



Kaiflex[®] HF plus s2

Free from halogens. Protects in case of fire. Prevents corrosion.

- Free of PVC, chlorides and brominated flame retardants
- Prevents stress corrosion cracking
- Complies with s2 high European smoke specifications
- Suitable for use in sustainable, green building compliant projects



Kaiflex® HFplus s2

Free from halogens.

Protects in case of fire. Prevents corrosion.

Halogen-free insulation materials are becoming more and more important in technical insulation. Since they are free of PVC, chlorides and brominated flame retardants, they are particularly suited to industrial and specialist applications where toxic combustion gases are a special hazard. This includes their use in maritime, railway, airport and hospital settings.

Kaiflex HFplus s2 insulation materials are uncritically foamed, free of halogens and heavy metals, and meet smoke development class s2 and fire resistance class R90 specifications. This insulation system thus complies with rigorous European requirements for construction products for fire protection and sustainable building. It meets the required safety standards even in demanding environments.

International certifications

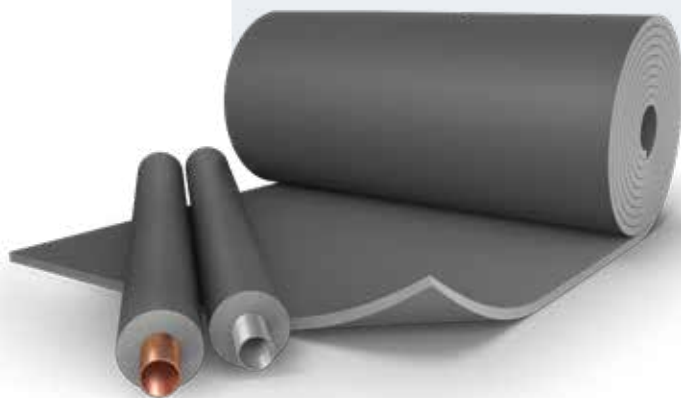
This halogen-free insulation material is approved for many application areas and special requirements with its international certifications. Since it is free of chloride, Kaiflex HFplus s2 prevents stress corrosion cracking and can be installed with confidence for insulating stainless steel pipes, such as those found in food and pharmaceutical production.

Kaiflex HFplus s2 is available in tube and sheet formats. The sheets also come in self-adhesive versions. Together with Kaiflex RT-HFplus s2 pipe supports and Kaiflex 494 HHF special adhesive, all components form a complete coordinated system.

Guaranteed sustainable – green light for green buildings

For Green Building certification, sustainability must be addressed in the installation of all fixtures and fittings. This naturally also applies to the insulation of technical building installations. The Kaiflex HFplus s2 insulation system fully meets

- Free of PVC, chlorides and brominated flame retardants
- Prevents stress corrosion cracking
- Complies with s2 high European smoke specifications
- Suitable for use in sustainable, green building compliant projects



the declaration criteria for low-pollution building materials. Depending on the configuration, it complies with Green Building standards such as BREEAM, DGNB and LEED, and can be used with confidence in sustainable construction.

With its specific structure, this high-quality rubber material for demanding hygienic applications also offers further health benefits. As a closed-cell insulation material, Kaiflex HFplus s2 generates no harmful particles, whether in ongoing operation or during installation and working with the material.

Environmental Product Declarations (EPD) make the ecological assessment of Kaimann insulation materials even more transparent. In this way, the company assists in the planning and certification of sustainable buildings.

Further services and information

Additional assistance in planning and selecting the optimum insulation system is provided by the Kaimann Fire Protection Planner at www.sgti-firepenetration.com.



Guaranteed halogen-free

Kaiflex is free of PVC, chlorides and brominated flame retardants, making it the ideal choice for construction projects with high safety requirements.



Reduced smoke development

In the event of a fire, visibility in rooms and corridors must be guaranteed for as long as possible. Through improved fire behaviour, Kaiflex increases personal protection and reduces contamination of building inventory.



