



Kaiflex[®] KKplus s3

Proven and durable insulation of surfaces and large pipelines

- Universal insulation material for busy public and commercial buildings
- Increased energy efficiency thanks to very good thermal conductivity of up to $\lambda \leq 0.033$ (W/m·K)
- Reliably prevents condensation and reduces the risk of corrosion under the insulation
- Additional protection against micro-organisms and mould



Kaiflex® KKplus s3

Proven and durable insulation of surfaces and large pipelines

Efficient and long-term insulation of pipework is of great importance for the energy efficiency and comfort of buildings.

With its very high-level technical attributes, Kaiflex KKplus s3 is the economical alternative for applications requiring the utmost in energy efficiency. This proven closed-cell rubber insulation material has an excellent thermal efficiency of up to $\lambda \leq 0.033$ (W/m·K) and condensation resistance of up to $\mu \geq 10,000$ even at low layer thicknesses, so reliably preventing energy losses and pipe corrosion in the long term.

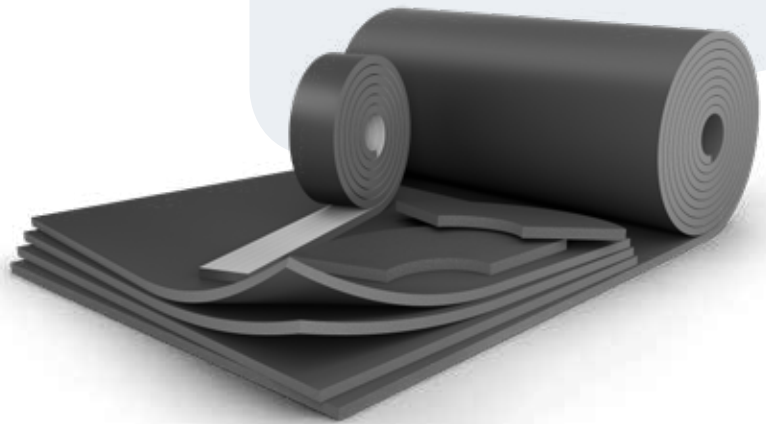
Kaiflex KKplus s3 is suitable for the technical insulation of refrigeration and air conditioning systems, especially for surfaces and large pipes. The insulation material provides an effective water vapour barrier to ensure reliable insulating performance over the entire operational life of the system.

Highly efficient at any insulation thickness

Kaiflex KKplus s3 sheet material is flexible and easy to work with, and is offered in standard formats from 6 to 32 mm and in thicker versions of e.g. 50 mm, in precut shapes (elbows, strips etc.) and in self-adhesive versions.

Thanks to its antimicrobial and fibre-free structure, the material meets high hygienic requirements and is classified to B-s3, d0, making it especially suitable for insulation in healthcare facilities as well as public, commercial and industrial buildings. For example, it is used in airports, industrial plants, large office complexes and hotels.

- Universal insulation material for busy public and commercial buildings
- Increased energy efficiency thanks to very good thermal conductivity of up to $\lambda \leq 0.033$ (W/m·K)
- Reliably prevents condensation and reduces the risk of corrosion under the insulation
- Additional protection against micro-organisms and mould



Improved planning and ecological transparency

To assist planners and installers in selecting the optimum insulation system, the Kaimann Fire Protection Planner at www.sgti-firepenetration.com offers further information and specialist support.

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.



High safety due to good fire behaviour

The requirements for certified safety in case of fire have increased worldwide for elastomeric insulation materials. Kaiflex reduces the spread of fire and smoke, is self-extinguishing and does not drip off when burning.



Reliable prevention of condensation

Dew formation can lead to damage to insulation as well as technical equipment. Due to its closed-cell property, Kaiflex keeps pipes and ducts dry and prevents corrosion under the insulation (CUI).



In-built anti-microbial resistance

Mould growth can have a negative impact on indoor air quality. Kaiflex offers effective protection against moisture penetration, is naturally anti-microbial and resistant to the development of mould and eliminates any chance for bacteria.



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".

Related system components and accessories from our product range



Kaiflex RT-ST

Insulated pipe support to prevent condensation and thermal bridges.



Kaiflex FT

Insulated duct support to prevent condensation and thermal bridges.



Special Adhesive, Tape, Tools,...

