Technical Data Sheet

FINOMIX®
DRY MORTARS

Release 1: 25/02/2022

hydroflex cool•roof

flexible UV-resistant 2-component cementitious waterproofing mortar

class A5

- High UV resistance
- Excellent elastic performance even at -10°C
- Crack-bridging properties >2.50mm
- Protects concrete structures from carbonation

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HYDROFLEX COOL•ROOF

flexible UV-resistant 2-component cementitious waterproofing mortar

DESCRIPTION

Ultra-white, flexible, 2-component cementitious mortar, for waterproofing of exposed and non-exposed surfaces, protecting them against moisture and water under pressure.
Mixing of componentA into component B forms, at the cured state, a flexible seamless membrane impermeable to water against positive or negative hydrostatic pressure, that adheres strongly to the substrate and is able to bridge cracks and withstand contraction-expansion and vibrations of the substrate.
It exhibits high UV resistance and excellent crack-bridging performance for cracks >2.50mm (class A5) at +23°C and >1.25mm (class A4) at -10°C.
Classified as coating mortar (C) for the protection of concrete structures according to European standard EN 1504-2.

APPLICATIONS

It is applied in two or more layers, for the waterproofing of roofs, and as a cool roof-coating since it exhibits high solar reflectance, reducing the cooling costs during the summer months.
It is ideal for waterproofing against water under pressure and substrates subject to strain and that have the tendency to develop (or already have) micro-cracks due to contraction-expansion or vibrations.
It is used for:

- Waterproofing of concrete water tanks.
- Waterproofing in baths, showers, swimming pools, roofs, balconies, etc., before the installation of ceramic tiles or other decorative layers.
- Waterproofing and protection of surfaces made of concrete, cement-based floor-screeds, bricks, AAC blocks, cement-blocks, etc., as well as cement-boards, gypsum-boards, wood, etc.
- Protection of cracked concrete and render surfaces from the ingress of moisture and other corroding agents.
- Protection of concrete surfaces exposed to saline environment.

PROPERTIES / ADVANTAGES

- High UV resistance.
- Applied as a cool roof-coating reducing the cooling costs during the summer months.
- Crack-bridging properties of the cured membrane. It withstands contraction-expansion and vibrations of the substrate.
- Strong adhesion to the substrate.
- Compatible to mortars used for the installation of ceramic tiles, glass-mosaics, natural stones, etc.
- Can be applied on slightly wet surfaces without priming.
- Excellent waterproofing performance.
- Vapour permeable.
- Increased resistance to ageing.
- Pre-weighted, ready-to-mix containers. - Stable product quality.

HARMONIZED STANDARDS / REGULATIONS

- **EN 1504-2:2004:** Cement-based product for the protection of concrete surfaces - Coating (C). Meets the requirements of the standard.
- **EN 1504-9:2008:** Products and systems for the protection and repair of concrete structures - General principles for the use of products and systems. Meets the requirements of the standard according to Principle 1 (PI - Protection against Ingress), 2 (MC - Moisture Control) and 8 (IR - Increasing Resistivity).
- **Regulation (EC) No. 305/2011:** CE marked product with Declaration of Performance (DoP): HFCOOLROOF/CPR-7-13/090/02-2022.

APPLICATION INSTRUCTIONS

- Surfaces must be clean, free from dust, oil and other loose materials.
- Decomposed parts of concrete or render must be properly removed (manually, mechanically, by sandblasting or waterblasting, etc.) until the surface remains stable and clean. Restoration must be done using the proper **FINOMIX** repairing products.

- Steel elements protruding from concrete should be cut to a depth of 2-3cm and the holes should be repaired with the appropriate repair mortar (**RP 4000** or **RP 4100**) or using the polyurethane sealing mastic **PU•FIX**.
- Inner corners (floor-wall interface) must be shaped into gutter with sides of about 5cm using suitable repairing mortars.
- Render surfaces must be dry and adhere strongly to the substrate.
- Existing surfaces like old tile layers, terrazzo floors, marble, etc., must be sound and properly cleaned before the application of **HYDROFLEX COOL•ROOF** on them.
- Porous surfaces must be soaked with water before application. Allow the excess water ro evaporate or remove it using compressed air.
- Empty component B (10kg) into a clean vessel and then add component A (25kg) under continuous stirring until a homogenous mixture without lumps is formed. It is recommended to use a low speed electric mixer (~300rpm). The mixture should be left to settle for about 5 minutes and then be slightly stirred again.
- Apply the mixture with a brush, a spatula or by spraying, in 2-3 layers with a maximum thickness of 1mm per layer. The number of total layers depends on the demands for waterproofing. Each layer is applied crosswise to the previous one after it has sufficiently dried. In cases where the application is done by spraying, special attention should be payed to the uniform thickness of each layer.
- For the waterproofing of surfaces subject to movements, contraction-expansions and prone to cracking, the waterproofing layer must be reinforced with the special fiberglass mesh of 60g/m^2. The mesh is embedded into the first layer and then two more layers are applied. Take special care for the mesh to be embedded completely without leaving gaps.
- Joints and corners should also be reinforced the same way by embedding 10cm wide fiberglass mesh strips in the first layer and covering it with a second layer while it is still fresh.
- The finished surface of **HYDROFLEX COOL•ROOF** must be left to cure for 5-7 days before applying any other layer on it. Use only high quality cementitious adhesives type C2 according to EN 12004-1 for tile bonding.

