

# CLIMAROOF<sup>®</sup>

## KF-1

Waterproofing, adhesive, leveling  
cementitious mortar for flat roofs  
and horizontal surfaces



- » Unique - innovative combination of waterproofing, adhesion and leveling properties.
- » Great protection against moisture penetration.
- » High adhesive properties on a variety of substrates.
- » High mechanical strength.
- » Advanced rheological characteristics with leveling properties.
- » Ease of application (standing applicator).

ClimaRoof<sup>®</sup> KF-1 is a waterproofing, adhesive, leveling cementitious mortar of high strength, designed with new generation elastomeric and hydrophobic polymers as well as with selected quartz aggregates. It ideally combines excellent adhesive properties between different types of surfaces and at the same time protection against moisture penetration.

It is classified as coating for surface protection of concrete according to EN 1504-2 & EN 1504-9:2008 (Principle PI - protection against ingress - Method 1.3, Principle MC - moisture control - Method 2.3, Principle IR - increasing resistivity by limiting moisture content - Method 8.3) and as screed CT-C16-F6, according to EN 13813.

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### FIELD OF APPLICATION

ClimaRoof® KF-1 is used as an adhesive for ClimaRoof® KF-XPS, XPS Etics GF or ClimaRoof® KF-XPS Incline extruded polystyrene thermal insulation boards of the Lightweight Thermal & Water Insulation System ClimaRoof® by BIOCLIMA®, with additional leveling and waterproofing protection properties.

Also, it can be used for waterproofing and leveling of horizontal surfaces of various types e.g. concrete, cementitious floors, cement boards, bathrooms, showers,

terraces, etc. that will be covered with tiles, marbles, decorative microcement coatings, etc.

Also, due to special formulation of selected aggregates, ClimaRoof® KF-1 can be applied as repairing and leveling repairing mortar for horizontal surfaces of terraces with additional waterproofing properties, before application of final coatings. In this way, the need for application of extra repairing products is minimized.

<b>TECHNICAL DATA</b> (Measurement conditions 20°C and 50% Relative Humidity)	
Color	Grey
Water ratio	4,1 l water in 25kg ClimaRoof KF-1
Maximum grain size of mortar	1mm
Bulk density of dry mortar	1,62±0,05Kg/l
Bulk density of fresh mortar	1.98 ±0,05Kg/l
Application temperature	Από +5°C έως +30°C
Min/max layer thickness	3/15 mm per application layer
Pot life	60 min
Time for the 2nd layer of application	6-24 hours after the first layer
Mild walkability	8 hours after completed the application
Consumption	1,5-2,0kg/m <sup>2</sup> /mm

<b>PRODUCT PERFORMANCES</b>	
Permeability to CO <sub>2</sub> EN 1062-6	$s_D = 315m$
Permeability to water vapor EN ISO 7783-2	$s_D = 0,26m$ (Class I, permeable to water vapor)
Capillary absorption & permeability to water, EN 1062-3	$w \leq 0,057 \text{ kg/m}^2 \cdot \text{h}^{0,5}$
Pull-off test EN 1542	$\geq 1,25 \text{ N/mm}^2$
Adhesion to XPS EN 13494	$\geq 0,327 \text{ N/mm}^2$
Flexural strength EN 13892-2	$7,0 \pm 1,0 \text{ N/mm}^2$
Compressive strength EN 13892-2	$17,5 \pm 1,5 \text{ N/mm}^2$
Reaction to fire after application EN 13501-1	A2-s1,d0

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### DIRECTIONS FOR USE:

**1. SUBSTRATE - PREPARATION:** To ensure better adhesion, the surface is required to be flat, solid, dry, clean and free of dust, oils, salts, rust, loose paint and residues, swollen paints, etc. **ClimaRoof® KF-1** has very good adhesion to standard structural surfaces (eg concrete, cement mortar, brick, cement board). Light soaking with water before use is recommended. On highly absorbent surfaces priming is recommended, using micromolecular acrylic primer **Eco Dur Aqua** by **KRAFT PAINTS**. On demanding substrates of asphalt sealants, acrylic or polyurethane sealing membranes, decorative tiles, etc... which are well anchored and without surface alteration, priming is recommended with **Epoxy Aqua Floor Primer** by **KRAFT PAINTS** with simultaneous application of quartz aggregates.

**2. MIXING:** In a clean container add 4.1-4.5 lt of clean water and gradually empty the contents of a 25Kg bag of **ClimaRoof® KF-1** product. Stirring constantly with a low speed mixer so that a homogeneous paste is obtained. Allow the mixture to rest for about 5 minutes and repeat stirring for a while. The mixture is ready for use for the next 60 minutes (at 25°C). It is forbidden to add extra water to correct the workability of the mortar. This will reduce strength and increase shrinkage.

