



Kaiflex® EF

Economical insulation of cold and hot water pipes

- The standard for construction projects with high economic requirements
- Optimized range for all common piping and air ducts
- Reliably prevents condensation and reduces the risk of corrosion under the insulation
- Additional protection against micro-organisms and mould





Kaiflex® EF

Economical insulation of cold and hot water pipes

Kaiflex EF insulation material made of closed-cell rubber is ideally suited for technical insulation of cold and hot water pipes. Thanks to the uniform building material class B₁/B-s3, d0 and thermal conductivity of ≤ 0.036 (W/m·K) at 0 °C across all insulation thicknesses, Kaiflex EF can be used flexibly in small and large projects alike. The insulation material provides sustainable protection against energy losses and also minimises the risk of corrosion beneath the insulation due to a water vapour diffusion resistance of up to $\mu \geq 8,000$. Kaiflex EF effectively acts as a vapour barrier. This insulation material is an ideal and economical choice for builders who value energy efficiency and sound insulation, while not wanting to compromise on quality.

Wide range of applications

The product range is tailored to core applications and consists of sheets and tubes – sheets are also available in self-adhesive versions – and matching accessories such as Kaiflex EF Tape. This means that the elastomeric insulation material can be

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worked quickly and easily even in difficult installation situations. Versatile in use, it can be applied to various system sizes for insulating pipework and air ducts in highly frequented public and commercial buildings such as airports, large office complexes, and hotels, as well as in residential buildings and industrial plants.

Related system components and accessories from our product range



Special Adhesive, Tape, Tools,...
Accessories designed for the optimal and efficient application of Kaiflex products



Further information, technical documents, application guides, services and much more can be found online at

www.kaimann.com

Kaiflex EF

Technical Data

Material type base			Elastomeric foam based on synthetic rubber, Flexible Elastomeric Foam (FEF)	
Cell structure			Closed cell	
Colour			Anthracite	
Max. service temperature	Pipe Flat surface		+110 °C +85 °C	
Min. service temperature			-50 °C (-200 °C)	see remark (1)
Thermal conductivity	λ_d at -10 °C at 0 °C at +10 °C		$0.036 + 10^{-4} \vartheta + 2.7105 \cdot 10^{-20} \vartheta^2$ $\leq 0.035 \text{ W/(m·K)}$ $\leq 0.036 \text{ W/(m·K)}$ $\leq 0.037 \text{ W/(m·K)}$	Test acc. to DIN EN ISO 8497 Test acc. to DIN EN 12667
Water vapour permeability	Tube	Moisture resistance factor μ	$\geq 7,000$ no separate vapour barrier required	Test acc. to DIN EN 13469
	Sheet	Moisture resistance factor μ	$\geq 8,000$ no separate vapour barrier required	Test acc. to DIN EN 12086
Fire behaviour	Tube	Euroclass characteristics ⁽²⁾	B _L -s3, d0	Test acc. to DIN EN 13501-1
	Sheet	Euroclass characteristics ⁽²⁾	B-s3, d0 Self-extinguishing, no drips	Test acc. to DIN EN 13501-1
Resistance to	Corrosion		Satisfies requirements	In acc. with DIN 1988
Insulation material index number acc. to AGI	Tube		36.12.03.05.04	
	Sheet		36.07.03.05.04	
Health aspects			Fibre free: For high hygiene requirements Free from heavy metal (e.g. cadmium, lead) and formaldehyde	
Other properties	ph-Value		7	
Other certificates/ approvals			CE-compliant	
Storage	Self-adhesive products		The material must be installed within one year after delivery and proper storage. Store in a dry room at a typical relative humidity (between 50 % and 70 %) and room temperature (between 0 °C and +35 °C)	
Tolerances & limits			Satisfies requirements	Gemäß EN 14304:2009+A1:2013
Outdoor applications			Needs protection against UV-radiation	see remark (3)

Remark (1) For temperatures below -50 °C please contact our Technical Support Team for advice.

