Removable version, with IC CLAD jacketing



Service temperature range: from 0°C to +85°C

Non Jacketing, glued version



Service temperature range: from -45°C to +85°C





Each piece has been specifically designed in order to perfectly match the equipment to be insulated. The elastomeric closed cell structure offers a very low thermal conductivity combined with excellent resistance to water vapor diffusion.

- Time savings during equipment maintenance.
- Easy and quick to use.
- Quality finish.
- Made in the EU.

K-FLEX® K-BOX are available in removable or non removable versions.

For different sizes and models, please contact us.

K-FLEX® K-BOX ▶ RANGE			
	▼ Fittings ▼	▼ Thicknesses ▼	■ Diameters       ■
K-FLEX® K-B0X - Removable	Threaded	from 19 to 40 mm	from 22 to 76 mm
	Flanged	from 32 to 50 mm	from 48 to 168 mm
K-FLEX® K-BOX - Glued	Threaded	from 19 to 40 mm	from 22 to 76 mm
	Flanged	from 32 to 50 mm	from 48 to 168 mm

### **ACCESSORIES**









### K-FLEX® K-JACKET

 Removable and reausable tailor made system for thermal insulation of special parts and complex geometry for industrial applications





Thermal insulation K-FLEX® K-JACKET is a removable multifunctional product made of heat-insulating materials, technical cover fabrics and ergonomic fastening accessories for convenient and quick access to equipment requiring regular inspection and maintenance. Main fields of application: objects of energy, chemical, food, oil refining industry, and also transportation of oil and gas, shipbuilding and other fields.

### **USES OF INSULATION**

- Flange connection
- Valves with electric heating
- Regulators
- Ball plug valve
- Pressure sensor
- ▶ Ball plug valves with electric heating

- Shutters
- Heat exchangers
- Valves
- Level gauges
- Filters
- Other equipment



Decreases heat loss of heating cable



 Protects valves and equipment from thermal shocks and negative external influences



 Grades vibration fluctuations and decrease the industrial noise



Supports the temperature of the equipment



Protects from condensation and freeze



 Provides safety for maintenance personnel

Makes individually for needs of each client to technical features of the isolated equipment. Delivery of removable covers K-FLEX® JACKET includes: development and agreement of the sketch layout of the product; development of technical and commercial proposal; actual measurements of equipment; development of patterns and blueprints; making; quality control of the output product and delivery.

### **OPTIONS OF PRODUCT**

- Insulation for indoor use
- Insulation for outdoor use
- Insulation with heating cable
- Insulation for use in temperatires up to 900 °C
- Versions: G1(Russia) lowly flammable and NG (Russia) nonflammable



Valve case DU 200



### TECHNICAL FABRICS FOR MAKING OF THE COVER LAYER

- K-FLEX® SIL CLADfiberglass withsilicone impregnation
- Silica fabric with silicone impregnation
- Fiberglass with PVC impregnation

<b>FABRICS</b>	1		
Indications	▼ K-FLEX® SIL CLAD ▼		▼ Fiberglass ▼
Maximum working temperature	up to +250 °C	up to +1000 °C	up to +80 °C
Using in sub zero temperatures	up to -60 °C	-	-
Outdoor using	+	-	-
Fabric flammability group	G1 (Russia)	NG (Russia)	G1 (Russia)
Wetness resistance	+	-	-
Oil and oil producs resistance	+	-	-
K-FLEX® reserves the right to change	data and technical requirem	ents without notice.	



### FILLERS FOR THE MAIN THERMAL INSULATION LAYER

► Foam rubber K-FLEX® ST

Basalt wool

Foam rubber K-FLEX® ENERGO PLUS

> Silica fiber insulation

FILLERS		V FLEV®	D#	0:::
▼ Indications ▼	▼ K-FLEX® ST   ▼	K-FLEX®  ▼ ENERGO PLUS ▼	Basalt	Silica
Maximum working temperature	up to +105 °C	up to +150 °C	up to +680 °C	up to +1100 °C
Using in sub zero temperatures	up to -20 °C	up to -60 °C	up to -60 °C	-
Outdoor using	+	+	+	-
Fire safety	lowly flammable		nonflammable	
Flammability group	G1 (Russia)	G1 (Russia)	NG (Russia)	NG (Russia)
Rate of thermal conductivity up to 20 °C, $B_T$ / (M·°C), no more	0,038	0,039	0,040	0,041
Wetness resistance	+	+	-	-
Oil and oil producs resistance	+	+	-	-
Average density, kg/m <sup>3</sup>	40	70	80	128
Operation period, years	25	48	5	3
K-FLEX® reserves the right to change	data and technical re	quirements without notic	ce.	



