

GAME CHANGING **kairopak** SYSTEM

Proven Kaiflex technology,  
beneficial length: 1,20 m

**KaiCene**<sup>®</sup>-Technology

Tubes uncoated

**INCERAM**<sup>®</sup>-Cladding

Sheets coated



## **kaiflex**<sup>®</sup> **KK** plus s1

Uncompromising. Because safety comes first!

- Our new safety standard for busy public and commercial buildings
- Low smoke development and high flame retardancy provide additional personal safety in the event of a fire
- Active fire protection, thanks to INCERAM-Cladding (sheets coated)
- Minimizes reliably energy loss
- Effectively prevents water vapour diffusion and thus maintains the systems long-lasting insulating effect
- Easy to use, thanks to KaiCene-Technology (tubes uncoated)
- High system reliability with pipe supports, tape and glue



**KAIMANN**  
SAINT-GOBAIN

## Kaiflex KKplus s1 Technical Data

<b>Material type base</b>			Elastomeric foam based on synthetic rubber. Flexible Elastomeric Foam (FEF) in acc. to EN 14304	
<b>Material type coating</b>	Tube		uncoated (KaiCene-technology)	
	Sheet		Glass fabric, single-side coated with an expanded graphite covering, low-smoke and intumescent in case of fire (INCERAM-Cladding)	
<b>Cell structure</b>			Closed cell	
<b>Colour</b>	Schlauch		Anthracite	
	Sheet	Base material Coating	Black Anthracite	
<b>Max. service temperature</b>	Pipe		+110 °C	
	Flat surfaces		+85 °C	
<b>Min. service temperature</b>			-50 °C (-200 °C)	see remark (1)
<b>Thermal conductivity</b>	$\lambda_{\theta}$		$0,038 + 9,0144 \cdot 10^{-5} \theta + 3,29744 \cdot 10^{-7} \theta^2$	
	at -10 °C		$\leq 0,037 \text{ W/(m}\cdot\text{K)}$	Test acc. to DIN EN ISO 8497
	at 0 °C		$\leq 0,038 \text{ W/(m}\cdot\text{K)}$	Test acc. to DIN EN 12667
	at +10 °C		$\leq 0,039 \text{ W/(m}\cdot\text{K)}$	
<b>Water vapour permeability</b>	Moisture resistance factor $\mu$		$\geq 10.000$	Test acc. to DIN EN 13469 Test acc. to DIN EN 12086
<b>Fire behaviour</b>	Tube	Euroclass characteristics	B <sub>L</sub> -s1, d0	Test acc. to DIN EN 13501-1 see remark (2)
	Sheet	Euroclass characteristics	B-s1, d0	Test acc. to DIN EN 13501-1 see remark (2)
			Self-extinguishing, no drips	
<b>Fire resistance classification</b>			R 90	(ABP) Nr.: P-MPA-E-14-001
<b>Resistance to</b>	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
<b>Environmental aspects</b>			No biocides added	
<b>Health aspects</b>			Fibre free: For high hygiene requirements	
			Heavy metal (e.g. cadmium, lead) and formaldehyde free	
<b>Other attributes</b>	pH-Value		NPD (No performance determined)	
<b>Other certificates/ approvals</b>			CE-compliant	
<b>Storage</b>	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)	
<b>Tolerances &amp; limits</b>			Satisfies requirements	In acc. with EN 14304:2009+A1:2013
<b>Outdoor applications</b>			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 should be either painted using Kaifinish Color paint or covered with a suitable UV resistant cladding system within 1 day of being installed outdoors.

Uncompromising. Because safety comes first!