Remark (2) The Euroclass rating applies to metallic or solid mineral substrates.

Remark (3) To protect against UV-induced deterioration Kaiflex must be either painted using Kaifinish Color paint or covered with a suitable UV resistant cladding system within 1 day of being installed outdoors.

Kaiflex EF
 Tube

Colour: Anthracite · Length: 2 m

Copper pipe Cu		Iron & steel pipe Fe			9 mm Insulation thickness		
OD mm	Nom. width DN	Inch	OD mm	Nom. width DN	Dimension / Reference	Order No.	m/ carton
6.0	4				EF-T-2m-09x006	4000892	360
10.0	8	1/8	10.2	6	EF-T-2m-09x010	4000894	320
12.0	10		12.5		EF-T-2m-09x012	4000895	280
15.0	10	1/4	13.5	8	EF-T-2m-09x015	4000896	240
18.0	15	3/8	17.2	10	EF-T-2m-09x018	4000897	190
22.0	20	1/2	21.3	15	EF-T-2m-09x022	4000899	156
28.0	25	3/4	26.9	20	EF-T-2m-09x028	4000901	124
35.0	32	1	33.7	25	EF-T-2m-09x035	4000904	92
42.0	40	1 1/4	42.4	32	EF-T-2m-09x042	4000906	70
		1 1/2	48.3	40	EF-T-2m-09x048	4000908	60
54.0	50		54.0		EF-T-2m-09x054	4000909	60
		2	60.3	50	EF-T-2m-09x060	4000911	60
64.0			63.5		EF-T-2m-09x064	4000912	54
76.1	65	2 1/2	76.1	65	EF-T-2m-09x076	4000914	54
88.9	80	3	88.9	80	EF-T-2m-09x089	4000916	36

Copper pipe Cu		Iron & steel pipe Fe			13 mm Dämmschichtdicke		
OD mm	Nom. width DN	Inch	OD mm	Nom. width DN	Dimension / Reference	Order No.	m/ carton
6.0	4				EF-T-2m-13x006	4000924	240
10.0	8	1/8	10.2	6	EF-T-2m-13x010	4000926	190
12.0	10		12.5		EF-T-2m-13x012	4000927	172
15.0	10	1/4	13.5	8	EF-T-2m-13x015	4000928	154
18.0	15	3/8	17.2	10	EF-T-2m-13x018	4000929	130
22.0	20	1/2	21.3	15	EF-T-2m-13x022	4000931	110
28.0	25	3/4	26.9	20	EF-T-2m-13x028	4000933	86
35.0	32	1	33.7	25	EF-T-2m-13x035	4000936	76
42.0	40	1 1/4	42.4	32	EF-T-2m-13x042	4000938	56
		1 1/2	48.3	40	EF-T-2m-13x048	4000940	48
54.0	50		54.0		EF-T-2m-13x054	4000941	46
		2	60.3	50	EF-T-2m-13x060	4000943	40
64.0			63.5		EF-T-2m-13x064	4000944	40
76.1	65	2 1/2	76.1	65	EF-T-2m-13x076	4000947	34
88.9	80	3	88.9	80	EF-T-2m-13x089	4000949	30

Kaiflex EF
 Tube

Colour: Anthracite · Length: 2 m

Copper pipe Cu		Iron & steel pipe Fe			19 mm Insulation thickness		
OD mm	Nom. width DN	Inch	OD mm	Nom. width DN	Dimension / Reference	Order No.	m/ carton
6.0	4				EF-T-2m-19x006	4000958	126
10.0	8	1/8	10.2	6	EF-T-2m-19x010	4000959	106
12.0	10		12.5		EF-T-2m-19x012	4000960	100
15.0	10	1/4	13.5	8	EF-T-2m-19x015	4000961	86
18.0	15	3/8	17.2	10	EF-T-2m-19x018	4000962	78
22.0	20	1/2	21.3	15	EF-T-2m-19x022	4000964	74
28.0	25	3/4	26.9	20	EF-T-2m-19x028	4000966	58
35.0	32	1	33.7	25	EF-T-2m-19x035	4000969	48
42.0	40	1 1/4	42.4	32	EF-T-2m-19x042	4000970	40
		1 1/2	48.3	40	EF-T-2m-19x048	4000972	30
54.0	50		54.0		EF-T-2m-19x054	4000973	30
		2	60.3	50	EF-T-2m-19x060	4000975	28
64.0			63.5		EF-T-2m-19x064	4000976	28
76.1	65	2 1/2	76.1	65	EF-T-2m-19x076	4000979	28
88.9	80	3	88.9	80	EF-T-2m-19x089	4000981	22