### **FASTENING HARDWARE FOR FIXING**

Para-aramid thread with metal core

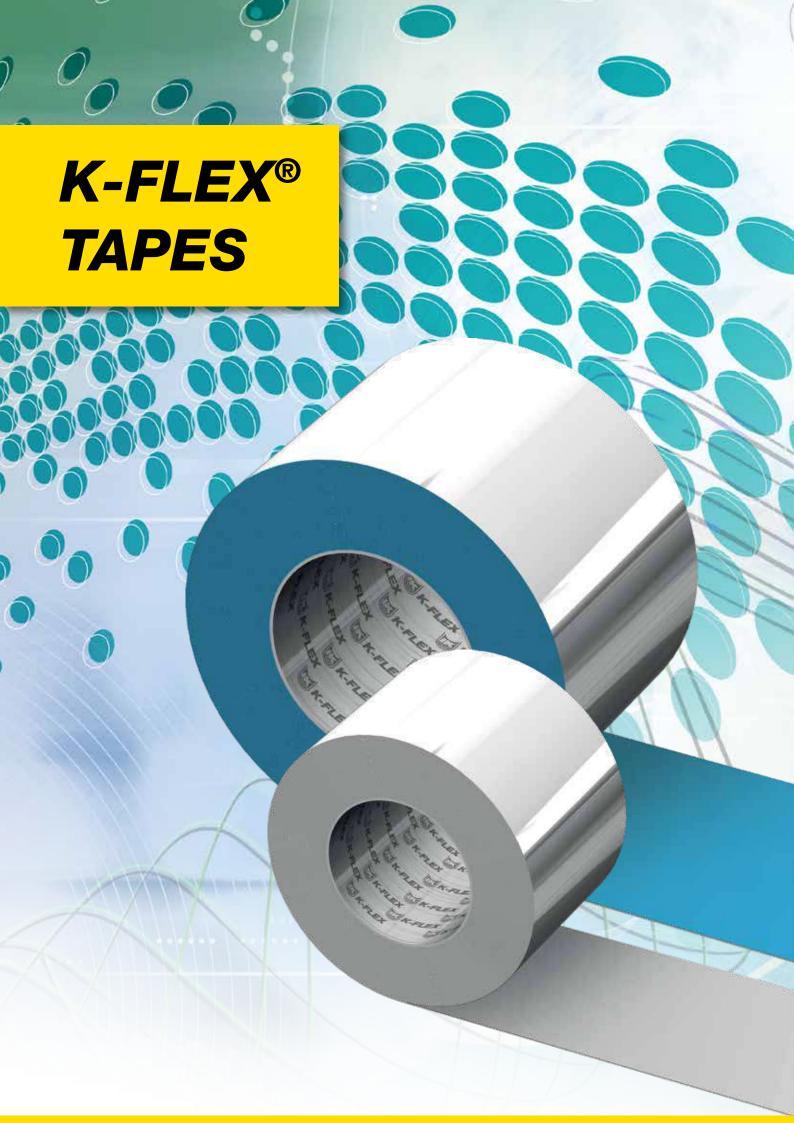
Premium class contact tapes

Multifilament belts

Spring buckles

▼ Threads ▼	→ Belts →	▼ Tapes ▼	→ Bucklers →	
Temperature of use up to 1000 °C	Polypropylene basis	Polyamide basis	Industrial about looks	
Resistant to mechanical stress	Resistant to ultraviolet	Temperature of useup to +140 °C	Industrial steel locks	
Nonflammable	Resistant to attrition	Perfect resistance to so-	Breaking load no less that 1100 kr	
Tensile strength more than 3500 kH	Resistant to temperature fluctuations from -60 °C to +60 °C	lon water, acid solutions to ISO 105-G04:1989		











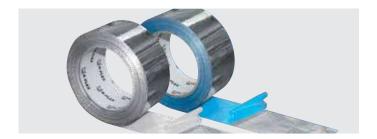
#### K-FLEX® TAPES

► The difference is in the details



# K-FLEX® ALU AA CW TAPE

### **Aluminum Foil Tape**



High tensile strength aluminum foil, combined with cold weather solvent acrylic adhesive, protected by an easy-release silicone release paper or silicone coated blue polyethylene liner. Cold Weather version (low temperatures).

#### **MEASUREMENTS**

Thicknesses: 25 - 30 - 40 Micron

Length: 50 m

Widths: 50 - 75 - 100 mm

#### **FEATURES**

- Aluminum foil provides excellent reflection of both heat and light.
- High quality adhesive with strong adhesion offers a permanent seal and bond on Foil-Scrim-Kraft Facing joints and seams in HVAC ductwork applications.
- ▶ Good resistance to aging, both indoors and outdoors.
- Low moisture vapor transmission rate offers excellent performance.

#### APPLICATIONS

HVAC industry for joining and sealing Foil-Scrim-Kraft Facing laminated ductwrap / duct board joints and seams; joining and sealing flexible air duct seams and connections. General purpose holding, patching, sealing and masking applications – indoors and outdoors.

#### STORAGE & SHELF LIFE

12 months when stored at 21°C (70°F) / 50% relative humidity out of direct sunlight.

#### SURFACE PREPARATION

It is essential, as with all pressure-sensitive tapes, that the surface to which the tape is applied must be clean, dry, free of grease, oil or other contaminants.

#### PRODUCT USE

It is essential that the user evaluate the products to determine whether it is fit for a particular purpose and user's method of application. Good results will be obtained when applied to a clean, dry surface with a suitable pressure on products between +10  $\sim$  +40°C (+50  $\sim$  +105 °F).

K-FLEX® ALU AA CW	TAPE > TECHNICAL DA	TA		
	K-FLEX® ALU	K-FLEX® ALU	K-FLEX® ALU → AA 140 CW →	▼ Test method ▼
Backing thickness	25 Micron	30 Micron	40 Micron	PSTC-133 / ASTM D 3652
Total thickness	60 Micron	70 Micron	80 Micron	PSTC-133 / ASTM D 3652
Adhesion to steel	15 N/25mm	15 N/25mm	15 N/25mm	PSTC-101 / ASTM D 3330
Rolling ball tack test	5 cm	5 cm	5 cm	PSTC-6 / ASTM D 3121
Tensile strength	40 N/25mm	40 N/25mm	40 N/25mm	PSTC-131 / ASTM D 3759
Elongation to break	3.0 %	3.0 %	3.0 %	PSTC-131 / ASTM D 3759
Service temperature	-35 ~ +120 °C	-35 ~ +120 °C	-35 ~ +120 °C	

The physical properties of the products shown above are obtained from test methods defined by Technical Standards Authorities, Quality Assurance and Technical Service Departments and do not represent a guarantee of product performance. Individual tapes may vary from these parameters and in all applications the end user should determine whether the product is fit for a particular purpose and is suitable for the user's method of application before use.

K-FLEX® reserves the right to change data and technical requirements without notice.



# K-FLEX® ALU AR CW TAPE

### **Foil-Scrim Tape**

Foil-Scrim backing, combined with cold weather solvent acrylic adhesive, protected by an easy-release silicone release paper. Cold Weather version (low temperatures).

#### **MEASUREMENTS**

Thicknesses: 43 - 50 Micron

Length: 50 m

Widths: 50 - 75 - 100 mm

#### **FEATURES**

- Foil-Scrim provides excellent reflection of both heat and light.
- High quality adhesive with strong adhesion and holding power offers reliable and durable Foil-Scrim Facing for joints and seams sealing in HVAC and ductwork applications.
- Low moisture vapor transmission rate makes K-FLEX® ALU AR 107 an excellent vapor barrier.
- Service Temperature range from -30 ~ +120 °C (-22~ +248 °F).

#### **APPLICATIONS**

HVAC industry for joining and sealing Foil-Scrim Facing laminated blankets / duct board / pipe section joints and seams; joining and sealing flexible air duct seams and connections. May also be used for other industrial uses requiring a tape with these characteristics and benefits.

#### STORAGE & SHELF LIFE

12 months when stored at 21°C (70°F) / 50% relative humidity out of direct sunlight

#### SURFACE PREPARATION

It is essential, as with all pressure-sensitive tapes, that the surface to which the tape is applied must be clean, dry, free of grease, oil or other contaminants.

#### PRODUCT USE

It is essential that the user evaluate the products to determine whether it is fit for a particular purpose and user's method of application. Good results will be obtained when applied to a clean, dry surface with a suitable pressure on products between +10  $\sim$  +40°C (+50  $\sim$  +105 °F).

K-FLEX® ALU AR CW TAPE > TECHNICAL DATA						
	K-FLEX® ALU	K-FLEX® ALU  → AR 107 PLUS CW TAPE →	▼ Test method ▼			
Backing thickness	43 Micron	50 Micron	PSTC-133 / ASTM D 3652			
Total thickness	83 Micron	90 Micron	PSTC-133 / ASTM D 3652			
Adhesion to steel	15 N/25mm	15 N/25mm	PSTC-101 / ASTM D 3330			
Rolling ball tack test	5 cm	5 cm	PSTC-6 / ASTM D 3121			
Tensile strength	100 N/25mm	120 N/25mm	PSTC-131 / ASTM D 3759			
Elongation to break	3.0%	3.0%	PSTC-131 / ASTM D 3759			
Service temperature	-30 ~ +120 °C	-30 ~ +120 °C				

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K-FLEX® reserves the right to change data and technical requirements without notice.