CLEANING OF EQUIPMENT

Clean all tools and application equipment with water immediately after use. Hardened material can only be mechanically removed.

RECOMMENDATIONS

- Temperature during application should be between +5°C and +35°C.
- Don't mix component A with water and don't add water to the mixture. Water addition affects the properties of the product.
- Do not add cement, aggregates or other admixtures to **HYDROFLEX COOL•ROOF**.
- Each layer of **HYDROFLEX COOL•ROOF** should not exceed 1mm in thickness.
- Postpone the application if high temperatures or frost are expected for the following 24 hours after application.
- During the curing period protect the fresh surface from dehydration.
- Fresh surface must be protected from rainfall and frost for the first 24-48 hours.
- **HYDROFLEX COOL•ROOF** must not be exposed directly to chlorine water (e.g. swimming pools). It must be covered with tiles or other protective/decorative coatings.

TECHNICAL CHARACTERISTICS			
PRODUCT CHARACTERISTICS		**COMPONENT A**	**COMPONENT B**
Appearance		cementitious powder	liquid
Colour		white	milky white
Bulk density		1.40 ±0.05 kg/lt	
Density			1.10 ±0.05 kg/lt
Dry solids content		100%	52%
APPLICATION CHARACTERISTICS (+23°C / 50% R.H.)			
Mixing ratio of components		A : B = 25 : 10 (parts by weight)	
pH		> 11	
Density		1.90 ±0.05 kg/lt	
Pot life		about 1 hour (22°C)	
Application temperature		minimum: +5°C / maximum: +35°C	
Max. application thickness per layer		1mm	
Consumption		approximately 1.2-1.4 kg/m^2 for a 1mm thick layer	
PERFORMANCE CHARACTERISTICS			
Adhesion after thermal compatibility	freeze-thaw with de-icing salts (EN 13687-1)	≥ 1.0 N/mm^2	
	thunder shower (thermal shock) (EN 13687-2)	≥ 1.0 N/mm^2	
Static crack-bridging (EN 1062-7)	at +23°C	Class A5 (crack width > 2.50 mm)	
	at -10°C	Class A4 (crack width > 1.25 mm)	
Depth of penetration of water under pressure	under positive pressure (EN 12390-8, 3 days, 5bar)	no penetration	
	under negative pressure (1.5bar)	no penetration	
Adhesion to concrete (EN 1542, MC 0,40)		≥ 1.5 N/mm^2	
Capillary absorption and permeability to water (EN 1062-3)		≤ 0.01 kg·m^{-2}·h$^{-0,5}$	
Permeability to water vapour (EN ISO 7783)		S_D < 5m (Class I)	
Permeability to CO_2 (EN 1062-6)		CO_2 S_D > 50m	

Note: Measurements were conducted in a laboratory environment. The varying conditions present on-site (temperature, humidity, ventilation, substrate absorbency) may affect the material's properties.

SAFETY PRECAUTIONS

- The product (component A) contains cement which has an alkaline reaction with water and is classified as irritant.
- Always wear appropriate personal protective equipment for eyes and skin (protective clothing, gloves and goggles).
- If skin contact occurs, rinse well with plenty of clean water.
- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- Consult product's Safety Data Sheet for further instructions on safety handling.
- PRODUCT FOR PROFESSIONAL USE.

PACKAGING - STORAGE

Available in:

- Package of 35kg (25kg A + 10kg B) in white colour.

Storage: Component A: 12 months from production date, if stored in original, sealed packaging, protected from direct sunlight and moisture. ▪ Component B: 12 months from production date, if stored in original, sealed container, protected from direct sunlight and frost.

LEGAL NOTICE

The technical characteristics and recommendations for the use and application of the **FINOMIX** range of products are based on the knowledge and experience of the company. The above information shall be considered merely indicative and subject to confirmation after long-term practical application. For this reason, anyone who intends to use the product must ensure that it is suitable for the envisaged application. Since the specific site conditions during the applications are beyond the control of our company, the user alone is fully responsible for any consequences deriving from the use of the product. **FINOBETON S.A.** (**FINOMIX**) has the right to modify the properties of its products without prior notice. This release voids any previous publications issued for this technical specifications sheet.

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ISO 14001 ENVIRONMENTAL MANAGEMENT SYSTEM
ISO 45001 OCCUPATIONAL HEALTH & SAFETY