KAIMANN
SAINT-GOBAIN

Kaiflex® ST s2

Versatile application. Optimised safety in case of fire.

- Universal insulation material for busy public and commercial buildings
- Dependable safety: Euroclass B_L-s2, d0
- Meets the demanding international requirements for elastomeric insulation materials
- Reliably prevents condensation and reduces the risk of corrosion under the insulation
- Additional protection against micro-organisms and mould

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The requirements for structural fire protection, and in particular the increased focus on personal safety in case of fire, have been increasing internationally for years. More and more, limited smoke development has to correspond to an "s2" smoke development class in accordance with EN 13501-1 as the minimum requirement for flame-retardant building products. Kaimann meets these enhanced requirements and offers increased fire safety with its Kaiflex ST s2: The insulation material made of closed-cell rubber emits limited smoke to s2 standards and is self-extinguishing as well as non-dripping. These properties mean that the insulation material meets the demanding European requirements for combustible building materials such as MVV TB, VKF RF2, Class O (in accordance with UK Building Regulations) and Class 1 (tested in accordance with BS476-7) for surface spread of flame.

The universal insulation material for flexible use

Kaiflex ST s2 is attractive not only because of its reliable fire protection, but also with its universal applicability. Thanks to its wide product range and in combination with the system benefits of pipe supports and special adhesive, the insulation material can be used for any size of project without having to change materials or manufacturers. Kaiflex ST s2 thus presents itself as the Kaimann standard in technical insulation.

This means that the insulation material can be used for cold and hot pipes and on different pipe diameters – both in small boiler rooms and in large-scale projects. It reliably prevents condensation and corrosion from forming, particularly in systems featuring alternating temperatures, which are being installed increasingly frequently, and when correctly dimensioned, it simultaneously fulfils the legal requirements for hot water and heat distribution systems. It is used in cooling and air conditioning systems for insulating pipes in highly frequented public and commercial buildings, like airports, large office complexes, hotels, and apartment buildings, as well as in industrial plants and in shipbuilding. Thanks to its antimicrobial and fibre-free structure, Kaiflex ST s2 also meets high hygienic requirements and is especially suitable for insulation in healthcare facilities, such as hospitals.

Tested and certified – very good technical values

It is not just its versatility that makes Kaiflex ST s2 impressive, but also the very highest level of technical specifications: its very low thermal conductivity and the best water vapour diffusion resistance values makes Kaimann insulation material extremely energy-efficient and provides sustainable protection against energy loss. It effectively acts as a vapour barrier and reliably prevents condensation, greatly minimising the risk of corrosion underneath the insulation. This means Kaiflex ST s2 ensures reliable insulation performance over the entire operational life of the system.

Kaiflex ST s2 hoses are available as a standard product or self-adhesive in 2 and 1.2 m lengths. Whichever variant you choose, it is easy to work with.

NEW! Limited smoke development thanks to Euroclass B_L-s2, d0

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.

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".

FM Approved
Highest required standard of qualiity, technical integrity and performance for use in commercial and industrial facilities.

Related system components and accessories from our product range

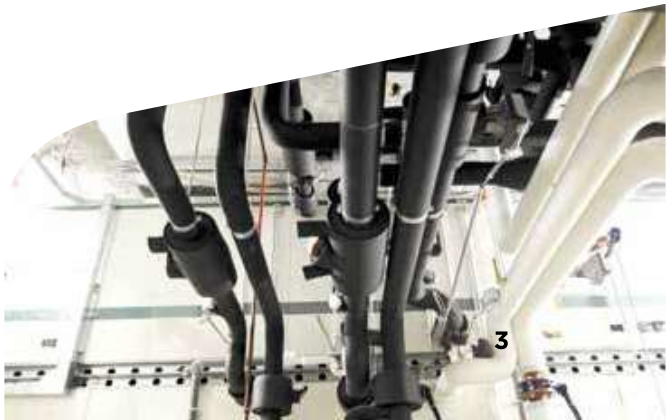
Kaiflex RT-ST
Insulated pipe support to prevent condensation and thermal bridges.

Special Adhesive, Tape, Joints,...
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.



NEW! Limited smoke development thanks to Euroclass B_L-s2, d0

Kaiflex ST 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		+110 °C	
Min. service temperature			–50 °C (–200 °C)	see remark (1)
Thermal conductivity	Thickness <25 mm	λ_ϑ	$0.033 + 7.1316 \cdot 10^{-5} \cdot \vartheta + 1.2533 \cdot 10^{-6} \cdot \vartheta^2$	
		at –10 °C	≤0.032 W/(m·K)	Test acc. to DIN EN ISO 8497
		at 0 °C	≤0.033 W/(m·K)	
		at +10 °C	≤0.034 W/(m·K)	
	Thickness ≥25 mm	λ_ϑ	$0.036 + 7.1316 \cdot 10^{-5} \cdot \vartheta + 1.2533 \cdot 10^{-6} \cdot \vartheta^2$	
		at –10 °C	≤0.035 W/(m·K)	Test acc. to DIN EN ISO 8497
		at 0 °C	≤0.036 W/(m·K)	
		at +10 °C	≤0.037 W/(m·K)	
Water vapour permeability	Thickness <25 mm	Moisture resistance factor μ	≥10000	Test acc. to DIN EN 13469
			no separate vapour barrier required	
	Thickness ≥25 mm	Moisture resistance factor μ	≥7000	Test acc. to DIN EN 13469
			no separate vapour barrier required	
Fire behaviour	Thickness ≤45 mm	Euroclass characteristics (2)	B_L-s2, d0	Test acc. to DIN EN 13501-1
	Thickness >45 mm	Euroclass characteristics (2)	C_L-s2, d0	
	Tape	Euroclass characteristics (2)	B-s3, d0 (as part of a system incl. Kaiflex ST s2 tubes: up to B_L-s2, d0)	
		Characteristics acc. to British Standard	Class O	In acc. with UK Building Regulations
		Surface spread of flame	Class 1	Test acc. to BS 476-7
		Fire propagation	Total spread index: <12	Test acc. to BS 476-6
			Sub Index 1: <6	Test acc. to BS 476-6
			Self-extinguishing, no drips	
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			36.12.02.05.04	
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	
			FIW-audited (European Insulation Keymark Scheme for Thermal Insulation Products)	035-FIW-2-008.0-05
			UL-approved (UL94)	In acc. with UL94 V-0, HF 1
			FM-approved	
			DNV, Lloyd's Register, See BG	
			IAC Gold	In acc. with ISO 16000, Part 3 & 6

Kaiflex ST s2
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 metalic 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.

035 FPW-2-008,0-05 · c UL us UL94 V-0, HF-1 · FM APPROVED · 0736/2022 · EPD VERIFIED