

GAME CHANGING *kairopak* SYSTEM

Proven Kaiflex technology,
new beneficial length: 1,20 m

NEW: KaiCene®-Technology

Sheets uncoated

PATENT
pending

kaiflex **KK** plus s2

Reliable fire protection, energy efficiency
and corrosion protection for additional safety

- Ideal choice for busy public and commercial buildings, as well as refrigeration systems
- Combines fire protection, energy efficiency and corrosion protection
- Classified as s2, it complies with demanding European smoke specifications
- Minimum 90 minutes fire resistance according to DIN 4102-11
- Easy to use, thanks to KaiCene-Technology (sheets uncoated)
- Coordinated components ensure outstanding reliability



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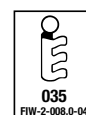
Kaiflex KK_{plus} s2 Technical Data

Material		Elastomeric foam based on synthetic rubber. Flexible Elastomeric Foam (FEF) in acc. to EN 14304	
Cell structure		Closed cell	
Colour		Tubes: Black Sheets: Black/Anthracite	
Upper temperature limit	Pipe Flat surfaces	+110 °C +85 °C	
Lower temperature limit		-50 °C (-200 °C)	See remark (1)
Thermal conductivity	λ_{ϑ} at -10 °C at 0 °C at +10 °C	Tubes: $0,033 + 7,2 \cdot 10^{-5} \vartheta + 1,2 \cdot 10^{-6} \vartheta^2$ Sheets: $0,038 + 8,0 \cdot 10^{-5} \vartheta + 1,2 \cdot 10^{-7} \vartheta^2$ Tubes: $\leq 0,032$ W/(m·K) Sheets: $\leq 0,037$ W/(m·K) Tubes: $\leq 0,033$ W/(m·K) Sheets: $\leq 0,038$ W/(m·K) Tubes: $\leq 0,034$ W/(m·K) Sheets: $\leq 0,039$ W/(m·K)	Test acc. to DIN EN ISO 8497 DIN EN 12667
Water vapour permeability	Moisture resistance factor μ	Tubes: ≥ 10.000 Sheets: ≥ 7.000	Test acc. to DIN EN 13469 DIN EN 12086
Euroclass[°]	Tubes Open Tubes (Sheets up to pipe- $\varnothing \leq 300$ mm) Sheets	B _i -s2, d0 B _i -s1, d0 B-s2, d0	Test acc. to DIN EN 13501-1
Practical fire behaviour		Self-extinguishing, no drips, does not support flame spread	
Fire performance		Class 0	Test acc. to BS 476-6
Fire resistance classification (DIN 4102-11) with rubber		R 90	(ABP) Nr.: P-MPA-E-14-001
Corrosion resistance		Satisfies requirements	In acc. with DIN 1988
Insulation material index number acc. to AGI	Tubes Sheets	36.12.02.05.04 36.07.04.05.01	
Health aspects		Dust & fibre free Heavy metal (e.g. cadmium, lead) and formaldehyde free	
Resistance to	Mould and bacteria	No growth	In acc. with VDI 6022
Other attributes	pH-Value	CE marked Neutral	
Other certificates / approvals	Valid for all tubes	FIW-audited (European Insulation Keymark Scheme for Thermal Insulation Products) FM-approved DNV, Lloyd's Register, See BG	035-FIW-2-008.0-04
Shelf life	Self-adhesive products	1 year	Store in a dry room at a typical relative humidity (between 50 % and 70 %) and room temperature (between 0 °C and +35 °C)
Tolerances		In acc. with DIN EN 14304:2013-04	
Outdoor applications		Needs protection against UV-radiation	See remark (2)

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

Remark (2) To protect against UV-induced deterioration Kaiflex should be either painted using Kaifinish Color paint or covered with a suitable UV resistant cladding system within 3 days of being installed outdoors.

[°] The Euroclass rating applies to metallic or solid mineral substrates.



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Kaiflex KK_{plus} s2 Tube · uncoated