# K-FLEX® ALU BLACK CW TAPE Coloured Aluminum Foil Tape



Black or white lacquered 30 micron (1.2 mil) aluminum foil, combined with cold weather solvent acrylic adhesive, protected by an easy-release silicone release paper or silicone coated blue polyethylene liner. Cold Weather version (low temperatures).

#### **MEASUREMENTS**

Thickness: 30 Micron

Length: 50 m Width: 50 mm

#### **FEATURES**

- Lacquered aluminum foil.
- ▶ Good aging resistance, both indoors and outdoors.
- Low moisture vapor transmission rate offers excellent sealing and patching performance.

#### **APPLICATIONS**

HVAC industry for joining and sealing black lacquered Foil-Scrim-Kraft Facing laminated ductwrap / duct board / pipe insulation's joints and seams. May also be used for other industrial uses requiring a tape with these characteristics and benefits.

#### STORAGE & SHELF LIFE

12 months when stored at 21°C (70°F) / 50% relative humidity out of direct sunlight.

#### SURFACE PREPARATION

It is essential, as with all pressure-sensitive tapes, that the surface to which the tape is applied must be clean, dry, free of grease, oil or other contaminants.

#### **PRODUCT USE**

It is essential that the user evaluate the products to determine whether it is fit for a particular purpose and user's method of application. Good results will be obtained when applied to a clean, dry surface with a suitable pressure on products between +10  $\sim$  +40°C (+50  $\sim$  +105 °F).

K-FLEX® ALU BLACK CW TAPE > TECHNICAL DATA					
→ Property →	→ Value →	▼ Test method ▼			
Backing thickness	30 Microns	PSTC-133 / ASTM D 3652			
Total thickness	70 Microns	PSTC-133 / ASTM D 3652			
Adhesion to steel	15 N/25mm	PSTC-101 / ASTM D 3330			
Rolling ball tack test	5 cm	PSTC-6 / ASTM D 3121			
Tensile strength	45 N/25mm	PSTC-131 / ASTM D 3759			
Elongation to break	3.0 %	PSTC-131 / ASTM D 3759			
Service temperature	-35 ∼ +120 °C				

The physical properties of the products shown above are obtained from test methods defined by Technical Standards Authorities, Quality Assurance and Technical Service Departments and do not represent a guarantee of product performance. Individual tapes may vary from these parameters and in all applications the end user should determine whether the product is fit for a particular purpose and is suitable for the user's method of application before use. Available also in ALU WHITE version.

K-FLEX® reserves the right to change data and technical requirements without notice.



# K-FLEX® CLOTH DUCT TAPE



High Quality PE Duct Tape, adopts high grade fabric cloth with color polyethylene covering, coats improved synthetic rubberresin adhesive coated. It enjoys fast stick, straight and smooth tear, good tensile strength, excellent moisture resistant. It conforms well to irregular surface. It is a good choice for bundling, heavy carton packing, general maintenance, pipe wrapping, carpet fixing, airconditioning duct's seam and joint sealing etc.

#### **MEASUREMENTS**

Thicknesses: 160 - 180 Micron

Length: 50 m

Widths: 50 - 75 - 100 mm

#### STORAGE & SHELF LIFE

12 months when stored at 21°C (70°F) / 50% relative humidity out of direct sunlight.

#### PRODUCT USE

It is essential that the user evaluate the products to determine whether it is fit for a particular purpose and user's method of application. Good results will be obtained when applied to a clean, dry surface with a suitable pressure on products between +10  $\sim$  +40°C (+50  $\sim$  +105 °F).

K-FLEX® CLOTH DUCT TAPE > TECHNICAL DATA							
▼ Property ▼	K-FLEX®  ▼ CLOTH DUCT 1604H ▼	K-FLEX® ▼ CLOTH DUCT 1804H ▼	K-FLEX® ▼ CLOTH DUCT 1805H ▼				
Mesh	35	35	35				
Colour	Grey, Blue, Red	Grey, Black	Grey				
Thickness	160 Microns	180 Microns	180 Microns				
Adhesion	16 N/25mm	18 N/25mm	18 N/25mm				
Tensile	75 N/25mm	80 N/25mm	85 N/25mm				
Elongation to break	12 %	12 %	12 %				
Service temperature	-20 ~ +60 °C	-20 ~ +60 °C	-20 ~ +60 °C				

The physical properties of the products shown above are obtained from test methods defined by Technical Standards Authorities, Quality Assurance and Technical Service Departments and do not represent a guarantee of product performance. Individual tapes may vary from these parameters and in all applications the end user should determine whether the product is fit for a particular purpose and is suitable for the user's method of application before use.

K-FLEX® reserves the right to change data and technical requirements without notice.









#### K-FLEX® ACCESSORIES

▶ Complete range of solution for the installers



# K-FLEX® GUTTAGENA PVC BAND



Twice the thickness compared to the previous range, it is ideal for finishing PVC sheet insulation coverings (eg. K-FLEX® PACK RS 590). The GUTTAGENA band is available in one colour, light grey, and is matt finished.

#### **MEASUREMENTS**

Thicknesses: 0,2 mm Lengths: 50 m Widths: 5 - 10 cm

### **K-FLEX® VINYL BAND**



Flexible, robust and resistant to external agents, used for covering pipes insulated with elastomeric insulation or other materials. The small roll sizes allow for applications even in tight and narrow spaces. The wide range of colours available allows for a correct colour-coding of pipes, in compliance with the law.

#### **COLOURS**

red green blue grey (K-Pack RS 590 type) light grey black

#### **MEASUREMENTS**

Thicknesses: 0,1 mm Lengths: 50 - 25 m Width: 10 cm



# K-FLEX® PVC 200 TYPE W ELBOWS



90° single-piece elbows in laminated plastic. Apart from enhancing the overall appearance of the insulated part, they increase protection against impact.

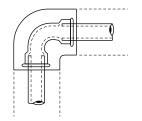
#### **APPLICATION**

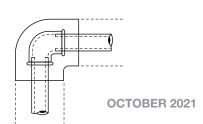
After having taken the measurements and having chosen the suitable type of elbow, place it onto the part to be covered. The internal borders should overlap to allow for fastening with the appropriate plastic rivets (see the section "components: fixing products").

#### **MEASUREMENTS**

Thicknesses mm: 20, 25, 30, 40, 50, 70, 80, 90

Tube diameters mm: from 17 to 114; inches: from 3/8" to 4".







### **K-FLEX® PACK RS 590**



A rigid PVC self-rolling sheet with a smooth grey surface. The sheet adheres perfectly to all cylindrical pre-insulated surfaces. Light and easy to use, this non-drip self-extinguishing product protects the insulation as well as enhancing overall external appearance. To maintain the product features intact, in the winter season the rolls should be stocked at room temperature for 24 hours prior to their use.