Exceptionally sustainable

Kaiflex supports the certification of sustainable buildings through high energy efficiency, long product life, combined with safety and comfort.



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

www.kaimann.com

Certified quality



EPD

Transparent ecological balance thanks to an "Environmental Product Declaration".



LEED

Contribution to the certification of buildings according to the international classification system for ecological construction (Leadership in Energy and Environmental Design).

Related system components and accessories from our product range



Kaiflex RT-HFplus s2

Insulated pipe support to prevent condensation and thermal bridges.



Kaiflex Special Adhesive 494 HHF

The halogen-free and Green Building-compliant special adhesive

Kaimann Services



KaiCalc

Insulation thickness calculator for technical insulation in heating and cooling applications.

www.kaicalc.com



On-site consulting

Benefit from personal advice from our dedicated and competent application engineers and field service staff.



Kaiflex HF plus s2
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		-40 °C	see remark (1)
Thermal conductivity	λ_{θ} at -10 °C at 0 °C at +10 °C	$0.040 + 8.0 \cdot 10^{-5} \cdot \theta + 7.0 \cdot 10^{-7} \cdot \theta^2$ $\leq 0.039 \text{ W/(m}\cdot\text{K)}$ $\leq 0.040 \text{ W/(m}\cdot\text{K)}$ $\leq 0.041 \text{ W/(m}\cdot\text{K)}$	Test acc. to DIN EN ISO 8497 Test acc. to DIN EN 12667
Water vapour permeability	Moisture resistance factor μ	≥ 2000	Test acc. to DIN EN 13469 Test acc. to DIN EN 12086
Fire behaviour	Tube	Euroclass characteristics ⁽²⁾ D _L -s2, d0 (corresponds to RF3 acc. to VKF Fire protection guidelines)	Test acc. to DIN EN 13501-1
	Sheet	Euroclass characteristics ⁽²⁾ D-s2, d0 (corresponds to RF3 acc. to VKF Fire protection guidelines) Self-extinguishing, no drips	Test acc. to DIN EN 13501-1
Environmental aspects		ODP Zero GWP Zero	
Health aspects		Fibre free: For high hygiene requirements Halogen free (chlorine, bromine, PVC etc.) Free from heavy metal (e.g. cadmium, lead) and formaldehyde	
Other properties	ph-Value	Neutral	
Other certificates / approvals		CE-compliant Lloyds Register Approval Bureau Veritas Type Approved Det Norske Veritas Type Approval ABS Type Approval Certificate IMO MSC.61(67) MED Modul B & D	
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	In acc. with EN 14304:2009+A1:2013
Outdoor applications		Needs protection against UV-radiation	see remark (3)

Remark (1) For temperatures below -40 °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 HFplus s2
Tube



Colour: Anthracite · Length: 1,2 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
10.0	8	1/8	10.2	6	HF+s2-T-1,2m-09x010	4014182	204.0
12.0	10		12.5		HF+s2-T-1,2m-09x012	4014180	144.0
15.0	10	1/4	13.5	8	HF+s2-T-1,2m-09x015	4000809	158.4
18.0	15	3/8	17.2	10	HF+s2-T-1,2m-09x018	4000810	144.0
22.0	20	1/2	21.3	15	HF+s2-T-1,2m-09x022	4014062	105.6
28.0	25	3/4	26.9	20	HF+s2-T-1,2m-09x028	4014063	86.4
35.0	32	1	33.7	25	HF+s2-T-1,2m-09x035	4000813	69.6
42.0	40	1 1/4	42.4	32	HF+s2-T-1,2m-09x042	4000814	57.6
		1 1/2	48.3	40	HF+s2-T-1,2m-09x048	4000815	50.4

