

## Strong Repair 84



Polymer-modified, fiber reinforced, thixotropic, ultra high-strength, concrete repairing mortar

- » Suitable for use in high-strength concrete constructions, structural and non-structural
- » Thixotropic
- » Application thickness 5-60 mm (locally up to 80mm)
- » Natural recycled raw materials (Recycled Green Technology)
- » Zero shrinkage & dehydration cracks
- » Contains corrosion inhibitor
- » Excellent adhesion to the substrate
- » Non-corrosive (does not contain chloride ions and lime)
- » Designed for dynamic-stress applications
- » Resistant to temperature changes
- » Indoor and outdoor usage

**Strong Repair 84** is a polymer-modified, thixotropic, one-component repairing mortar, reinforced with advanced adhesion and thixotropy resins as well as PP fibers. Contains natural hydraulic recycled binders (Recycled Green Technology) that improve workability and control hydration mechanisms, as well as active, amorphous, inorganic additives that compensate shrinkage tendencies and maximize mechanical strengths. Does not corrode metal

reinforcements, zero percentage of chloride ions and lime. It is classified as concrete repairing mortar **PCC R4** according to **EN 1504-3 & EN 1504-9:2008 (Principle 3 Concrete Restoration – Methods 3.1 & 3.2, Principle 4 Structural strengthening – Method 4.4, Principle 7 Preserving or Restoring Passivity – Methods 7.1 & 7.2).**

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## FIELD OF APPLICATION

**Strong Repair 84** is suitable for repairs, structural and non-structural, of concrete elements on vertical and horizontal surfaces. It is ideal for restoring loosened concrete elements (e.g. due to carbonation, corrosion, cracking, stress). Also, it is used for structural reinforcement of concrete, restoring or upgrading the bearing capacity of the construction element. In addition, it can be used for preserving or restoring passivity (protection of concrete reinforcement).

It is applied, indicatively, to high-strength concrete elements such as: walls, columns, beams, tanks, bridges, dams, balcony cantilevers, parapets, ceilings, floors, where repair, restoration, reinforcement, smoothing & filling of rigid joints is required, etc.

It is applied in thicknesses of 5 – 60 mm per layer (locally up to 80mm). Suitable for indoor and outdoor usage.

<b>TECHNICAL DATA</b> (Measurement conditions 20°C and 60% Relative humidity)	
Color	<b>Grey</b>
Water ratio	<b>4.4 lt water in 25 kg Strong Repair 84</b>
Maximum grain size	<b>2000µm</b>
Bulk density of dry mortar	<b>1,60 ± 0,05kg/l</b>
Bulk density of fresh mortar	<b>2,20 ± 0,05kg/l</b>
Application temperature	<b>From +5°C to +35°C</b>
Application thickness	<b>5-60 mm per coat</b>
Pot life	<b>1 hour</b>
Consumption	<b>1.7 kg/m<sup>2</sup>/mm</b>

<b>PRODUCT PERFORMANCES</b>	
Compressive strength, EN 12190	≥ 50MPa
Chloride ion content, EN 1015-17	≤ 0,01%
Adhesive bond, EN 1542	≥ 2,60 MPa
Carbonation resistance, EN 13295	passes
Elastic modulus, EN 13412	≥ 25,0 GPa
Thermal compatibility, measured as adhesion after: <ul style="list-style-type: none"> <li>• 50 cycles freeze thaw with de-icing salt immersion, EN 13687-1</li> <li>• 30 cycles thunder shower, EN 13687-2</li> <li>• 30 dry thermal cycles, EN 13687-4</li> </ul>	≥ 2,60 MPa
Capillary absorption (c), EN 13057	$c \leq 0,15 \text{kg} \cdot \text{m}^{-2} \cdot \text{h}^{-0.5}$
Reaction to fire, EN 13501-1	A1

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## DIRECTIONS FOR USE:

1. **SUBSTRATE - PREPARATION:** To ensure good adhesion substrate should be sound, clean, rough, free of dust, oil, lime, tar and loose elements. Light soaking with water before use. Any excess water is allowed to evaporate or removed with compressed air.

On substrates with high absorbency (eg aerated concrete, old plasters/renders, etc.) it is recommended to apply **Eco Dur Aqua** by **KRAFT PAINTS** diluted 1: 1 to 1: 2 with water. Caution! The primer must properly be diluted in order to be completely absorbed and avoid film formation on the substrate surface.