#### **USE**

It is used as a protective covering and to enhance the external appearance of large and small cylindrical pipes insulated with elastomeric material, glass wool mats, rock wool mats, polyurethane and polystyrene pipe coverings.

#### **APPLICATION**

- Measure and cut a section of the PVC sheet based on the circumference of the insulation, leaving an excess of a few centimeters for overlapping the joining edges.
- Wrap the sheet around the insulation
- ▶ Seal the borders with plastic rivets (see reference in the section "components: fixing products").

K-FLEX® PACK RS 590 ▶ TECHNICAL DATA					
▼ Property ▼	Value ▼				
Base	Rigid PVC				
Colour	Standard light grey				
Packaging	Rolls				
Sheet thickness	0,30 mm ÷ 0,35 mm				
Temperature range	from -25 °C to +70 °C				
Thermal conductivity $\boldsymbol{\lambda}$	0,16 W/(m•K)				
Permeability to vapour $\mu$	1,0 gm2 24h Pa				
K-FLEX® reserves the right to change data and technical requirements without notice.					

# K-FLEX® PVC TYPE SE 90° ELBOWS



90° single-piece elbows in laminated plastic.

Apart from enhancing the overall appearance of the insulated part, they increase protection against impact.

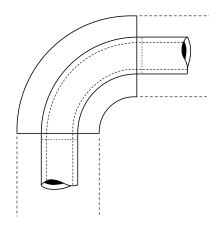
#### **APPLICATION**

After having taken the measurements and having chosen the suitable type of elbow, place it onto the part to be covered. The internal borders should overlap to allow for fastening with the appropriate plastic rivets (see the section "components: fixing products").

#### **MEASUREMENTS**

Thicknesses mm: 20, 25, 30, 40, 50, 70, 80, 90

Tube diameters mm: from 17 to 114; inches: from 3/8" to 4"



### **K-FLEX® PVC TYPE T**



Laminated plastic PVC singlepiece T sections.

Ideal for protecting insulated pipes of medium and large diameters.

#### **APPLICATION**

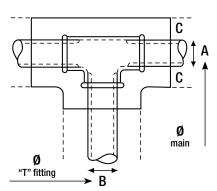
The external diameter of the PVC T section also includes the thickness of the insulation.

E.g.: to cover a pipe with a 76 mm Ø

(A-B), and a 32 mm thick insulation (C), a 140 x 140 type should be ordered.

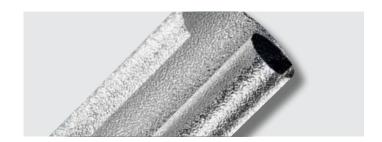
#### **MEASUREMENTS**

External diameter (main./branch.) mm: from 52/52 to 245/245 from 67/61 to 108/61 from 108/67 to 245/218





## K-FLEX® ALU EMBOSSED R 200



Self-wrapping embossed protection sheet in rolls of 99.5% pure aluminium. Sheet thickness 0.1 and 0.2 mm Supplied in 1 m wide rolls

#### **PROPERTIES**

The product grips perfectly to all cylidrical pre-insulated surfaces, it is light, easy to handle, protects the insulation and enhances the overall appearance. It is incombustible.

#### **POSSIBILITIES OF USE**

Used as a protective covering, it also improves the overall appearance of small and large cylindrical pipes insulated with elastomeric, fibre-glass mattresses, mineral wool, polyeurothane and polystyrene.

#### **APPLICATION**

If not already pre-cut, cut the sheet to the required circumference. Wrap the sheet around the insulation, seal the longitudinal edges with adhesive foil tape and plastic rivets.

# K-FLEX® BLECH MT-CU



99.5% PURE ALUMINIUM SHELL and 90° ELBOWS with a thickness ranging from 0,6 and 0,8.

MT 500: male and female ball swaged edges calendered tube, with reinforced length-wise drilled sealing system.

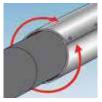
Length: 1000mm

CU 501: 90° preformed segmented elbows with female-female ball swaged edges.

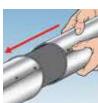
#### **APPLICATION ON TUBES**

- The MT 500 tube diameter is slightly greater than that of the corresponding CU 501 elbow, which makes the connection between the two parts much easier.
- The edges of the joints are fixed together by using the short screws in the holes provided.









#### **APPLICATION OF CU501 ELBOWS**

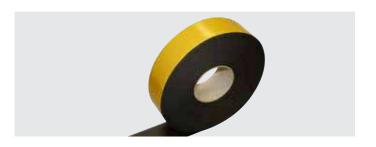
- Open the segments of the elbow and place them around the insulated pipe.
- After the sections have been correctly positioned, seal the elbow with short screws using the holes provided.
- Connect the MT 500 tube by attaching male edge to female edge.







# K-FLEX® ST ANTICONDENSATION TAPE



Highly flexible closed cell elastomeric foam (FEF) suitable for hot and cold thermal insulation, featuring a combination of low thermal conductivity, high water vapour diffusion resistance and low flame spread.

#### **MEASUREMENTS**

Thickness: 3 mm Lengths:10 - 15 m

Heights: 15 - 25 - 30 - 50 - 75 - 100 mm

#### **APPLICATIONS**

Pipes, ducts, tanks, applied for refrigeration, air conditioning, heating and plumbing, pipe fittings and water ducts, industrial applications for energy saving and/or condensation prevention purposes.

K-FLEX® ST ANTICOND	ENSATIO	N TAP	E > TEC	HNICA	L DATA						1
Property										▼ Test method ▼	
Maximum service temperature	+85°C										
Minimum service temperature	-40°C										
Permeability	µ ≥ 7 000	0									EN 12086
Water absorption	<0.1 %	<0.1 %								EN 13472	
Leachable chlorides		<500 ppm When tested in line with DIN1988/7, Leachable chlorides <0.05%								EN 13468	
Ph	Neutral (	Neutral (7)								EN 13468	
Fire rating	Euroclass	Euroclass B- s2, d0								EN 13501	
Dimensional tolerances	as for EN	14304									
Ecological data	Without (	Without CFCs and HCFCs									
Medium temperature	-30°C	-20°C	-10°C	0°C	+10°C	+20°C	+30°C	+40°C	+50°C	+70°C	
Thermal conductivity [W/(m °K)]	0.030	0.031	0.032	0.033	0.034	0.035	0.036	0.037	0.038	0.042	EN12667
K-FLEX® reserves the right to change data	and technical	requirements	without notic	ce.							



# K-FLEX® SOLAR HT TAPE



Flexible closed cell elastomeric foam (EPDM) suitable for hot thermal insulation, specially designed to suit highed temperature sapplications.

#### **MEASUREMENTS**

Thickness: 3 mm Length:15 m Height: 50 mm

#### **APPLICATIONS**

Ducts and pipes, specially designed for solar systems and high temperatures.