Copper pipe Cu		Iron & steel pipe Fe			13 mm Insulation thickness		
OD mm	Nom. width DN	Inch	OD mm	Nom. width DN	Dimension / Reference	Order No.	m/ carton
10.0	8	1/8	10.2	6	HF+s2-T-1,2m-13x010	4000820	134.4
12.0	10		12.5		HF+s2-T-1,2m-13x012	4000821	120.0
15.0	10	1/4	13.5	8	HF+s2-T-1,2m-13x015	4014181	96.0
18.0	15	3/8	17.2	10	HF+s2-T-1,2m-13x018	4000823	88.8
22.0	20	1/2	21.3	15	HF+s2-T-1,2m-13x022	4014064	72.0
28.0	25	3/4	26.9	20	HF+s2-T-1,2m-13x028	4000825	57.6
35.0	32	1	33.7	25	HF+s2-T-1,2m-13x035	4014065	43.2
42.0	40	1 1/4	42.4	32	HF+s2-T-1,2m-13x042	4014066	36.0
		1 1/2	48.3	40	HF+s2-T-1,2m-13x048	4000828	38.4
54.0	50		54.0		HF+s2-T-1,2m-13x054	4000829	28.8
		2	60.3	50	HF+s2-T-1,2m-13x060	4000830	28.8
76.1	65	2 1/2	76.1	65	HF+s2-T-1,2m-13x076	4000831	25.2
88.9	80	3	88.9	80	HF+s2-T-1,2m-13x089	4000832	16.8

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
10.0	8	1/8	10.2	6	HF+s2-T-1,2m-19x010	4000833	72.0
12.0	10		12.5		HF+s2-T-1,2m-19x012	4000834	72.0
15.0	10	1/4	13.5	8	HF+s2-T-1,2m-19x015	4014067	62.4
18.0	15	3/8	17.2	10	HF+s2-T-1,2m-19x018	4000836	50.4
22.0	20	1/2	21.3	15	HF+s2-T-1,2m-19x022	4014068	43.2
28.0	25	3/4	26.9	20	HF+s2-T-1,2m-19x028	4000838	39.6
35.0	32	1	33.7	25	HF+s2-T-1,2m-19x035	4000839	30.0
42.0	40	1 1/4	42.4	32	HF+s2-T-1,2m-19x042	4000840	26.4
		1 1/2	48.3	40	HF+s2-T-1,2m-19x048	4000841	22.8
54.0	50		54.0		HF+s2-T-1,2m-19x054	4000842	21.6
		2	60.3	50	HF+s2-T-1,2m-19x060	4000843	19.2
76.1	65	2 1/2	76.1	65	HF+s2-T-1,2m-19x076	4000844	14.4
88.9	80	3	88.9	80	HF+s2-T-1,2m-19x089	4000845	12.0

Slit tubes available on request.

Kaiflex HF plus s2
Tube



Colour: Anthracite · Length: 1,2 m

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
15.0	10	1/4	13.5	8	HF+s2-T-1,2m-25x015	4000846	39.6
18.0	15	3/8	17.2	10	HF+s2-T-1,2m-25x018	4000847	36.0
22.0	20	1/2	21.3	15	HF+s2-T-1,2m-25x022	4000848	30.0
28.0	25	3/4	26.9	20	HF+s2-T-1,2m-25x028	4014069	21.6
35.0	32	1	33.7	25	HF+s2-T-1,2m-25x035	4000850	24.0
42.0	40	1 1/4	42.4	32	HF+s2-T-1,2m-25x042	4000851	19.2
		1 1/2	48.3	40	HF+s2-T-1,2m-25x048	4000852	16.8
54.0	50		54.0		HF+s2-T-1,2m-25x054	4000853	16.8
		2	60.3	50	HF+s2-T-1,2m-25x060	4000854	14.4
76.1	65	2 1/2	76.1	65	HF+s2-T-1,2m-25x076	4000855	12.0
88.9	80	3	88.9	80	HF+s2-T-1,2m-25x089	4000856	9.6