Copper pipe Cu		Iron & steel pipe Fe			25 mm Insulation thickness		
OD mm	Nom. width DN	Inch	OD mm	Nom. width DN	Dimension / Reference	Order No.	m/ carton
12.0	10		12.5		EF-T-2m-25x012	4000991	60
15.0	10	1/4	13.5	8	EF-T-2m-25x015	4000992	60
18.0	15	3/8	17.2	10	EF-T-2m-25x018	4000993	50
22.0	20	1/2	21.3	15	EF-T-2m-25x022	4000995	42
28.0	25	3/4	26.9	20	EF-T-2m-25x028	4000997	40
35.0	32	1	33.7	25	EF-T-2m-25x035	4000999	32
42.0	40	1 1/4	42.4	32	EF-T-2m-25x042	4001000	24
		1 1/2	48.3	40	EF-T-2m-25x048	4001001	24
54.0	50		54.0		EF-T-2m-25x054	4001002	22
		2	60.3	50	EF-T-2m-25x060	4001003	22
64.0			63.5		EF-T-2m-25x064	4001004	18
76.1	65	2 1/2	76.1	65	EF-T-2m-25x076	4001006	18
88.9	80	3	88.9	80	EF-T-2m-25x089	4001008	14

Kaiflex EF

Sheet · endless



Colour: Anthracite · Width: 1 m · OD coil: 40 cm · in box

Insulation thickness mm	Dimension / Reference	Order No.	rm/ carton	m ² / carton
10	EF-Sh-e-1m-40BX-10	4005635	10	10
13	EF-Sh-e-1m-40BX-13	4006562	8	8
19	EF-Sh-e-1m-40BX-19	4005636	6	6
25	EF-Sh-e-1m-40BX-25	4005637	4	4

Kaiflex EF

Sheet · endless · self-adhesive






Colour: Anthracite · Width: 1 m · OD coil: 40 cm · in box

Insulation thickness mm	Dimension / Reference	Order No.	rm/ carton	m ² / carton
10	EF-Sh-e-1m-40BX-10-SA	4006563	10	10
13	EF-Sh-e-1m-40BX-13-SA	4005639	8	8
19	EF-Sh-e-1m-40BX-19-SA	4005640	6	6
25	EF-Sh-e-1m-40BX-25-SA	4005641	4	4






Accessories

Adhesive · Cleaner · Protective Coating

		Details	Dimension / Reference	Order No.	Container type	Content	Pcs./ PU
Adhesive							
	Kaiflex Special Adhesive 414	incl brush · toluene-free	Ad-414-CA220	4004706	Can	220 g	24
	Kaiflex Special Adhesive 414	toluene-free	Ad-414-CA660	4004708	Can	660 g	20
	Kaiflex Special Adhesive 414	toluene-free	Ad-414-CN2200	4004710	Canister	2200 g	6
Cleaner							
	Kaiflex Cleaner		Clean-CA1000	4004732	Can	1.0 l	12
Protective Coating							
	Kaifinish Color	Colour: White (approx. RAL 9010)	KF-Co-wh-CA750	4004719	Can	0.75 l	4
		Colour: Grey (approx. RAL 7035)	KF-Co-gr-CA750	4004720	Can	0.75 l	4