K-FLEX® SOLAR HT TAF	E TEC	HNICAL	DATA							
Property						•				▼ Test method ▼
Maximum service temperature	+85°C									
Minimum service temperature	-40°C									
Permeability	NPD									EN 12086
Water absorption	<0.1 %	0.1 %								EN 13472
Leachable chlorides		<500 ppm When tested in line with DIN1988/7, Leachable chlorides <0.05%							EN 13468	
Ph	Neutral (7	Neutral (7)								EN 13468
Fire rating	Euroclass	E								EN 13501
Dimensional tolerances	as for EN	14304								
Ecological data	Without C	FCs and HC	FCs							
Medium temperature	-30°C	-20°C	-10°C	0°C	+10°C	+20°C	+30°C	+40°C	+50°C	
Thermal conductivity [W/(m °K)]	0.037	0.038	0.039	0.040	0.041	0.042	0.043	0.044	0.044	EN12667
K-FLEX® reserves the right to change data	and technical r	equirements v	vithout notice.							

# K-FLEX® ECO ANTICONDENSATION TAPE



Highly flexible closed cell elastomeric foam (FEF) suitable for hot and cold thermal insulation, free from halogenated flame retarders and halogenated ingredients, featuring a low toxicity in case of fire.

#### **MEASUREMENTS**

Thickness: 3 mm Length:15 m Height: 50 mm

#### **APPLICATIONS**

Pipes, ducts, tanks, applied for refrigeration, air conditioning, heating and plumbing, pipe fittings and water ducts, industrial applications for energy saving and/or condensation prevention purposes.

K-FLEX® ECO ANTICON	DENSATI	ON TAI	PE > TE	CHNIC	AL DAT	Ά					
Property		▼ Value ▼							▼ Test method ▼		
Maximum service temperature	+85°C										
Minimum service temperature	-40°C										
Permeability	$\mu \geq 3~00$	0									EN 12086
Water absorption	<0.1 %	<0.1 %								EN 13472	
Leachable chlorides		<500 ppm When tested in line with DIN1988/7, Leachable chlorides <0.05%							EN 13468		
Ph	Neutral (	Neutral (7)							EN 13468		
Fire rating	Euroclas	Euroclass E								EN 13501	
Dimensional tolerances	as for EN	114304									
Ecological data	Halogen	free, PVC,	CFC, HCFC	e Formald	leide						
Medium temperature	-30°C	-20°C	-10°C	0°C	+10°C	+20°C	+30°C	+40°C	+50°C	+70°C	
Thermal conductivity [W/(m °K)]	0.035	0.036	0.037	0.038	0.039	0.040	0.041	0.042	0.043	0.044	EN12667
K-FLEX® reserves the right to change data	and technical re	equirements	without notic	e.							



# K-FLEX® COLOR ANTICONDENSATION TAPE



Highly flexible closed cell elastomeric foam (FEF) protected by a layer of specially designed acrylic paint available in different colours.

#### **MEASUREMENTS**

Thicknesses: 3 - 6 mm Lengths:7,5 - 15 m Heights: 50 - 100 mm

#### **APPLICATIONS**

Pipes, ducts, tanks, applied for air conditioning, heating and plumbing, fittings and accessories.

K-FLEX® COLOR TAPE > TECHNICAL DATA						
■ UV stability	→ Value →	▼ Test method ▼				
Weatherometer	> 2000 Hours	DIN 53231				
Desert exposure	> 2 Anni	ASTM G 7-97				
Total weight approx.	50 g/m²	EN 12086				
Thickness	45 μ					
Fire rating with K-FLEX® ST	Euroclass C-s3, d0					
Fire rating with K-FLEX® ECO	Euroclass E					
Fire rating with K-FLEX® SOLAR HT	Euroclass E					
K-FLEX® reserves the right to change data and technical requirem	ents without notice.					

#### **COLOR RANGE**

RAL 7035 grey - Colour code **G0**RAL 9002 white - Colour code **G1**RAL 9011 black - Colour code **N0**RAL 5012 blue - Colour code **B0**RAL 6032 green - Colour code **V0**RAL 3000 red - Colour code **R0** 

# K-FLEX® BITUMINOUS CONGLOMERATE TAPE



This product was formulated to provide insulation and to prevent condensation on pipes, fittings, and tubings used in heating, air conditioning, refrigeration, and plumbing.

#### **MEASUREMENTS**

Thickness: 3 mm Lengths:9 - 15 m Height: 50 mm

#### COMPOSITION

This product is a polymer-based material containing butyl rubber, asphalt, and granulated cork (55% by volume). It contains no fibers.

#### **DETAILS**

This product adheres to most clean, dry surfaces and to itself, making it possible to apply more than one layer without adding fasteners or adhesives. It is sufficiently soft and pliable to be molded around most fittings and connections. The material retains its flexibility and adhesion after prolonged exposure to UV and over a service temperature range of – 20 °F to 190 °F (-29 °C to 88 °C). It is black in colour and has a grainy, rubber-like consistency.

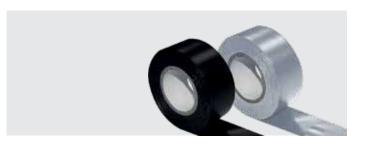
#### STORAGE & SHELF LIFE

Indefinite if stored under normal warehouse conditions.

K-FLEX® BITUMINOUS CONGLOMERATE TAPE > TECHNICAL DATA					
	▼ Value ▼	▼ Test method ▼			
Composition	Select grades of ground virgin cork and synthetic elastomeric materials.				
Colour	Black	ASTM D1729			
Odour	Imparts no odor, can be used without danger of contamination.				
Service Temperature	from -30°C to +100°C				
% Solids	>99% by weight	ASTM C771			
Specific Weight	$0.99 \pm 0.05 \text{ g/cm}3$	ASTM D297			
Tensile Yield	2,688 bar	ASTM C907			
Elongation to break	>2 inches	TP-019			
K-FLEX® reserves the right to change data and technical requirement	nts without notice.				



# K-FLEX® PVC AT 070 SELF-ADHESIVE TAPE



A thin premium grade plasticized PVC film coated with an aggressive rubber based adhesive with good characteristics. It is highly conformable and unaffected by most chemicals and moisture. Meet ROHS, REACH requirement. It does not contain substances harmful to human body, such as lead and cadmium.

#### **MEASUREMENTS**

Length: 25 m

Heights: 25 - 38 - 50 mm

#### **APPLICATIONS**

- ▶ Electric insulation below 600V
- Insulating wrapping of electric wires and cables
- Marking of electric wires and cables
- Can be used indoor and outdoor

Property		▼ Test method ▼
otal thickness	0.10 mm	ASTM-D-1000
Tensile strength	20 N/cm	ASTM-D-1000
Elongation to break	200%	ASTM-D-1000
Adhesion Strength: to steel to backing	1,5 N/cm 1,5 N/cm	ASTM-D-1000 ASTM-D-1000
Voltage resistance	600 V	UL510
Temperature resistance	80 °C	ASTM-D-1000
Flame resistance	<2 s	ASTM-D-1000
Content of Heavy Metal: Lead, Cadmium Mercury, Chromium Polybrominated biphenyl	<30 ppm <10 ppm <10 ppm	US EPA3052 US EPA3060A US EPA3540C

### **K-FLEX® BUTYL TAPE**



K-FLEX® Butyl Tape is a self-adhesive sealing tape consisting of a high-performance butyl rubber adhesive compound, protected by a reinforced aluminium film. K-FLEX® Butyl Tape is highly adhesive, even at low temperatures, to all common building materials. K-FLEX® Butyl Tape is highly resistant to ageing and UVrays. K-FLEX® Butyl Tape is available in various sizes for multipurpose applications.