Copper pipe Cu		Iron & steel pipe Fe			32 mm Insulation thickness		
OD mm	Nom. width DN	Inch	OD mm	Nom. width DN	Dimension / Reference	Order No.	m/ carton
15.0	10	1/4	13.5	8	HF+s2-T-1,2m-32x015	4000857	21.6
18.0	15	3/8	17.2	10	HF+s2-T-1,2m-32x018	4000858	21.6
22.0	20	1/2	21.3	15	HF+s2-T-1,2m-32x022	4000859	21.6
28.0	25	3/4	26.9	20	HF+s2-T-1,2m-32x028	4000860	19.2
35.0	32	1	33.7	25	HF+s2-T-1,2m-32x035	4000861	18.0
42.0	40	1 1/4	42.4	32	HF+s2-T-1,2m-32x042	4000862	14.4
		1 1/2	48.3	40	HF+s2-T-1,2m-32x048	4000863	13.2
54.0	50		54.0		HF+s2-T-1,2m-32x054	4000864	10.8
		2	60.3	50	HF+s2-T-1,2m-32x060	4000865	10.8
76.1	65	2 1/2	76.1	65	HF+s2-T-1,2m-32x076	4000866	8.4
88.9	80	3	88.9	80	HF+s2-T-1,2m-32x089	4000867	7.2

Slit tubes available on request.

Kaiflex HFplus s2

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
6	HF+s2-Sh-e-1m-40BX-06	4013734	18	18
10	HF+s2-Sh-e-1m-40BX-10	4013736	10	10
13	HF+s2-Sh-e-1m-40BX-13	4008750	8	8
19	HF+s2-Sh-e-1m-40BX-19	4008751	6	6
25	HF+s2-Sh-e-1m-40BX-25	4008752	4	4
32	HF+s2-Sh-e-1m-40BX-32	4013739	3	3

Kaiflex HFplus s2

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
6	HF+s2-Sh-e-1m-40BX-06-SA	4013735	18	18
10	HF+s2-Sh-e-1m-40BX-10-SA	4013737	10	10
13	HF+s2-Sh-e-1m-40BX-13-SA	4013738	8	8
19	HF+s2-Sh-e-1m-40BX-19-SA	4008753	6	6
25	HF+s2-Sh-e-1m-40BX-25-SA	4008754	4	4
32	HF+s2-Sh-e-1m-40BX-32-SA	4013740	3	3






Accessories

Adhesive · Cleaner · Protective Coating

		Details	Dimension / Reference	Order No.	Container type	Content	Pcs./ PU
Adhesive							
	Kaiflex Special Adhesive 494 HHF	hexane- and halogenfree	Ad-494-CN2200	4012616	Canister	2200 g	6
	Kaiflex Special Adhesive 515 ECO	solvent-free	Ad-515-CA1000	4004706	Can	1000 g	12
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