Colour: Black · Length: 1,2 m

Copper pipe Cu		Iron & steel pipe Fe			KK _{plus} 2 Insulation thickness 9,5 - 16,0 mm				KK _{plus} 4 Insulation thickness 15,5 - 25,0 mm			
OD mm	Nom width DN	Inch	OD mm	Nom width DN	avg. IT mm	Reference	Order No.	m/ carton	avg. IT mm	Reference	Order No.	m/ carton
18,0	15	3/8	17,2	10	11,5	KK+s2-2/018-1,2	4003342	116,4	17,5	KK+s2-4/018-1,2	4003352	51,6
22,0	20	1/2	21,3	15	12,0	KK+s2-2/022-1,2	4003343	86,4	18,0	KK+s2-4/022-1,2	4003353	51,6
28,0	25	3/4	26,9	20	12,5	KK+s2-2/028-1,2	4003344	58,8	19,0	KK+s2-4/028-1,2	4003354	36,0
35,0	32	1	33,7	25	13,0	KK+s2-2/035-1,2	4003345	50,4	19,5	KK+s2-4/035-1,2	4003355	32,4
42,0	40	1 1/4	42,4	32	13,5	KK+s2-2/042-1,2	4003346	42,0	20,0	KK+s2-4/042-1,2	4003356	28,8
		1 1/2	48,3	40	13,5	KK+s2-2/048-1,2	4003347 *	38,4	20,5	KK+s2-4/048-1,2	4003357	21,6
54,0	50		54,0		13,5	KK+s2-2/054-1,2	4003348	36,0	21,0	KK+s2-4/054-1,2	4003358	19,2
		2	60,3	50	14,0	KK+s2-2/060-1,2	4003349	28,8	21,5	KK+s2-4/060-1,2	4003359	19,2
76,1	65	2 1/2	76,1	65	14,0	KK+s2-2/076-1,2	4003350	27,6	22,0	KK+s2-4/076-1,2	4003360	14,4
88,9	80	3	88,9	80	14,5	KK+s2-2/089-1,2	4003351 *	21,6	22,5	KK+s2-4/089-1,2	4003361	12,0

* No stock item, delivery time on request.

For further dimensions please contact our customer service.

Kaiflex KK_{plus} s2 SK Tube · uncoated · self-adhesive · with tangential cut



Colour: Black · Length: 1,2 m

Copper pipe Cu		Iron & steel pipe Fe			KK _{plus} 2 Insulation thickness 11,5 - 14,5 mm				KK _{plus} 4 Insulation thickness 17,5 - 22,5 mm			
OD mm	Nom width DN	Inch	OD mm	Nom width DN	avg. IT mm	Reference	Order No.	m/ carton	avg. IT mm	Reference	Order No.	m/ carton
18,0	15	3/8	17,2	10	11,5	KK+s2-2/018-1,2-SK	4003362 *	116,4	17,5	KK+s2-4/018-1,2-SK	4003372 *	51,6
22,0	20	1/2	21,3	15	12,0	KK+s2-2/022-1,2-SK	4003363 *	86,4	18,0	KK+s2-4/022-1,2-SK	4003373 *	51,6
28,0	25	3/4	26,9	20	12,5	KK+s2-2/028-1,2-SK	4003364 *	58,8	19,0	KK+s2-4/028-1,2-SK	4003374 *	36,0
35,0	32	1	33,7	25	13,0	KK+s2-2/035-1,2-SK	4003365 *	50,4	19,5	KK+s2-4/035-1,2-SK	4003375 *	32,4
42,0	40	1 1/4	42,4	32	13,5	KK+s2-2/042-1,2-SK	4003366 *	42,0	20,0	KK+s2-4/042-1,2-SK	4003376 *	27,6
		1 1/2	48,3	40	13,5	KK+s2-2/048-1,2-SK	4003367 *	38,4	20,5	KK+s2-4/048-1,2-SK	4003377 *	19,2
54,0	50		54,0		13,5	KK+s2-2/054-1,2-SK	4003368 *	36,0	21,0	KK+s2-4/054-1,2-SK	4003378 *	19,2
		2	60,3	50	14,0	KK+s2-2/060-1,2-SK	4003369 *	28,8	21,5	KK+s2-4/060-1,2-SK	4003379 *	19,2
76,1	65	2 1/2	76,1	65	14,0	KK+s2-2/076-1,2-SK	4003370 *	27,6	22,0	KK+s2-4/076-1,2-SK	4003380 *	12,0
88,9	80	3	88,9	80	14,5	KK+s2-2/089-1,2-SK	4003371 *	21,6	22,5	KK+s2-4/089-1,2-SK	4003381 *	12,0

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Kaiflex KKplus s2 SK-T Tube · uncoated · self-adhesive · with elastomeric tape overlap