#### **MEASUREMENTS**

Length:10 m

Heights: 50 - 100 mm

#### **FEATURES**

- Tear-resistant
- Cold applied
- Excellent adhesion at low temperatures
- Waterproof and self-sealing
- Excellent heat stability
- Resistant to ageing and to UV-rays
- No oil migration
- Solvent-free

#### **APPLICATIONS**

Choose the most suitable width and metal finish of the sealing tape. Unroll the tape until the desired length is reached. Start removing the release liner that covers the adhesive part of the tape and position the sealing tape. Carry out a rollpressing to avoid entrapment of air bubbles. When connecting two tapes, use an overlap of at least 5 cm. Press with a roller or a cloth pad.

#### STORAGE & SHELF LIFE

The quality and the characteristics of the materials remain unaltered for a long period of time. However, it is recommended to use the product within 12 months from production date. The product must be stored in the original and unopened packaging in a dry and well ventilated place at a temperature between + 5 °C and + 40 °C. Storage above 50 °C may lead to difficulties in removing the release liner when applying. The product is not affected by frost.

#### SURFACE PREPARATION

The sealing tape must be applied to a clean, dry, smooth and dust-free surface. For an application between 0 °C and 5 °C, ensure that frost or condensation are absent on the surface. In case of porous supports it's advisable to stabilize the surface. No special tools are required to install this sealing tape.

#### **PRODUCT USE**

Sealing and joining materials such as glass, steel, Plexiglas, polycarbonate, wood, aluminium, PVC. K-FLEX® Butyl Tape can be used for the sealing of doors and windows frames, conservatories, gutters, piping and ducting. K-FLEX® Butyl Tape can also be applied in construction on canopies, roofs, chimneys and skylights.



Property	Value ▼	▼ Test method ▼
Film Type / Colour	Aluminium - PET	
Compound Type / Colour	Butyl Rubber Adhesive / Grey	
Standard Thicknesses	0.8 mm	
Tensile strength	Long. 185 N / 50 mm   Tras. 200 N / 50 mm	EN 12311-1
Elongation to break	Long. 10 %   Tras. 20 %	EN 12311-1
Solids	100%	
180° Peel Adhesion	20 N/cm	ASTM D 1000
Probe Tack	8.0 N	ASTM D 2979
Vertical Flow	0 mm	ISO 7390
Application Temperature Range	0 °C / + 40 °C	
Service Temperature Range	- 30 °C / + 90 °C	
Test Reports	Fire classification: E Factor of Resistance to the Diffusion of the Water Vapour: $\mu=2.720.000$ Total Volatile Organic Compound emissions (TVOC): $30~\mu g/m^3$	EN 13501-1 UNI EN 1931 ISO 16000-6

The manufacturer disclaims all liability for product use and applications. Butyl sealants are plastic products. They possess no elastic recovery. Do not use for permanent fixing or in load bearing applications instead of an adhesive or a mechanical fixing. Butyl adhesive are sensitive to solvents. It is advisable to check the chemical compatibility of the butyl adhesive with the substrate adhesives.

 $\mbox{K-FLEX}^{\tiny{\textcircled{\tiny{\$}}}}$  reserves the right to change data and technical requirements without notice.

# K-FLEX® PE INSULATION TRIMMING



Self-adhesive closed cell reticulated PE foam tape, used to cover the seal flange in air-conditioning ducts.

#### **MEASUREMENTS**

Thicknesses mm: 3 Length m: 20

Height mm: 15, 20, 25

# K-FLEX® ADHESIVE DISPENSER



A useful accessory that controls flow and helps spread adhesives evenly on insulation surfaces, avoiding having to continuously dip the brush into the tin of adhesive. The adhesive correctly diluted, is manually pumped through the brush.

# SPECIAL THINNER FOR K-FLEX® ADHESIVES

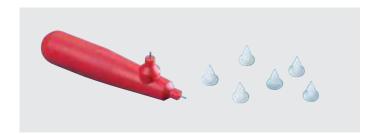


Before covering the surfaces to be insulated, it is advisable to clean them with the special K-FLEX® thinners which, thanks to its composition, is also suitable for use with K 414, K 420 or K 425 adhesives. Cleaning of all surfaces with the special K-FLEX® thinners also improves the performance of the adhesives. The special K-FLEX® thinners can be also used for cleaning brushes and spatulas used to spread the glue.

Available in 1 litre tins.



# K-FLEX® FASTENING PRODUCTS PLASTIC RIVETS, PUNCH AND K-FIX



Important for correctly fastening PVC and AL CLAD sheets. PLASTIC RIVETS: box of 100 WHITE and GREY rivets. PUNCH: straight/angular

K-FIX. Galvanized steel installation hangar spike with a 50x50 mm base. With adhesive and nonadhesive surface, with a 2,7 mm diameter stick pike, and a self-blocking 30 mm diameter disc.

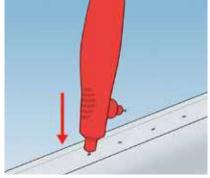
It can be applied to flat metal surfaces for fastening insulation material in sheet or roll form (mineral wool, polyethylene, etc.). Strongly recommended for air-conditioning ducts.

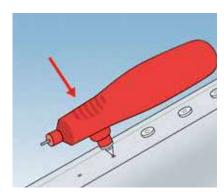
#### **TEMPERATURE RANGE**

min/max +10 °C/ +80 °C. Supplied in boxes of 100 pieces. Length of pins - from 19 to 114 mm.

#### **APPLICATIONS**

- Punch holes along the overlap of the sheet, going through both layers.
- Insert the plastic rivets in the holes, pressing them firmly into the insulation layer.





TYPE A: HORIZONTAL USE TYPE B:	INSULATION THICKNESS													
	20 MM		25/30 MM		35/40 MM		50 MM		60 MM		80 MM		100 MM	
VERTICAL USE	Type A	Type B	Type A	Type B	Type A	Type B	Type A	Type B	Type A	Type B	Type A	Type B	Type A	Type B
20 kg/m³	8	4	8	4	8	4	8	4	8	4	8	4	10	6
30 kg/m <sup>3</sup>	8	4	8	4	8	4	8	4	10	6	10	6	10	6
40 kg/m <sup>3</sup>	8	4	8	4	8	4	10	6	10	6	10	6	12	8
50 kg/m <sup>3</sup>	8	4	8	4	10	6	10	6	10	6	12	8	14	10
80 kg/m³	8	4	10	6	10	6	12	8	12	8	14	10	16	12
100 kg/m <sup>3</sup>	10	6	10	6	12	8	14	10	14	10	16	12	20	16

## **K-FLEX® ADHESIVE**



K-FLEX® K 414, K 420 and K 425 glues have been specifically designed for use with K-FLEX® elastomeric foam insulation material. The securely bonded surfaces and joints are resistant to ageing and atmospheric agents, and preserve the technical characteristics of the insulating material.

