

## Repair 540R

Extra-fast setting cementitious mortar, polymer-modified, fiber-reinforced, plastic consistency, specific for fixing road covers and maintenance of industrial floors.

Repair 540R is a cementitious, quick-setting, single-component, premixed, controlled-shrinkage mortar with a plastic consistency, based on high-strength hydraulic binders, selected aggregates, special additives and HP fibers. The dimensional stability allows the application of Repair 540R even at high thicknesses in a single coat, eliminating cracking phenomena in all phases of the product's life (application, plastic phase, curing). Repair 540R is ideal for fixing manhole covers, bollards, poles, road signs, advertising, quick repair of holes, gravel nests, damage to the concrete roadway and for the maintenance of industrial floors. Formulated in the new Licata S.p.A. Research & Development laboratories, Repair 540R is characterized by easy workability and high adhesion power. The rapid development of mechanical strengths allows to minimize the installation and commissioning times of the area subject to intervention.



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### MAIN FIELDS OF USE

Repair 540R has been formulated in such a way as to ensure the best performance in all interventions for which an ultra-fast, dimensionally stable mortar with high mechanical performance and extremely workable is required. Repair 540R is indicated for:

- Fastening of light or heavy operating machines
- Fixing of manhole covers, bollards, poles, road signs, advertising, etc.
- Quick repair of holes, gravel nests,
- Repair of the concrete roadway
- Maintenance of industrial floors.

For different applications, please contact the technical department.

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### CHARACTERISTICS

- Modular plastic consistency. The formulation of Repair 540R allows you to adjust the workability of the mixture to obtain surfaces with a slight slope, adapting it to the installation needs, or perfectly flat.
- Quick setting. The use of special accelerating additives drastically reduces finishing times, making Repair 540R walkable after 1 hour and drive over 3-4 hours after application.
- Mechanical resistance. The high-performance hydraulic binders, the selected aggregates with a constant granulometric curve and the pozzolanic additions confer high mechanical resistance values.
- Durability. The particular formulation and the additives contained give the mortar high durability and resistance to de-icing salts, oils and hydrocarbons.
- High adhesion power. Repair 540R is a modified polymer mortar (PCC). The adhesion values obtained after exposure to extreme conditions of frost, heat and chemical aggression are proof of its reliability over time.
- Controlled hygrometric withdrawal. The presence of fibers and the particular formulation of Repair 540R reduce cracking phenomena to a minimum even in the case of high thicknesses, up to 100 mm used as it is and over 100 mm if cut with 30% by weight of clean gravel 6-9 mm.
- Resistant to de-icing salts, oils and hydrocarbons.



## APPLICATION PROCEDURE

### Preparation of the substrate

Mechanically remove any friable or easily detachable parts. Thoroughly clean the application area so that it is free of dust, residues of surface treatments such as: detergents, oily substances, mineral or organic greases, waxes, traces of gypsum and salts.

### Preparation of the product

3.75-4.25 liters of clean water (UNI EN 1008) are required for each 25 kg bag (i.e. 15-17% by mass). Pour into a construction site cement mixer or, for small quantities, use a clean container, containing  $\frac{3}{4}$  of the mixing water. Mix for about 3 minutes at a low number of revolutions, gradually adding the residual water until obtaining a mixture of the desired workability, homogeneous and free of lumps. Avoid splitting the packs for partial mixing. The product stored in open bags and used only in part may no longer meet the technical characteristics listed in this document.

### Application

The previously prepared substrate must be wet to excess, bringing it to SSA (Dry Saturated Surface) conditions. In the case of horizontal jets on absorbent or particularly smooth substrates, instead of wetting to excess, it is possible to treat the dry surface with a coat of Tiles Eco Primer primer. Spread the product on the substrate helping it to slide with a trowel and, if necessary, adjust the slope as required by straightening. Repair 540R can be walked on after 1 hour, can be driven over after 3-4 hours and fully develops resistance after 28 days of curing. Do not apply Repair 540R on substrates in the presence of a veil of water on the surface, completely dry or in extreme conditions such as: substrates exposed to the beating sun or frozen. Make sure that the ambient, substrate and product temperatures during application are between +5 ° C and +35 ° C.

## PRODUCT INFORMATION

Appearance	Gray powder or black powder
Grain size	< 3 mm
Consumption of the powder	≈18,5 kg/m <sup>2</sup> ogni 10 mm di spessore
Mixing water	15-17% of the weight of the powder
Workability time at 20 °C	< 10 minutes
Application thickness per coat	10-100 mm
Application temperature	from +5 ° C to +35 ° C
Storage	6 months in a dry and protected place in unopened packaging, at temperatures between +5 ° C and +35 ° C
Packaging	25 kg bag
Density	2100-2180 kg/m <sup>3</sup>
pH of the product	aprox 12

## PERFORMANCE

Characteristic	Test method	Regulatory requirement	Performance
Compressive strength	EN 12190	≥45 MPa	
2 hours			>25 MPa
4 hours			>30 MPa
1 day			>39 MPa
7 days			>49 MPa
28 days			>58 MPa
Flexural strength	EN 196-1		
2 hours			6 N/mm <sup>2</sup>
4 hours			6,5 N/mm <sup>2</sup>
1 day			7 N/mm <sup>2</sup>
7 days			7,5 N/mm <sup>2</sup>
28 days			9 N/mm <sup>2</sup>
Chloride ion content	EN 1015-17	Absent	Absent
Elastic module	EN 13412	≥20 GPa	≥20 GPa
Thermal compatibility, freezing and thawing	EN 13687-1	≥2 MPa	≥2 MPa
Capillary absorption	EN 13057	≤0,5 kg m <sup>-2</sup> h <sup>-1/2</sup>	≤0,5 kg m <sup>-2</sup> h <sup>-1/2</sup>
Thermal resistance - Operating temperature			-30°C ÷ +90°C
Fire resistance Euroclass	EN 13501-1		Class A1

## WARNINGS

- Product for professional use.
- Do not add water or other powder to the already mixed product.
- Alkaline material: protect the eyes and skin during application.
- Workability can be adjusted by varying the amount of mixing water, strictly following the requirements of the technical data sheet.
- After use, wash the tools with water when the dough is still fresh.
- The ambient temperature and the humidity rate affect the workability, setting and drying times.
- Adequately cure the product's maturation for at least 24 hours after laying, protect the fresh mortar from rapid drying, direct sunlight, strong wind and heavy rain.

## SAFETY

Regarding information on the correct disposal, storage and handling of the product, please consult the relative Safety Data Sheet.

## NOTE

This technical data sheet replaces and cancels the previous versions.

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