In cases of rusted concrete reinforcement, the rust and other loosely attached particles are carefully removed (mechanically or by water blasting / sandblasting) from the perimeter and uniformly of the entire substrate surface (where possible). Next, it is recommended **Rust Blocker Powder** by **KRAFT PAINTS** (polymer-modified, reinforcement corrosion inhibitor and bonding bridge mortar) to be applied on the steel reinforcement (or optionally, also to the rest application surface of repairing mortars, as bonding bridge).

2. **MIXING:** In a clean container add pure water and gradually empty the package content while stirring constantly with a low-speed electric mixer (4.4 - 4.6 lt water per 25 Kg or 0.9 lt water per 5Kg **Strong Repair 84**).

## IMPORTANT NOTES:

Do not apply at temperatures below +5°C and above +35°C as well as at relative humidity above 65%.

Do not apply in case of impending rain for at least the next 24 hours after application

During curing of the mortar, periodic damping (at least for 24 hours – especially in the summer months for at least 48 hours) and continuous

Mixing must be done carefully so that no amount of product remains on the walls or bottom of the container. The product is ready for use when the mixture becomes homogeneous without lumps.

3. **APPLICATION:** Application of **Strong Repair 84** on the substrate is carried out using a metal spatula or trowel at a thickness of 5-60 mm per layer (locally up to 80 mm), firmly pressing the mortar into the substrate, to fill any pores or pits. Depending on the conditions and thickness of application, any subsequent layers are repeated when the previous one has started to set. Otherwise, if it is repeated later, it is recommended to precede with light wetting and roughness increase of the surface. When usage of forming molds is necessary for the repair, light soaking with water on them is required previously (without excess water formation) and then repairing mortar is carefully poured, without entrapping air and creating pores.

**Strong Repair 84** surface can be finished, if required, using a float, trowel or suitable sander as soon as the mortar begins to set and with gentle mechanical stress during processing.

4. **CLEANING OF TOOLS:** Tools should be cleaned immediately after application with plenty of water while the material is still fresh or otherwise mechanically. Remove as much material as possible from tools before cleaning.

protection of the surface against strong air currents and direct sunlight (e.g. using wet burlap/cloths) is required.

Do not apply the mortar on lightweight, aerated concrete substrates.


Do not add additional improvement additives, cement, gypsum and other aggregates to the mixture.

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## CONSUMPTION

Consumption is about 17 – 19 Kg/m<sup>2</sup>/cm. It depends on the type of substrate, the method, the tools and the application conditions.

 2884/2878	<b>Druckfarben Hellas S.A.</b> Megaridos Ave., Kallistiri area, GR-19300 Aspropyrgos, Greece
<b>23</b> DoP No 05.07 <b>Strong Repair 84</b> <b>EN 1504-3</b> Concrete repair product for structural repair PPC mortar (based on hydraulic cement, polymer modified), Class R4	
Reaction to fire	Pending
Compressive strength	Class R4
Chloride ion content	≤ 0.05%
Adhesive bond	≥ 2.0 MPa
Carbonation resistances	Passes
Elastic modulus	≥ 20 GPa
Thermal Compatibility (Part 1, Freeze-Thaw)	≥ 2.0 MPa
Capillary absorption	≤ 0.5 kg·m <sup>-2</sup> ·h <sup>-0.5</sup>
Dangerous substances	Comply with 5.4

## PACKAGING – SHADES

The product is packaged in 25Kg, 5Kg valve paper bags in Grey shade.

## STORAGE

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

## HEALTH, SAFETY

### & ENVIRONMENTAL INFORMATION

Carefully read and follow all cautions and warnings on product label. For further information, refer to the Material Safety Data Sheet of this product.

Poison Centre Tel:

+30 210 7793 777



06/2024 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.com](http://www.kraftpaints.com), 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.

## DRUCKFARBEN HELLAS S.A.

ASPROPYRGOS 19 300, ATTICA - GREECE | TEL.: +30 210 55 19 500 - FAX: +30 210 55 19 501  
[www.druckfarben.com](http://www.druckfarben.com) | [www.kraftpaints.com](http://www.kraftpaints.com)



Toll-free number

800 111 7700 Monday - Friday, 8.00 am - 04.00 pm  
 e-mail: [paints.orders@druckfarben.gr](mailto:paints.orders@druckfarben.gr)