K 414 ADHESIVE in tins of: 0.5 - 0,8 - 2.6 litres K 420 ADHESIVE in tins of: 0.25 - 1 - 2.6 litres

K 425 ADHESIVE in tins of: 0.85 litre (complete with glue activator)

INDICATED CONSUMPTION OF 1 LITRE OF ADHESIVE					
▼ Tubes ▼	→ Glued to the heads →	→ Glued lengthways →			
Thickness 9 mm	every 1350 m	every 150 m			
Thickness 13 mm	every 500 m	every 100 m			
Thickness 19 mm	every 300 m	every 80 m			
Thickness 25 mm	every 220 m	every 60 m			
Thickness 32 mm	every 180 m	every 40 m			
Thickness 40 mm	every 139 m	every 27 m K-FLEA 420			
Sheet: 1 litres every 7m2 K-FLEX® does not accept responsability for different value.	ues to those indicated.	every 40 m  K-FLEX®  K 414 & K 420  Reaction to fire:  Class 0 BS476			
		Class 0 B341			

# K-FLEX® K-FINISH PAINT



K-FINISH is a water-based paint for coverings on internal and external installations insulated with K-FLEX® materials. With its polymerized acrilic base, it does not pollute and does not give off odours, and is particularly recommended for all indoor uses. Quick drying, it offers excellent protection. Coats of white paint, applied over a layer of K-FINISH will maintain their colour even in dark environments. The colours are resistant to light. It is advisable to paint the surface of externally insulated pipes to protect them againt harsh weather conditions and UV rays. For further protection it is advisable use a double layer of K-FINISH paint. Available in 2.5 litre tins, and on request, in various colours.



### **K-FLEX® COLOR PAINT**



Special paint for retouching the surfaces of COLOR coverings, scratched or damaged during installation. The paint, ready for use, should be applied with a soft brush.

Available in 0.5 litre tins.

#### **COLOR RANGE**

RAL 7035 grey

RAL 9002 white

RAL 9011 black

RAL 5012 blue

RAL 6032 green

RAL 3000 red

# K-FLEX® ALUMINIUM ENDCAPPING IN ROLLS



Special endcapping in ribbed aluminium for sealing the ends of insulated pipes. Available in the following colours: SILVER, LIGHT GREY, BLACK, BLUE and RED. Length of rolls - 10 m.

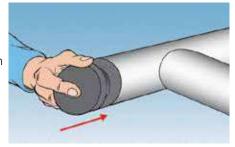
The different colours make it easier to identify the various pipes of a system.

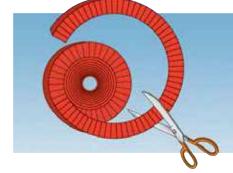
#### **MEASUREMENT**

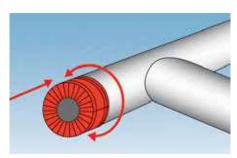
18x32, 23x32, 28x32, 38x42, 48x42,58x42 mm

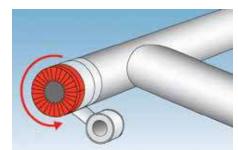
#### APPLICATION

- Place a cap of insulating material over the end of the pipe
- Cut a strip of the endcapping long enough to wrap around the circumference of the pipe covering
- Wrap the endcapping around the end of the insulated pipe and around the edges of the pipe covering
- Fix the endcapping to the pipe covering with the correct selfadhesive tape









## NEW FOR THE INSTALLER: K-FLEX® TOOLBOX!

K-FLEX® is pleased to introduce to its accessory range tool sets specifically tailored to each type of installation.

After extensive research, the K-FLEX® team has selected the best tools to support measurement, cutting and gluing ...everything necessary for the application of our insulating products!

#### MEASURING TOOLS:

In addition to the classic metal rolling meter and the wooden meter we have also selected a sturdy metal rule to facilitate linear cuts, a caliper and a compass suitable also for large diameter pipes and a cut-resistant template for the measurement and creation of elbows and T's.

#### **CUTTING TOOLS:**

In addition to the classic cutter with spare blades, we offer a set of knives of varying lengths complete with sharpening stone, a large mitrebox with grooves at 45°, 22.5° and 90° to facilitate the sectioning of the tube and a set of copper cores of various diameters to make the necessary holes to isolate valves, etc. All cutting tools are supplied with the correct blade guard or packaging specifically designed for transport, protection of the installer and of the product itself.

#### GLUING TOOLS:

We offer a K-FLEX® glue package specifically designed for our products to be used in conjunction with a set of flat brushes of different sizes or with the appropriate K-FLEX® applicator, as recommended in our installation manuals. There is also a special solvent-resistant container for cleaning brushes. In the toolbox you will find everything necessary for tracing onto our insulation products, a K-FLEX® installation manual and innovative multipurpose wipes for cleaning hands and tools, without using water. All our solutions, designed for the installer, are divided into practical sets for each installation: BASIC, MEDIUM and PREMIUM SET.

#### K-FLEX® TOOLBOX BASIC SET

- ▶ K-FLEX® Knife case
- > 3 Knives
- Sharpening stone
- Cutter + Spare blades
- Cutting template



### K-FLEX® TOOLBOX MEDIUM SET

- K-FLEX® Bag
- K-FLEX® Knife case
- > 3 Knives
- Sharpening stone
- Cutter + Spare blades
- Cutting template
- Mitre box
- Caliper
- Compass
- 2 Brushes
- Yellow marker
- Tape measure
- Metal ruler
- Nail punch





# K-FLEX® TOOL BOX **BASIC SET**



K-FLEX® ACCESSORIES > TOOL BOX - BASIC SET

▼ Description ▼ ▼ Dimension ▼ 

3 K-FLEX® knives with stainless steel blades chrome molybdenum vanadium: 1 knife with 10 cm blade, 1 knife with 20 cm blade and 1 knife with 36 cm blade. Semi rigid and anti-slip plastic handle, with blade guard.

#### **CUTTER + SPARE BLADES**

18 mm K-FLEX® Cutter + 1 box containing 10 spare blades.

SHARPENING STONE

Oval shaped tapered sharpening stone.

**CUTTING TEMPLATE** K-FLEX® A4 PVC cutting template 1 mm thick., 21x29,7cm.

# **K-FLEX® TOOL BOX MEDIUM SET**



850VRMK0001

53x27x7cm

62x30x25cm

K-FLEX® ACCESSORIES > TOOL BOX - MEDIUM SET

Description **▼** Dimension **▼** ▼ Code ▼

3 K-FLEX® knives with stainless steel blades chrome molybdenum vanadium: 1 knife with 10 cm blade, 1 knife with 20 cm

blade and 1 knife with 36 cm blade. Semi rigid and anti-slip plastic handle, with blade guard.