Accessories designed for the optimal and efficient application of Kaiflex products

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 KKplus s3
Technical Data

Material type base			Elastomeric foam based on synthetic rubber, Flexible Elastomeric Foam (FEF)	
Cell structure			Closed cell	
Colour			Black	
Max. service temperature	Flat surface		+85 °C	
Min. service temperature			-50 °C (-200 °C)	see remark (1)
Thermal conductivity	Thickness ≤32 mm	λ_{θ} at -10 °C	$0.033 + 10^{-4} \theta + 2.7105 \cdot 10^{-20} \theta^2$	Test acc. to DIN EN 12667
		at 0 °C	≤0.032 W/(m·K)	
	Thickness >32 mm	at +10 °C	≤0.033 W/(m·K)	Test acc. to DIN EN 12667
		λ_{θ} at -10 °C	$0.036 + 10^{-4} \theta + 2.7105 \cdot 10^{-20} \theta^2$	
	at 0 °C	≤0.035 W/(m·K)		
	at +10 °C	≤0.036 W/(m·K)		
Water vapour permeability	Thickness ≤32 mm	Moisture resistance factor μ	≥10,000	Test acc. to DIN EN 12086
	Thickness >32 mm	Moisture resistance factor μ	no separate vapour barrier required	
			≥7,000	Test acc. to DIN EN 12086
			no separate vapour barrier required	
Fire behaviour		Euroclass characteristics ⁽²⁾	B-s3, d0	Test acc. to DIN EN 13501-1
		Characteristics acc. to British Standard	Class O	In acc. with UK Building Regulations
			Self-extinguishing, no drips	
Fire resistance classification			R90	(ABP) Nr.:P-MPA-E-14-001
Resistance to	Corrosion		Satisfies requirements	In acc. with DIN 1988
	Mould and bacteria		No growth	Test acc. to DIN EN ISO 846 Meth. A+C In acc. with VDI 6022
Insulation material index number acc. to AGI			36.07.02.05.04	
Environmental aspects			No biocides added	
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	035-FIW-2-008.0-01
			FIW-audited (European Insulation Keymark Scheme for Thermal Insulation Products)	
			FM-approved	
			DNV, Lloyd's Register, See BG	

Kaiflex KKplus s3

Technical Data

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 -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 KKplus s3
Sheet · endless



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

Insulation thickness mm	Dimension / Reference	Order No.	rm/ carton	m ² / carton
3	KK+s3-Sh-e-1m-40BX-03	4003067	30	30
6	KK+s3-Sh-e-1m-40BX-06	4003068	18	18
10	KK+s3-Sh-e-1m-40BX-10	4003069	10	10
13	KK+s3-Sh-e-1m-40BX-13	4003070	8	8
16	KK+s3-Sh-e-1m-40BX-16	4003071	7	7
19	KK+s3-Sh-e-1m-40BX-19	4003072	6	6
25	KK+s3-Sh-e-1m-40BX-25	4003073	4	4
32	KK+s3-Sh-e-1m-40BX-32	4003074	3	3

Kaiflex KKplus s3
Sheet · endless · self-adhesive



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

Insulation thickness mm	Dimension / Reference	Order No.	rm/ carton	m ² / carton
3	KK+s3-Sh-e-1m-40BX-03-SA	4003075	18	18
6	KK+s3-Sh-e-1m-40BX-06-SA	4003076	18	18
10	KK+s3-Sh-e-1m-40BX-10-SA	4003077	10	10
13	KK+s3-Sh-e-1m-40BX-13-SA	4003078	8	8
16	KK+s3-Sh-e-1m-40BX-16-SA	4003079	7	7
19	KK+s3-Sh-e-1m-40BX-19-SA	4003080	6	6
25	KK+s3-Sh-e-1m-40BX-25-SA	4003082	4	4
32	KK+s3-Sh-e-1m-40BX-32-SA	4003083	3	3

Kaiflex KKplus s3
Sheet · pre-cut



Colour: Black · Length: 2,0 m · Width: 1,0 m · in box

Insulation thickness mm	Dimension / Reference	Order No.	m ² / carton
3	KK+s3-Sh-c-2x1m-BX-03	4003031	96
6	KK+s3-Sh-c-2x1m-BX-06	4003033	48
10	KK+s3-Sh-c-2x1m-BX-10	4003035	32
13	KK+s3-Sh-c-2x1m-BX-13	4003037	24
16	KK+s3-Sh-c-2x1m-BX-16	4003039	20
19	KK+s3-Sh-c-2x1m-BX-19	4003041	16
25	KK+s3-Sh-c-2x1m-BX-25	4003043	12
32	KK+s3-Sh-c-2x1m-BX-32	4003045	10
50	KK+s3-Sh-c-2x1m-BX-50	4003048	6

