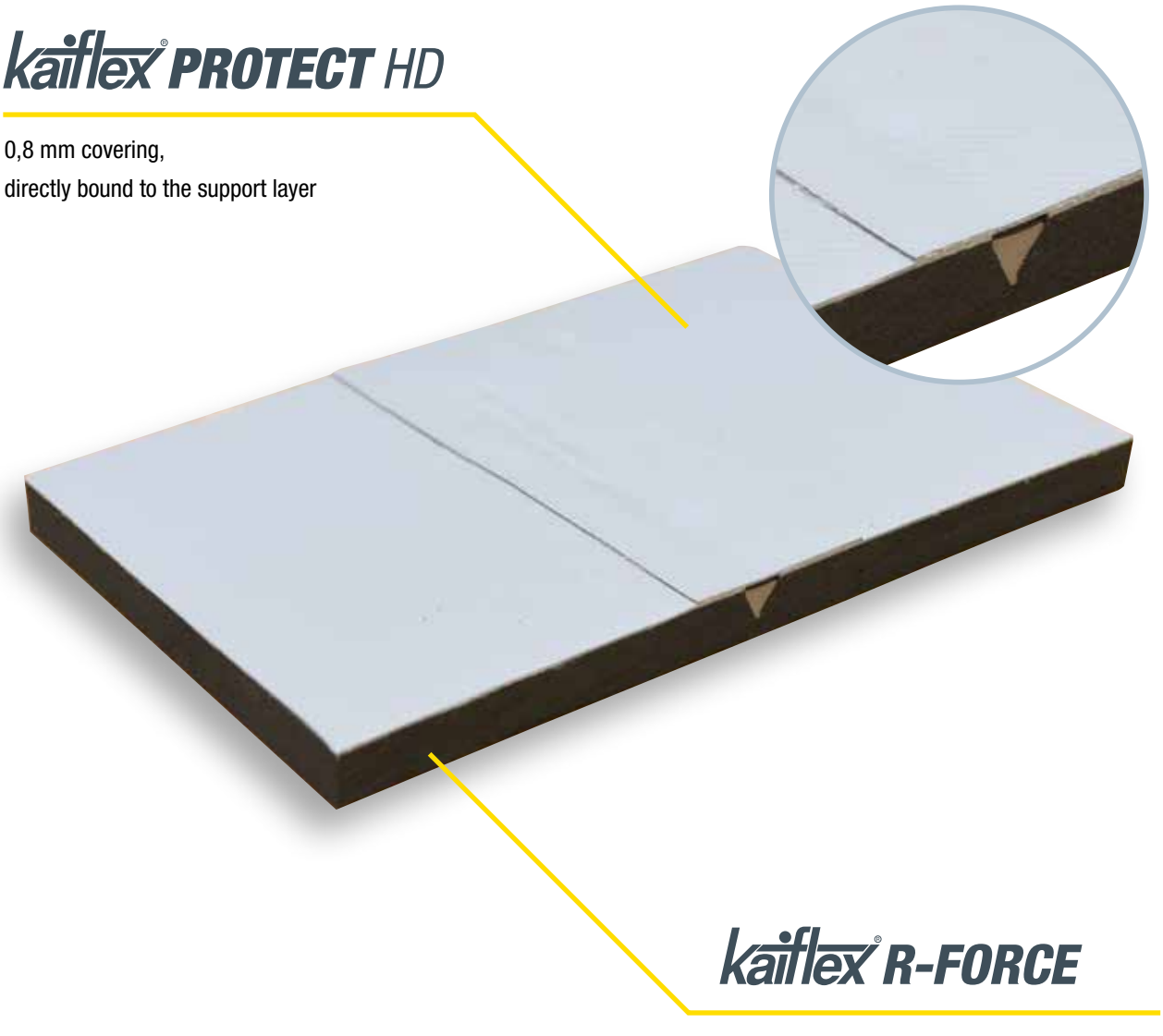
Kaiflex comCLAD

The Alternative. Outperforming metal cladding.