GAME CHANGING **kairopak<sup>®</sup>** SYSTEM

Proven Kaiflex technology, beneficial length: 1,20 m

## Kaiflex KK<sub>plus</sub> s1 Tube · uncoated (KaiCene-Technologie)



Colour: Black / Anthracite · Length: 1,2 m

Copper pipe Cu		Iron & steel pipe Fe			13 mm Insulation thickness			19 mm Insulation thickness		
OD mm	Nom width DN	Inch	OD mm	Nom width DN	Reference	Order No.	m/ carton	Reference	Order No.	m/ carton
15,0	10	1/4	13,5	8	KK+s1-13x015-1,2	4005146	108,0	KK+s1-19x015-1,2	4005157	62,4
18,0	15	3/8	17,2	10	KK+s1-13x018-1,2	4005147	88,8	KK+s1-19x018-1,2	4005158	50,4
22,0	20	1/2	21,3	15	KK+s1-13x022-1,2	4005148	73,2	KK+s1-19x022-1,2	4005159	49,2
28,0	25	3/4	26,9	20	KK+s1-13x028-1,2	4005149	58,8	KK+s1-19x028-1,2	4005160	39,6
35,0	32	1	33,7	25	KK+s1-13x035-1,2	4005150	50,4	KK+s1-19x035-1,2	4005161	30,0
42,0	40	1 1/4	42,4	32	KK+s1-13x042-1,2	4005151	36,0	KK+s1-19x042-1,2	4005162	27,6
		1 1/2	48,3	40	KK+s1-13x048-1,2	4005152	38,4	KK+s1-19x048-1,2	4005163	24,0
54,0	50		54,0		KK+s1-13x054-1,2	4005153	36,0	KK+s1-19x054-1,2	4005164	19,2
		2	60,3	50	KK+s1-13x060-1,2	4005154	28,8	KK+s1-19x060-1,2	4005165	19,2
64,0			63,5		KK+s1-13x064-1,2	4008639	28,8	KK+s1-19x064-1,2	4008642	15,6
70,0			70,0							
76,1	65	2 1/2	76,1	65	KK+s1-13x076-1,2	4005155	27,6	KK+s1-19x076-1,2	4005166	16,8
88,9	80	3	88,9	80	KK+s1-13x089-1,2	4005156	19,2	KK+s1-19x089-1,2	4005167	14,4

Copper pipe Cu		Iron & steel pipe Fe			25 mm Insulation thickness			32 mm Insulation thickness		
OD mm	Nom width DN	Inch	OD mm	Nom width DN	Reference	Order No.	m/ carton	Reference	Order No.	m/ carton
15,0	10	1/4	13,5	8				KK+s1-32x015-1,2	4008655 *	21,6
18,0	15	3/8	17,2	10	KK+s1-25x018-1,2	4008643 *	37,2	KK+s1-32x018-1,2	4008656 *	21,6
22,0	20	1/2	21,3	15	KK+s1-25x022-1,2	4008644 *	30,0	KK+s1-32x022-1,2	4008657 *	21,6
28,0	25	3/4	26,9	20	KK+s1-25x028-1,2	4008645 *	24,0	KK+s1-32x028-1,2	4008658 *	19,2
35,0	32	1	33,7	25	KK+s1-25x035-1,2	4008646 *	21,6	KK+s1-32x035-1,2	4008659 *	16,8
42,0	40	1 1/4	42,4	32	KK+s1-25x042-1,2	4008647 *	19,2	KK+s1-32x042-1,2	4008660 *	14,4
		1 1/2	48,3	40	KK+s1-25x048-1,2	4008648 *	16,8	KK+s1-32x048-1,2	4008661 *	13,2
54,0	50		54,0		KK+s1-25x054-1,2	4008649 *	16,8	KK+s1-32x054-1,2	4008662 *	12,0
		2	60,3	50	KK+s1-25x060-1,2	4008650 *	15,6	KK+s1-32x060-1,2	4008663 *	10,8
64,0			63,5		KK+s1-25x064-1,2	4008651 *	14,4	KK+s1-32x064-1,2	4008664 *	10,8
70,0			70,0					KK+s1-32x070-1,2	4008665 *	9,6
76,1	65	2 1/2	76,1	65	KK+s1-25x076-1,2	4008652 *	12,0	KK+s1-32x076-1,2	4008666 *	7,2
88,9	80	3	88,9	80	KK+s1-25x089-1,2	4008653 *	9,6	KK+s1-32x089-1,2	4008667 *	7,2

\* No stock item, delivery time on request.

For further dimensions please contact our customer service.

Uncompromising. Because safety comes first!