Kaiflex KKplus s3

Sheet · pre-cut · self-adhesive



Colour: Black · Length: 2,0 m · Width: 1,0 m · in box

Insulation thickness mm	Dimension / Reference	Order No.	m ² /carton
3	KK+s3-Sh-c-2x1m-BX-03-SA	4003050	96
6	KK+s3-Sh-c-2x1m-BX-06-SA	4003052	48
10	KK+s3-Sh-c-2x1m-BX-10-SA	4003054	32
13	KK+s3-Sh-c-2x1m-BX-13-SA	4003056	24
16	KK+s3-Sh-c-2x1m-BX-16-SA	4003058	20
19	KK+s3-Sh-c-2x1m-BX-19-SA	4003060	16
25	KK+s3-Sh-c-2x1m-BX-25-SA	4003062	12
32	KK+s3-Sh-c-2x1m-BX-32-SA	4003064	10
50	KK+s3-Sh-c-2x1m-BX-50-SA	4003066	6

Kaiflex KKplus s3

Two-piece elbow · made of 1.5 D sheet material



Colour: Black

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.	Pcs./carton
76.1	65	2 1/2	76.1	65	KK+s3-El-1,5D-13x076	4002421	6
88.9	80	3	88.9	80	KK+s3-El-1,5D-13x089	4002422	6
		3 1/2	101.6		KK+s3-El-1,5D-13x102	4002423	6
114.0	100	4	114.3	100	KK+s3-El-1,5D-13x114	4002424	6
			125.0		KK+s3-El-1,5D-13x125	4007585	6
159.0	150	5	139.7	125	KK+s3-El-1,5D-13x140	4002425	6
		6	160.0		KK+s3-El-1,5D-13x160	4002426	6
168.0	150	6	165.1	150	KK+s3-El-1,5D-13x165	4007587	6
			168.3	150	KK+s3-El-1,5D-13x168	4007588	6
			200.0		KK+s3-El-1,5D-13x204	4002427	6
		10	273.0	200	KK+s3-El-1,5D-13x273	4002428	6

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.	Pcs./carton
76.1	65	2 1/2	76.1	65	KK+s3-El-1,5D-19x076	4002429	5
88.9	80	3	88.9	80	KK+s3-El-1,5D-19x089	4002430	5
		3 1/2	101.6		KK+s3-El-1,5D-19x102	4005827	5
108.0	100		108.0		KK+s3-El-1,5D-19x108	4002431	5
114.0	100	4	114.3	100	KK+s3-El-1,5D-19x114	4002432	5
133.0	125	5	133.0		KK+s3-El-1,5D-19x133	4002433	5
			139.7	125	KK+s3-El-1,5D-19x140	4002434	5
159.0	150		160.0		KK+s3-El-1,5D-19x160	4002435	5
168.0	150	6	165.1	150	KK+s3-El-1,5D-19x165	4007589	5
		6	168.3	150	KK+s3-El-1,5D-19x168	4002436	5
			200.0		KK+s3-El-1,5D-19x204	4002437	5
		8	219.1	200	KK+s3-El-1,5D-19x219	4002438	5

Kaiflex KKplus s3

Two-piece elbow · made of 1.5 D sheet material



Colour: Black							
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.	Pcs./ carton
76.1	65	2 1/2	76.1	65	KK+s3-EI-1,5D-25x076	4002439	3
88.9	80	3	88.9	80	KK+s3-EI-1,5D-25x089	4002440	3
		3 1/2	101.6		KK+s3-EI-1,5D-25x102	4007590	3
108.0	100		108.0		KK+s3-EI-1,5D-25x108	4002441	3
114.0	100	4	114.3	100	KK+s3-EI-1,5D-25x114	4002442	3
			125.0		KK+s3-EI-1,5D-25x125	4007591	3
		5	139.7	125	KK+s3-EI-1,5D-25x140	4002443	3
159.0	150		160.0		KK+s3-EI-1,5D-25x160	4002444	3
		6	165.1	150	KK+s3-EI-1,5D-25x165	4007593	3
168.0	150	6	168.3	150	KK+s3-EI-1,5D-25x168	4002445	3
			200.0		KK+s3-EI-1,5D-25x204	4005831	3
		8	219.1	200	KK+s3-EI-1,5D-25x219	4007594	3
		10	273.0	200	KK+s3-EI-1,5D-25x273	4007595	3