Accessories

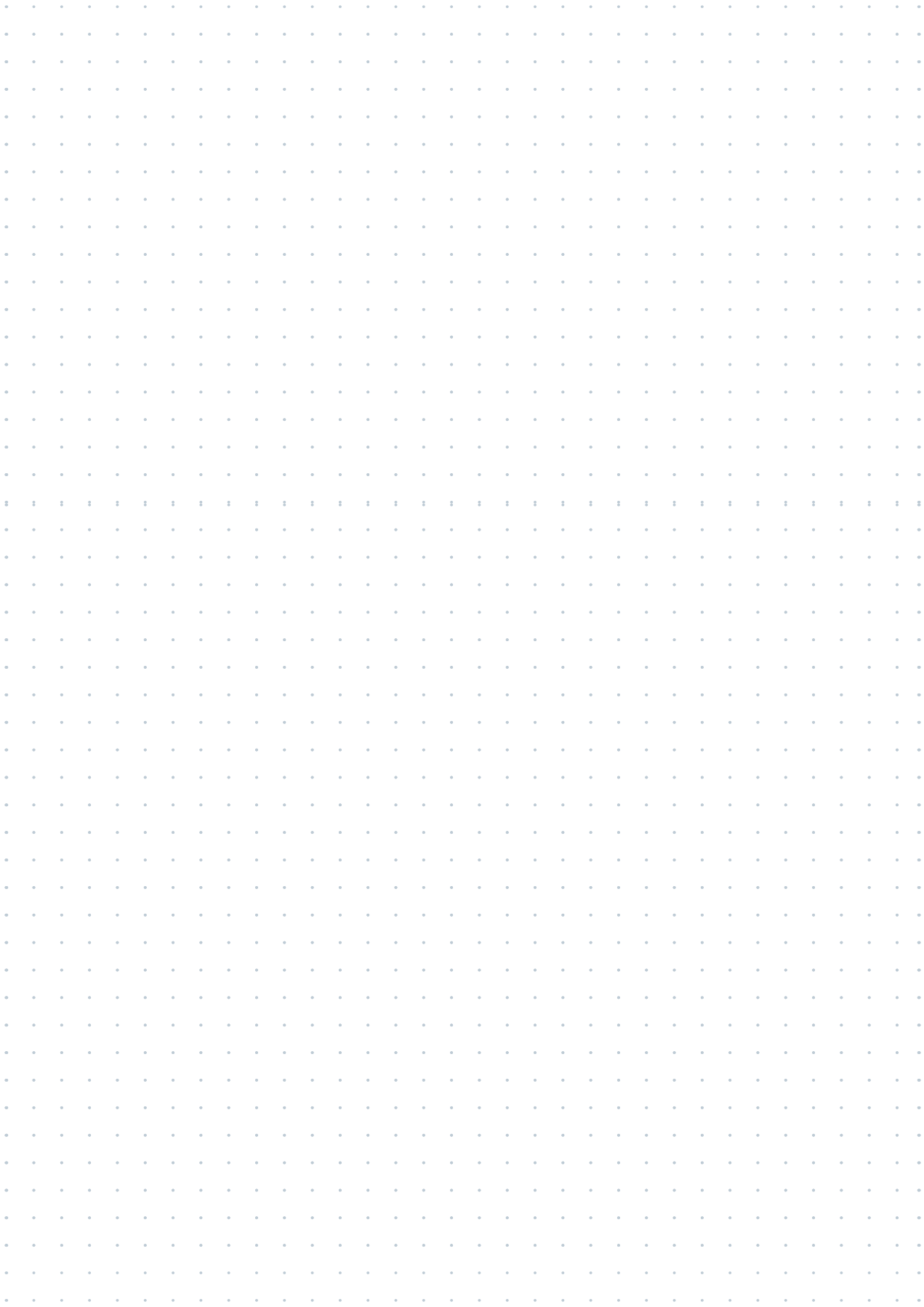
Glue pump · Knife · Gel ink pen

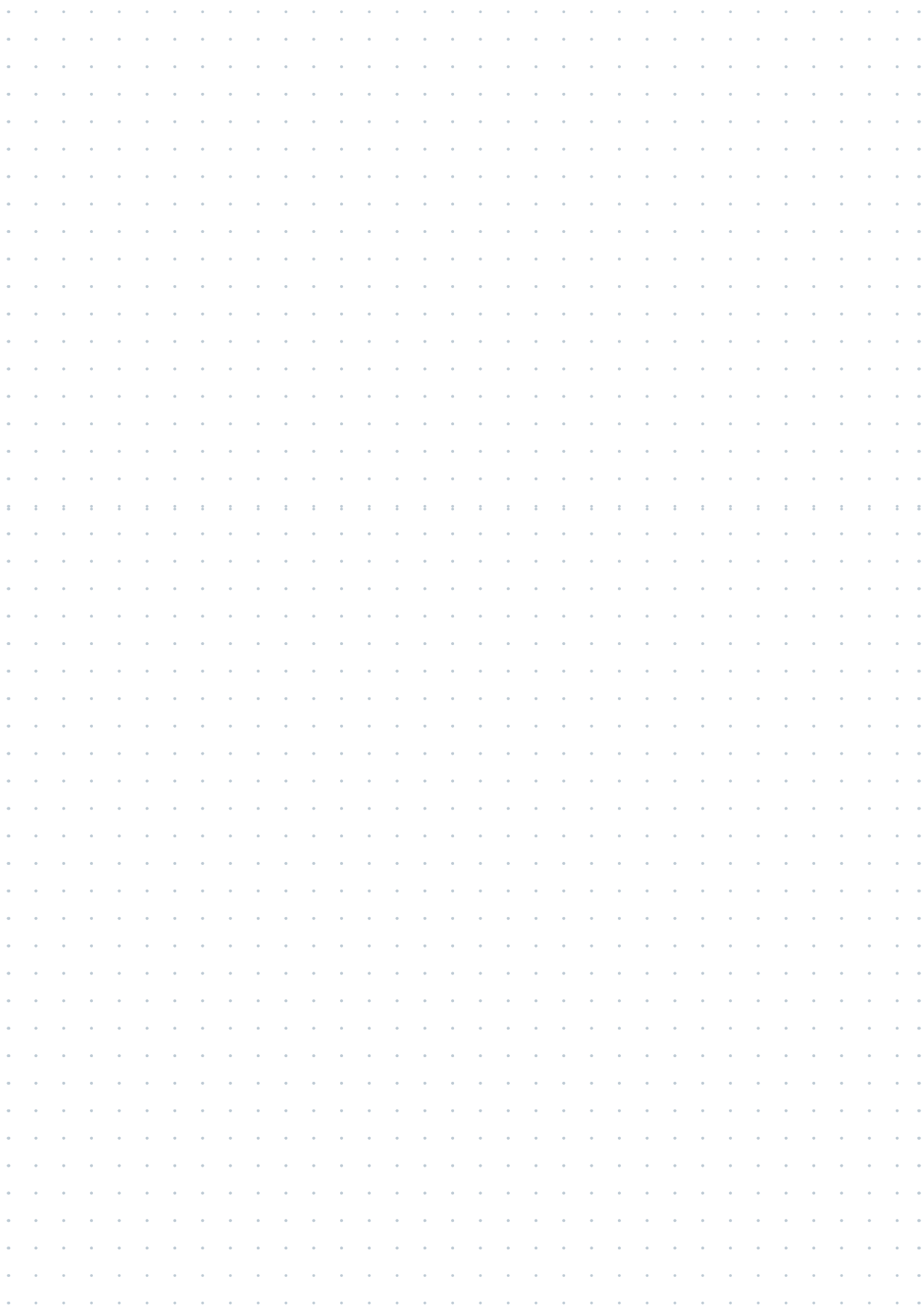
		Details	Dimension / Reference	Order No.	Pcs./ PU
Glue pump					
	Glue pump	long spout · 17 mm brush	GI-Pmp-long	4004718	1
	Glue pump	short spout · 17 mm brush	GI-Pmp-short	4004715	1
	11 mm brush	for glue pump	GI-Pmp-Brush-11	4004716	1
	17 mm brush	for glue pump	GI-Pmp-Brush-17	4004717	1
Knife					
	Ceramic knife	with ceramic blade (15 cm) and plastic handle (14 cm)	Knf-Ceramic	4004737	1
	Sheet knife		Knf-Sheet	4004735	1
	Set of knives	3 knives, 1 whetstone	Knf-Set	4004736	1
Gel ink pen					
	Gel ink pen	Colour: Silver · for marking on insulation materials	Gelpen	4004730	12