#### **CUTTER + SPARE BLADES**

18 mm K-FLEX® Cutter + 1 box containing 10 spare blades.

#### SHARPENING STONE

Oval shaped tapered sharpening stone.

#### **CUTTING TEMPLATE**

K-FLEX® A4 PVC cutting template 1 mm thick., 21x29,7cm. MITRE BOX

#### Stanley/K-FLEX® ABS Mitrebox, 230mm long x 95mm wide.

**BRUSHES** 

2 K-FLEX® brushes with yellow plastic handle, 3 cm and 7 cm wide

#### METAL RULER and TAPE MEASURE

K-FLEX® ABS 3m tape measure with imperial and metric measurements.

K-FLEX® 30cm aluminium ruler.

#### **CALIPER and COMPASS**

K-FLEX® 300mm outside metal caliper for measuring the external size. K-FLEX® carpenter's compass with a metal arc and binding screw for setting at the desired degree of opening

#### YELLOW MARKER

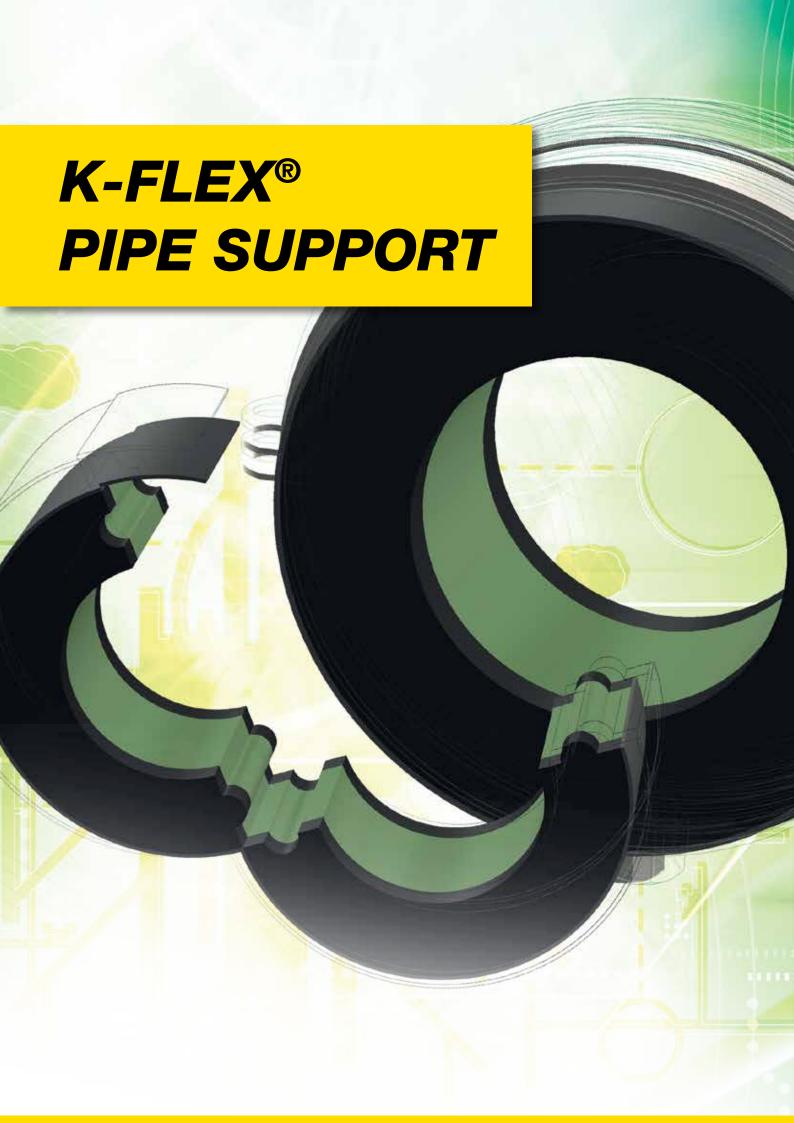
Marker Edding/K-FLEX®: waterproof yellow marker pen, quick-drying, low-odour, lightfast and durable.

K-FLEX® nail punch, straight/angular for the accurate fastening of PVC and K-FLEX® AL CLAD foil.

For stock availability, consult the relevant sales

office.

850VRMK0002









#### **K-FLEX® PIPE SUPPORT**

Fesearch has shown that uninsulated pipe fittings are still a common thermal bridge on insulated pipe systems. Their effect is often underestimated. A finite element method analysis (FEM) on an insulated pipe section has shown that approximately 50% of the heat loss for the entire considered section is due to the lack of use of pipe supports. It is so easy to avoid thermal bridges. The solution is called K-FLEX® pipe support.

# K-FLEX® PIPE SUPPORTS



Specifically designed to ensure a correct insulation thickness where joints are made. The PIR central section, which covers the whole circumference and is attached to two K-FLEX® insulating material sections, ensures a perfect continuity of the vapour barrier. Longitudinal sealing is obtained by means of the self-adhesive overlap. The external cover is in PVC. The support is also available with a collar and a special metal support which, when fixed to the supporting framework, ensures greater overall installation stability.

#### **MEASUREMENTS**

Thicknesses mm: 13, 19, 25, 32

Tube diameter mm: from 18 to 160; inches: from 3/4" to 5"

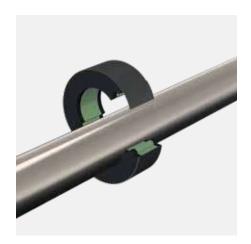
The insulating supports are also available in K-FLEX® ECO, SOLAR, AL CLAD, COLOR, in the same measurements as those indicated for K-FLEX® ST.

K-FLEX® PIPE SUPPORTS > TECHNICAL DATA	
▼ Property ▼	▼ Value ▼
Central section in PIR	Density 120 kg/m³
Compression resistance	1350 kPa
Temperature range	-45 °C +105 °C
Thermal conductivity $\boldsymbol{\lambda}$	0,036 W/(m•K) a 0 °C
Maximum stockage time	1 year
Colour	Black
Permeability to vapour	0,16 W/(m∙K)
Diam. and thickness tolerance	1,0 gm2 24h Pa
K-FLEX® reserves the right to change data and technical requirements without notice	

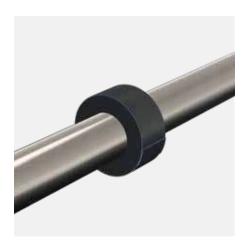


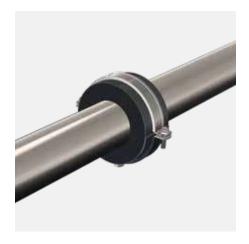
#### **APPLICATION**

- Place the insulating support around the pipe.
- Spread K-FLEX® adhesive onto the half-collars.
- Seal lengthways using the adhesive overlap.
- Fix the collar around the support.
- ▶ Glue the support to the insulating material.













#### CONTACT

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