GAME CHANGING **kairopak<sup>®</sup> SYSTEM**

Proven Kaiflex technology, beneficial length: 1,20 m

## Kaiflex KKplus s1 SK Tube · uncoated (KaiCene-Technologie) · self-adhesive · with tangential cut

Colour: Black / Anthracite · Length: 1,2 m

Copper pipe Cu		Iron & steel pipe Fe			13 mm Insulation thickness			19 mm Insulation thickness		
OD mm	Nom width DN	Inch	OD mm	Nom width DN	Reference	Order No.	m/ carton	Reference	Order No.	m/ carton
15,0	10	1/4	13,5	8	KK+s1-13x015-1,2-SK	4008683 *	108,0	KK+s1-19x015-1,2-SK	4008694 *	62,4
18,0	15	3/8	17,2	10	KK+s1-13x018-1,2-SK	4008684 *	88,8	KK+s1-19x018-1,2-SK	4008695 *	50,4
22,0	20	1/2	21,3	15	KK+s1-13x022-1,2-SK	4008685 *	80,4	KK+s1-19x022-1,2-SK	4008696 *	49,2
28,0	25	3/4	26,9	20	KK+s1-13x028-1,2-SK	4008686 *	58,8	KK+s1-19x028-1,2-SK	4008697 *	39,6
35,0	32	1	33,7	25	KK+s1-13x035-1,2-SK	4008687 *	50,4	KK+s1-19x035-1,2-SK	4008698 *	30,0
42,0	40	1 1/4	42,4	32	KK+s1-13x042-1,2-SK	4008688 *	36,0	KK+s1-19x042-1,2-SK	4008699 *	27,6
		1 1/2	48,3	40	KK+s1-13x048-1,2-SK	4008689 *	38,4	KK+s1-19x048-1,2-SK	4008700 *	24,0
54,0	50		54,0		KK+s1-13x054-1,2-SK	4008690 *	36,0	KK+s1-19x054-1,2-SK	4008701 *	19,2
76,1	65	2	60,3	50	KK+s1-13x060-1,2-SK	4008691 *	28,8	KK+s1-19x060-1,2-SK	4008702 *	19,2
		2 1/2	76,1	65	KK+s1-13x076-1,2-SK	4008692 *	27,6	KK+s1-19x076-1,2-SK	4008703 *	16,8
88,9	80	3	88,9	80	KK+s1-13x089-1,2-SK	4008693 *	19,2	KK+s1-19x089-1,2-SK	4008704 *	14,4

\* No stock item, delivery time on request.

For further dimensions please contact our customer service.

## Kaiflex KKplus s1 Sheet · coated (INCERAM-Cladding) · continuous

Colour: Black / Anthracite

Insulation thickness mm	Sheet · continuous 1 m width			Sheet · continuous · self-adhesive 1 m width		
	Reference	Order No.	m <sup>2</sup> / carton	Reference	Order No.	m <sup>2</sup> / carton
6	KK+s1-06-RL	4008727 *	18	KK+s1-06-RL-SK	4008733 *	15
10	KK+s1-10-RL	4008728 *	10	KK+s1-10-RL-SK	4008734 *	10
13	KK+s1-13-RL	4008729 *	14	KK+s1-13-RL-SK	4008735 *	14
16	KK+s1-19-RL	4008730 *	10	KK+s1-19-RL-SK	4008736 *	10
19	KK+s1-25-RL	4008731 *	8	KK+s1-25-RL-SK	4008737 *	8
32	KK+s1-32-RL	4008732 *	6	KK+s1-32-RL-SK	4008738 *	6

\* No stock item, delivery time on request.

For further dimensions please contact our customer service.



Kaimann GmbH · Hansastraße 2-5 · D-33161 Hövelhof · Germany · Tel.: +49 5257 9850-0 · info.kaimann@saint-gobain.com · www.kaimann.com  
© 2021 Kaimann GmbH · Subject to change without notice.

All values are based on results obtained under typical conditions of use.  
Recipient of these technical specifications are to check with Kaimann in advance if given values are meeting the specifications of intended area of application.

Kaiflex<sup>®</sup> and Kaifix<sup>®</sup> are registered trademarks of the Kaimann GmbH.