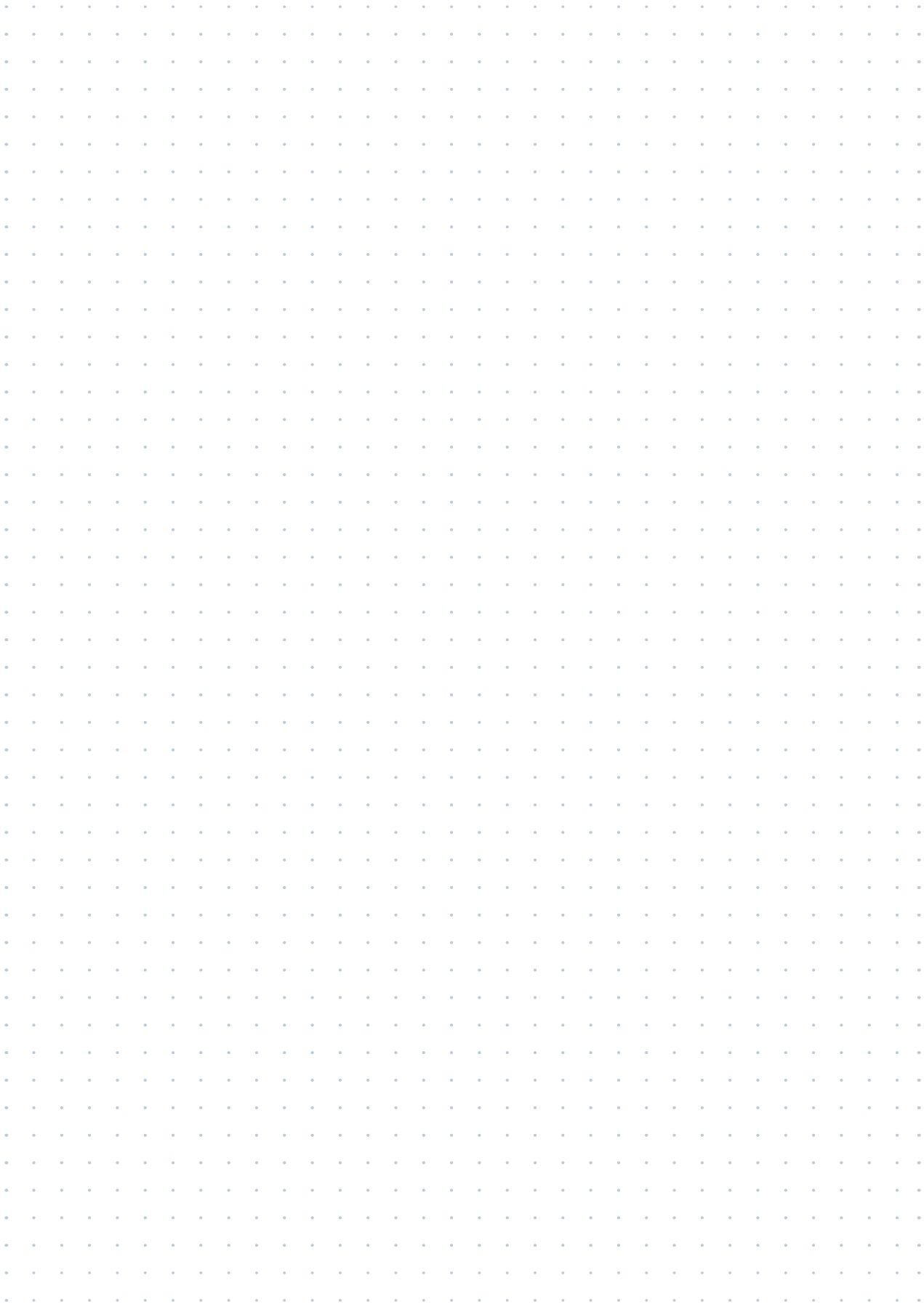
Accessories

Tape

		Details	Dimension / Reference	Order No.	Width mm	Length m	Thickness mm	Pcs./ PU
	Kaiflex EF Tape	self-adhesive	Tp-EF-50/15/3-SA	4004673	50	15	3	12







Tolerances, Limits

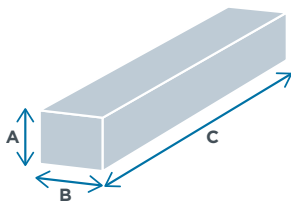
EN 14304:2009+A1:2013 · Flexible Elastomeric Foam (FEF)

Delivery form	Length	Width	Thickness		Perpendicularity	Inner diameter	
			Stated	Limits		$D_i \leq 100$	$D_i > 100$
Tube	±1.5 %	-	$d_p \leq 8$ $8 < d_p \leq 18$ $18 < d_p \leq 31$ $d_p > 31$	±1.0 ±1.5 ±2.5 ±3.0	3.0 mm	$D_{iD} + 1 \leq D_i \leq D_{iD} + 4$	$D_{iD} + 1 \leq D_i \leq D_{iD} + 6$
Sheet · endless	+5.0 % -1.5 %	±2.0 %	$d_p \leq 6$ $6 < d_p \leq 19$ $d_p > 19$	±1.0 ±1.5 ±2.0	3.0 mm/m (Length/Width) - 3.0 mm (Thickness)	-	-
Tape	+5.0 % -1.5 %	±2.0 %	$d_p = 3$	-0.1 +1.5	-	-	-

Measurements in mm · D_i = inner diameter · d_p = Nominal thickness of product · D_{iD} = Nominal thickness of a tube

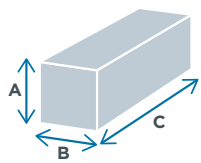
Kaiflex EF

Packaging types



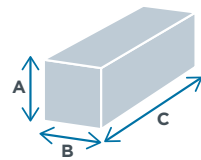
Tube · Length: 2 m

A: 320 mm
B: 410 mm
C: 2120 mm
Volume: 0.278 m³



Sheet · endless Width: 1 m OD coil: 53 cm

A: 560 mm
B: 560 mm
C: 1060 mm
Volume: 0.332 m³



Tape

A: 300 mm
B: 300 mm
C: 620 mm
Volume: 0.056 m³

General information

- Delivery in full packing units only.
- Delivery of 2 m tubes in shorter length: Up to 10 % of carton content may be supplied in length of 1 m. Carton content of less than 20 m tubes of 2 m length may be delivered in two pieces of 1 m length.
- The pipe dimensions given in the tables refer to DIN EN 1057 for copper pipes and DIN EN 10255 for steel pipes.
- Kaimann accessories are to be used to ensure proper installation.

We create solutions

Always finding the best solution for customers – this simple resolution is what produces innovative ideas and continuous progress at Kaimann. The company is one of the leading suppliers of technology and innovation in elastomeric insulation and offers a broad product portfolio for a wide range of applications, e.g. in building services and technology as well as industry.

These products ensure higher energy efficiency and sustainability, combined with effective protection against corrosion, fire and noise. Thanks to environmental product declarations (EPDs), Kaimann insulation also provides more transparency for its life cycle assessment.



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