Colour: Black · Length: 1,2 m

Copper pipe Cu		Iron & steel pipe Fe			KKplus 2 Insulation thickness 11,5 - 14,5 mm				KKplus 4 Insulation thickness 17,5 - 22,5 mm			
OD mm	Nom width DN	Inch	OD mm	Nom width DN	avg. IT mm	Reference	Order No.	m/ carton	avg. IT mm	Reference	Order No.	m/ carton
18,0	15	3/8	17,2	10	11,5	KK+s2-2/018-1,2-SK-T	4003382 *	90,0	17,5	KK+s2-4/018-1,2-SK-T	4003392 *	51,6
22,0	20	1/2	21,3	15	12,0	KK+s2-2/022-1,2-SK-T	4003383 *	63,6	18,0	KK+s2-4/022-1,2-SK-T	4003393 *	45,6
28,0	25	3/4	26,9	20	12,5	KK+s2-2/028-1,2-SK-T	4003384 *	56,4	19,0	KK+s2-4/028-1,2-SK-T	4003394 *	36,0
35,0	32	1	33,7	25	13,0	KK+s2-2/035-1,2-SK-T	4003385 *	48,0	19,5	KK+s2-4/035-1,2-SK-T	4003395 *	32,4
42,0	40	1 1/4	42,4	32	13,5	KK+s2-2/042-1,2-SK-T	4003386 *	40,8	20,0	KK+s2-4/042-1,2-SK-T	4003396 *	28,8
		1 1/2	48,3	40	13,5	KK+s2-2/048-1,2-SK-T	4003387 *	38,4	20,5	KK+s2-4/048-1,2-SK-T	4003397 *	24,0
54,0	50		54,0		13,5	KK+s2-2/054-1,2-SK-T	4003388 *	36,0	21,0	KK+s2-4/054-1,2-SK-T	4003398 *	24,0
		2	60,3	50	14,0	KK+s2-2/060-1,2-SK-T	4003389 *	28,8	21,5	KK+s2-4/060-1,2-SK-T	4003399 *	18,0
76,1	65	2 1/2	76,1	65	14,0	KK+s2-2/076-1,2-SK-T	4003390 *	27,6	22,0	KK+s2-4/076-1,2-SK-T	4003400 *	14,4
88,9	80	3	88,9	80	14,5	KK+s2-2/089-1,2-SK-T	4003391 *	21,6	22,5	KK+s2-4/089-1,2-SK-T	4003401 *	14,4

* No stock item, delivery time on request.

For further dimensions please contact our customer service.

Kaiflex KKplus s2 Sheet · uncoated (KaiGene-Technology) · continuous



Colour: Black / Anthracite

Insulation thickness mm	Sheet · continuous 1,2 m width · OD coil: 40 cm · in carton				Sheet · continuous · self-adhesive 1,2 m width · OD coil: 40 cm · in carton			
	Reference	Order No.	rm/ roll	m ² / roll	Reference	Order No.	rm/ roll	m ² / roll
6	KK+s2-06-RL40-1,2	4003754 *	18	21,6	KK+s2-06-RL40-1,2-SK	4003762 *	18	21,6
10	KK+s2-10-RL40-1,2	4003755 *	10	12,0	KK+s2-10-RL40-1,2-SK	4003763 *	10	12,0
13	KK+s2-13-RL40-1,2	4003756	8	9,6	KK+s2-13-RL40-1,2-SK	4003764	8	9,6
19	KK+s2-19-RL40-1,2	4003758	6	7,2	KK+s2-19-RL40-1,2-SK	4003766	6	7,2
25	KK+s2-25-RL40-1,2	4003759	4	4,8	KK+s2-25-RL40-1,2-SK	4003767	4	4,8
32	KK+s2-32-RL40-1,2	4003760	3	3,6	KK+s2-32-RL40-1,2-SK	4003768	3	3,6

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Kaifix ECplus Easy Connect · for Kaiflex KKplus s2 tubes



Colour: Black

Copper pipe Cu		Iron & steel pipe Fe			KKplus 2 Insulation thickness 9,5 - 16,0 mm				KKplus 4 Insulation thickness 15,5 - 25,0 mm			
OD mm	Nom width DN	Inch	OD mm	Nom width DN	avg. IT mm	Reference	Order No.	pcs./ carton	avg. IT mm	Reference	Order No.	pcs./ carton
18,0	15	3/8	17,2	10	11,5	EC+zs-2/018	4004995	97	17,5	EC+zs-4/018	4005005	43
22,0	20	1/2	21,3	15	12,0	EC+zs-2/022	4004996	72	18,0	EC+zs-4/022	4005006	43
28,0	25	3/4	26,9	20	12,5	EC+zs-2/028	4004997	49	19,0	EC+zs-4/028	4005007	30
35,0	32	1	33,7	25	13,0	EC+zs-2/035	4004998	42	19,5	EC+zs-4/035	4005008	27
42,0	40	1 1/4	42,4	32	13,5	EC+zs-2/042	4004999	35	20,0	EC+zs-4/042	4005009	24
		1 1/2	48,3	40	13,5	EC+zs-2/048	4005000 *	32	20,5	EC+zs-4/048	4005010	18
54,0	50		54,0		13,5	EC+zs-2/054	4005001	30	21,0	EC+zs-4/054	4005011	16
		2	60,3	50	14,0	EC+zs-2/060	4005002	24	21,5	EC+zs-4/060	4005012	16
76,1	65	2 1/2	76,1	65	14,0	EC+zs-2/076	4005003	23	22,0	EC+zs-4/076	4005013	12
88,9	80	3	88,9	80	14,5	EC+zs-2/089	4005004 *	18	22,5	EC+zs-4/089	4005014	10

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kaiflex[®] KK_{plus s2}

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