**3. APPLICATION:** Application as part of ClimaRoof® System: For adhesion of extruded polystyrene thermal insulation boards **ClimaRoof® KF-XPS** or **XPS Etics GF** apply **ClimaRoof® KF-1** to the substrate, with a metal spatula (with pole or without), covering the entire surface

without gaps. Minimum application thickness should be from 3mm and maximum thickness up to 15mm (locally up to 40mm). Thermal insulation boards are then pressed onto the substrate to ensure universal contact with the mixture, following the substrate incline. The final surface of the thermal insulation boards must be completely flat, without gaps between them (<1mm) and in the form of intersecting joints. In case of **ClimaRoof® Incline System**, for adhesion of thermal insulation boards **ClimaRoof® KF-XPS Incline** on to **ClimaRoof® KF-XPS** or **XPS Etics GF** thermal insulation boards, **ClimaRoof® KF-1** is applied with a metal spatula covering the entire surface without gaps. Then, **ClimaRoof® KF-XPS Incline** boards are pressed to ensure universal contact with the mixture.

Application as waterproofing, levelling or/and repairing material: Apply **ClimaRoof® KF-1** to the selected substrate surface using a smooth or serrated metal spatula (with a pole or without), covering the selected surface. If necessary, level using a smooth metal spatula. The material should be coated with overlying layers (e.g. tiles, marbles, decorative microcemento coverings etc.) after 3-7 days, depending on the environmental conditions and after the material is dried in depth.

**4. CLEANING OF TOOLS:** Immediately after the application tools must be cleaned with warm water and soap or a detergent solution. Remove as much material as possible from tools before cleaning.

### IMPORTANT NOTES:

Stir the product before use and at regular intervals during application with a mechanical drill.

Do not apply at temperatures below +5 °C and above +30 °C as well as at humidity levels above 65%.

Do not apply in case of frost forecast for at least next 24 hours after application.

Do not apply in case of impending rain or in direct intense sunlight and wind currents.

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## CONSUMPTION:

The consumption of ClimaRoof® KF-1 is about 1,5-2,0 kg/m<sup>2</sup>/mm. It depends on type of substrate, the type of thermal insulation boards, and also tools, conditions and method of application.

## PACKAGING - SHADES:

The product is packaged in 25Kg valve paper bags in Grey shade.

## STORAGE:

Stored on wooden pallets in a dry environment with temperature above 5°C for 12 months from the production date.

## HEALTH, SAFETY & ENVIRONMENTAL INFORMATION

Read label before use. For further information please consult the Material Safety Data sheet.

Poison Centre Telephone +30 210 7793 777.



### CERTIFIED SYSTEMS

ISO 9001 ISO 140001 ISO 50001 ISO 45001

07/24 THIS TECHNICAL DATA SHEET SUPERSEDES ALL PREVIOUS EDITIONS RELEVANT TO THIS PRODUCT

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**DISCLAIMER:** The above technical data, information, recommendations and guidance are based on scientific and technical knowledge, laboratory studies and long experience. However, the above information is considered to be as indicative and should be reviewed in any case in relation to each specific application conditions. Consequently, the suitability of each product in any application must be evaluated after referring to the updated Technical Data Sheet and to the website [www.kraftpaints.gr](http://www.kraftpaints.gr), as well as after contacting the technical support department, in case of necessity. Our company guarantees the quality of the product itself, whilst in any case the user/applicant is exclusively responsible for any undesirable failures after using the product.

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	<b>Druckfarben Hellas S.A.</b> Megaridos Ave., Kallistiri area, GR-19300 Aspropyrgos, Greece
<b>22</b> DoP No 03.36 <b>ClimaRoof® KF-1</b> <b>EN 1504-2:2004</b> Coating (C) for surface protection of concrete structures according to principles 1(PI), 2 (MC) and 8 (IR)	
Reaction to fire	A2-s1,d0
Permeability to CO2	s <sub>D</sub> > 50 m
Permeability to Water Vapour	Class I
Capillary Absorption and permeability to water	w < 0.1 kg/m <sup>2</sup> · h <sub>0,5</sub>
Adhesion strength by pull-off test	≥1.0 N/mm <sup>2</sup>
Dangerous substances	See SDS

	<b>Druckfarben Hellas S.A.</b> Megaridos Ave., Kallistiri area, GR-19300 Aspropyrgos, Greece
<b>22</b> DoP No 03.41 <b>ClimaRoof® KF-1</b> <b>EN 13813:2002</b> Cementitious screed material for use internally in buildings (CT-C16-F6)	
Reaction to Fire	A2-s1,d0
Release of Corrosive Substances	CT
Water Permeability	NPD
Water Vapour Permeability	NPD
Compressive Strength	C16
Flexural Strength	F6
Wear Resistance	NPD
Sound Insulation	NPD
Sound Absorption	NPD
Thermal Resistance	NPD
Chemical Resistance	NPD
Release of Dangerous Substances	See SDS

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