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.	Pcs./ carton
76.1	65	2 1/2	76.1	65	KK+s3-EI-1,5D-32x076	4006715	3
88.9	80	3	88.9	80	KK+s3-EI-1,5D-32x089	4002446	3
		3 1/2	101.6		KK+s3-EI-1,5D-32x102	4007596	3
114.0	100	4	114.3	100	KK+s3-EI-1,5D-32x114	4006716	3
			125.0		KK+s3-EI-1,5D-32x125	4007597	3
133.0	125		133.0		KK+s3-EI-1,5D-32x133	4007598	3
		5	139.7	125	KK+s3-EI-1,5D-32x140	4002447	3
159.0	150		160.0		KK+s3-EI-1,5D-32x160	4007599	3
		6	165.1	150	KK+s3-EI-1,5D-32x165	4007600	3
168.0	150	6	168.3	150	KK+s3-EI-1,5D-32x168	4002448	3
			200.0		KK+s3-EI-1,5D-32x204	4002449	3
		8	219.1	200	KK+s3-EI-1,5D-32x219	4002450	3

Kaiflex KKplus s3

Strip · self-adhesive



Colour: Black								
Insulation thickness mm	Dimension / Reference				Order No.	Length m	Width mm	Pcs./ carton
10	KK+s3-STR-10-050-SA				4003031	20	50	10
10	KK+s3-STR-10-100-SA				4003033	20	100	5
10	KK+s3-STR-10-125-SA				4003035	20	125	4
13	KK+s3-STR-13-050-SA				4003037	14	50	10
13	KK+s3-STR-13-100-SA				4003039	14	100	5
13	KK+s3-STR-13-125-SA				4003041	14	125	4
19	KK+s3-STR-19-050-SA				4003043	10	50	10
19	KK+s3-STR-19-100-SA				4003045	10	100	5
19	KK+s3-STR-19-125-SA				4003048	10	125	4

Kaiflex KKplus s3
Insulation-kit for Victaulic-systems






Colour: Black - consisting of 2 face sheets and 1 cover strip

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.	Pcs./ carton
		2	60.3	50	KK+s3-VIC-19x060	4010444	1
76.1	65	2 1/2	76.1	65	KK+s3-VIC-19x076	4010445	1
88.9	80	3	88.9	80	KK+s3-VIC-19x089	4001904	1
114.0	100	4	114.3	100	KK+s3-VIC-19x114	4001905	1
		5	139.7	125	KK+s3-VIC-19x140	4001906	1
168.0	150	6	168.3	150	KK+s3-VIC-19x168	4009326	1
			219.1		KK+s3-VIC-19x219	4009327	1
			273.0		KK+s3-VIC-19x273	4010446	1
			323.9		KK+s3-VIC-19x323	4010447	1
			355.9		KK+s3-VIC-19x356	4010448	1
			406.4		KK+s3-VIC-19x406	4010449	1

For further dimensions please contact our customer service.






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	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 KKplus s3 Tape	self-adhesive	Tp-KK+s3-50/15/3-SA	4004659	50	15	3	12

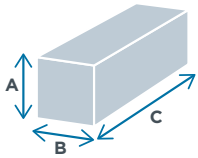
Tolerances, Limits

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

Delivery form	Length	Width	Thickness		Perpendicularity	Inner diameter	
			Stated	Limits		$D_i \leq 100$	$D_i > 100$
Sheet · pre-cut	±1.5 %	±2.0 %	$d_b \leq 6$ $6 < d_b \leq 19$ $d_b > 19$	±1.0 ±1.5 ±2.0	3.0 mm/m (Length/Width) - 3.0 mm (Thickness)	-	-
Sheet · endless	+5.0 % -1.5 %	±2.0 %	$d_b \leq 6$ $6 < d_b \leq 19$ $d_b > 19$	±1.0 ±1.5 ±2.0	3.0 mm/m (Length/Width) - 3.0 mm (Thickness)	-	-
Tape	+5.0 % -1.5 %	±2.0 %	$d_b = 3$	-0.1 +1.5	-	-	-

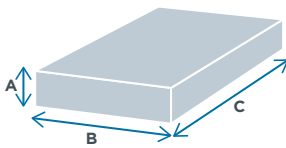
Measurements in mm · D_i = inner diameter · d_b = Nominal thickness of product · D_o = Nominal thickness of a tube

Kaiflex **KK**plus s3 Packaging types



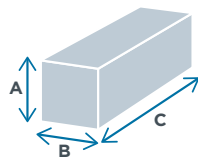
Sheet · endless Width: 1 m OD coil: 40 cm

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



Sheet · pre-cut Length: 2 m Width: 1 m

A: 170 mm
B: 1068 mm
C: 2080 mm
Volume: 0.378 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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