KAIMANN

The material

Kaiflex comCLAD is an innovative solution for cladding: Kaiflex Protect HD directly bound to an Kaiflex R-FORCE support. Thanks to the new comCLAD technology, extensive and thus risky wet glueing of insulation material is no longer necessary. It's the safest and easiest way to apply a closed, tight cladding. No warping, no wrinkles, smooth and equal surface, easy and safe bonding (rubber foam to rubber foam and cladding to cladding).



The welding

Easy, safe and reliable water and vapor tight sealing of insulation is now possible with comCLAD welding technology: both layers of Kaiflex comCLAD, Kaiflex R-FORCE as well as Kaiflex Protect HD, are optimized for fusing together and with the special Kaiflex comCLAD fusing mass.

Gaps and joints in Kaiflex R-FORCE insulation layers – and optionally the seams of Kaiflex comCLAD – are firstly sealed with fusing mass using a hand extruder. Kaiflex R-FORCE and the fusing mass will form a strong bond with a tear resistance being higher than that of Kaiflex R-FORCE itself.

The Kaiflex Protect HD cladding then is tightly sealed by applying a Kaiflex Protect HD welding tape onto the joint using hot air and a silicone or PTFE roller: first, the hot air is applied directly into the sharp angle between welding tape and cladding and the tape is pressed into the cladding's surface using the roller. Then the junctions of the tape to the cladding are fused by heating and again pressing with the roller.

The welding method is almost fully independent from the environmental conditions, as fusing is happening at high temperatures where moisture, frost etc. are no more an issue. Thus, the application of Kaiflex comCLAD and the sealing of Kaiflex R-FORCE can be done under climate conditions from very cold to very hot and humid resulting in equal performance and quality. The comCLAD welding / fusing technology is easy to understand and fast to apply. It needs a minimum of training and equipment, but will provide highly accurate sealing.

Kaiflex comCLAD Technical Data

Patent pending

Material		Highly durable cladding composite, comprising high density covering inseparably bound to Kaiflex R-FORCE® non-sag closed cell insulation foam	
Colour	Covering Foam	Grey Black	
Upper temperature limit		+85 °C	See remark (1)
Lower temperature limit		–50 °C	See remark (1)
Thermal conductivity	at 0 °C	≤0.037 W/(m·K)	Test acc. to DIN EN 12667
Water vapour permeability	Moisture resistance factor μ	≥50.000 No separate vapour barrier required	Test acc. to DIN EN 12086
EuroClass ◊	Covering	B-s3, d0	Test acc. to DIN EN 13501-1
Practical fire behaviour		Self-extinguishing, no drips, does not support flame spread	Classification NFPA-90A“B”(covering) ISO 11925 “E” (composite)
Mechanical properties	Tensile Strength Tear Strength	>20 MPa >40 N/mm	Test acc. to ISO 37 / ASTM D412 Test acc. to ISO 34-1 / ASTM D624
Corrosion resistance		Satisfies requirements	In acc. to DIN 1988
Environmental aspects		ODP Zero GWP Zero	
Health aspects		Heavy metal (e.g. cadmium, lead) and formaldehyde free	
Resistance to	Mechanical impact Weather UV Ozone Chemicals	Very good Good Good Good Good	
Dimensional stability	Oil & gas	Little / no shrinkage or swelling	For details on resistance contact our Technical Support Team
Other attributes	pH-Value	Neutral	
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)
Other	Gluing	Bond black foam (= glue seam) with Kaiflex special adhesive, then seal with Kaiflex mastic grey if temperature is +10 °C to +30 °C and humidity is below 80 %. However, under other conditions and in general welding (hot air, Kaiflex comCLAD fusing mass) is strongly recommended.	

Remark (1) For temperatures below –50 °C and above +85 °C please contact our Technical Support Team for advice.

◊ The Euroclass rating applies to metalic or solid mineral substrates.

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