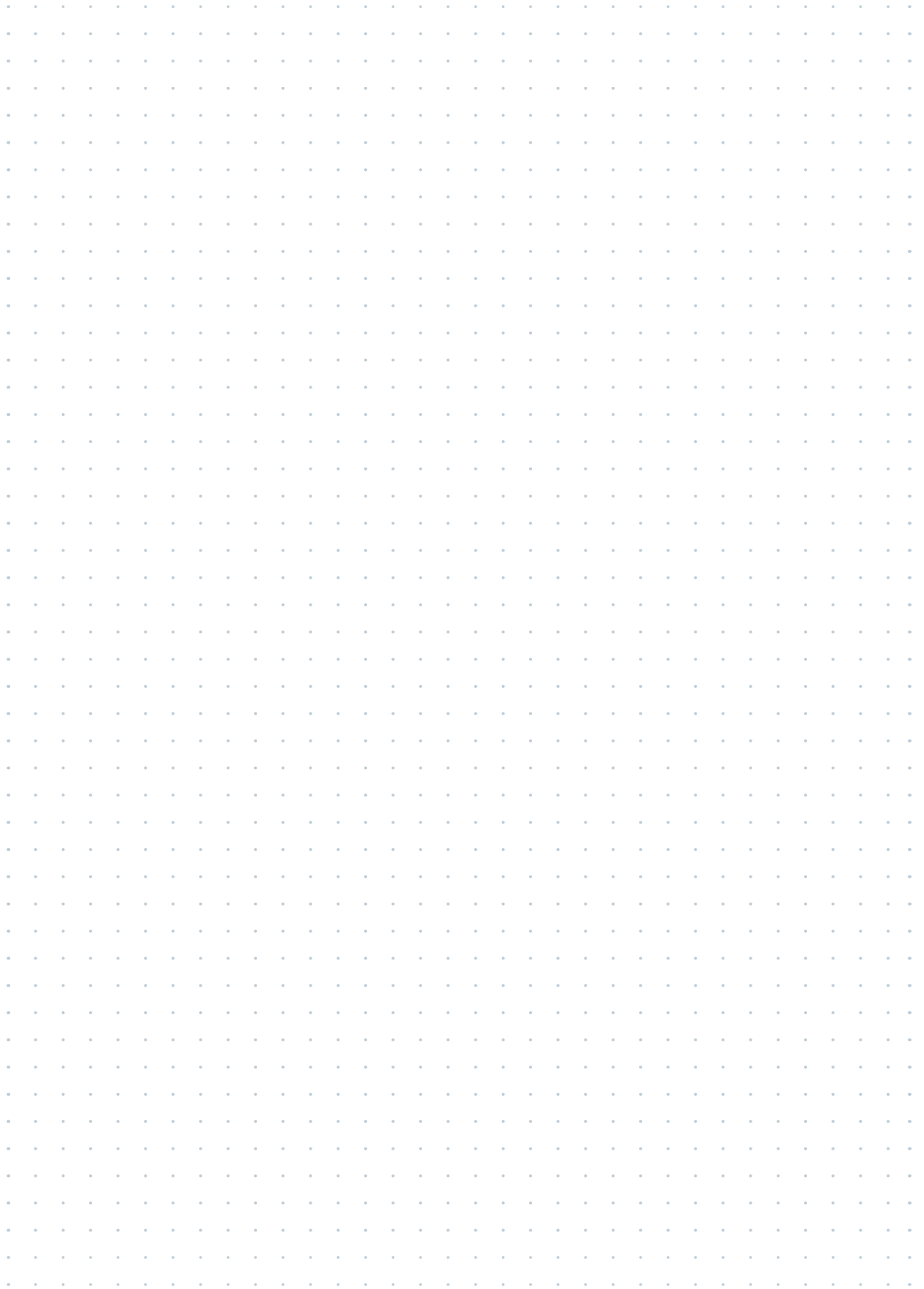
Glue pump · Knife · Gel ink pen

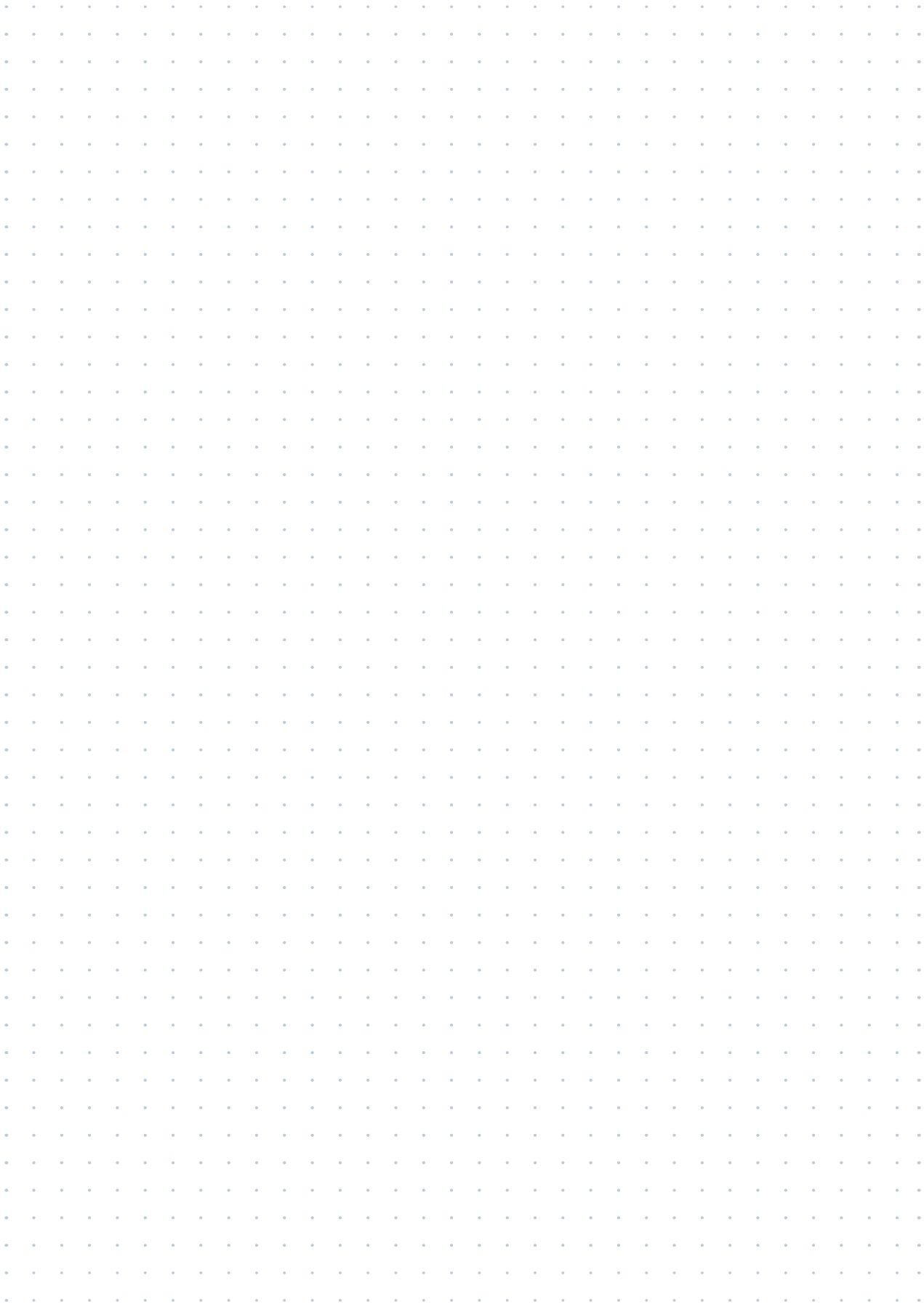
		Details	Dimension / Reference	Order No.	Pcs./ PU
Glue pump					
	Glue pump	long spout · 17 mm brush	Gl-Pmp-long	4004718	1
	Glue pump	short spout · 17 mm brush	Gl-Pmp-short	4004715	1
	11 mm brush	for glue pump	Gl-Pmp-Brush-11	4004716	1
	17 mm brush	for glue pump	Gl-Pmp-Brush-17	4004717	1
Knife					
	Ceramic 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 HFplus s2 Tape	self-adhesive	Tp-HF+s2-50/15/3-SA	4005135	50	15	3	12





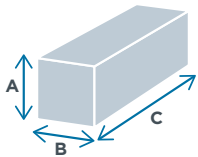
Tolerances, Limits

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	-	-	-

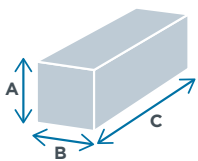
Measurements in mm · D_i = inner diameter · d_p = Nominal thickness of product · D_{iD} = Nominal thickness of a tube

Kaiflex HFplus s2 Packaging types



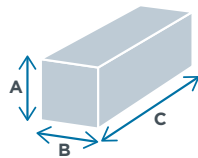
Tube · Length: 1.2 m

A: 385 mm
B: 400 mm
C: 1230 mm
Volume: 0.189 m³



Sheet · endless Width: 1 m OD coil: 40 cm

A: 410 mm
B: 410 mm
C: 1060 mm
Volume: 0.178 m³



Tape

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



General information

- Delivery in full packing units only.
- 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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