RESIMALTA 201 UP

FAST, CASTABLE POLYESTER MORTAR FOR HOLDERS AND GROUTING

EN 1504-6

Bi-component mortar based on anti-shrinkage, solvent-free, fast-hardening, hybrid polyester resins hardened with a mixture of catalyst powder, selected mineral charges and various additives.
CE-marked product as a system for the protection and repair of concrete structures in accordance with UNI EN 1504-6 “Anchoring of reinforcing steel bar”.

Areas of use

It is suitable for works carried out at low temperatures and it is used for:

- Casts under support plates of bridges, pillars, supports, footings and road joints;
- Holder and injections below rail-tracks of cranes, trolleys and precision machinery;
- Fast restoration of concrete floors and chipped joints;
- Fixing of runway lighting in airports;
- Concrete fast grouting of iron rods, stay wires, railings, poles;
- Reconstruction or new laying through casting of concrete prefab elements (ledges, chipped supports);
- Plugging through clogging of holes to fix water pipes and tubes;
- Filling and fast hardening of groves and breakings to place technical plants.

Features

Thanks to its fluid composition, RESIMALTA 201 UP can be directly applied to the support without the need for a primer; furthermore, it perfectly fills the castable volume and ensures excellent sealing.
It resists well both to static and dynamic stress and its physical characteristics remain the same throughout the thickness of the cast thanks to a composition which prevents settling of inerts.
RESIMALTA 201 UP also ensures:

- Waterproofing features;
- Fast hardening;
- Excellent adherence to concrete, metal, stone, wood;
- Electric insulation;
- Ease of use: it is packaged in two pre-weighed components to avoid the possibility of mistakes when weighing.

How to use

Preparaion of the basement
The surface or hole to be treated must be clean, healthy, dry and mortar grout and crumbly part-free. For best adhesion concrete surfaces must be rough and the metal must be sandblasted to SA 2.5 degree: in case of threaded galvanized rods or enhanced adherence, degreasing is sufficient.
In case of under plate casting or where it is necessary, use a funnel or prepare a suitable formwork with feeding hopper and exit breather pipe. To prevent the mortar from adhering to the formwork, apply a detaching agent or a polyethylene foil.
Holes to fix rods must be made with revolving percussion drill and not through coring; they must then be de-dusted, dried and cleaned.
In case of temperatures below +10°C, remove any possible humidity using compressed air and heat the support for a few minutes using a gas blowpipe, otherwise do not apply.

Preparation of the product
The two components must be pre-dosed as per stoichiometric ratio.
Pour component B into component A and blend at slow speed for 3' – 4' using drill with helix/spiral to reduce air inlet as much as possible; during this operation, scrape also the bottom and the sides of the bucket.

Application
Cast the mortar in the volume to be filled.

Notes
With low temperatures, keep the product at 20 – 25°C for a few hours before application to foster blending and casting. Packages are weight pre-measured out: fully use all components A and B. If you wish to divide the package, products must be weighed by respecting the A+B ratio on the label and must not be weighed out based on the volume.

Technical characteristics

Compression strength	(UNI EN 12190)	> 80 MPa
Flexural strength	(UNI EN 12190)	> 25 MPa
Elastic modulus (compression)	(UNI EN 13412)	9000 MPa
Adhesion on dry concrete	(ISO 4624)	> 4,0 MPa
Electrical resistivity ρ		10^{12} Ω
Viscosity		10500 cP
Density of non-hardened mortar		1,60 kg/dm³
Density of hardened mortar at 25°C		1,75 kg/dm³
A+B mixing ratio		100 + 194

Values obtained after 7 days of curing at 25 °C.

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Tensile strength
The test use a class > C20/25 concrete and have been carried out using class 4.8 threaded rods. RESIMALTA 201 UP is introduced in holes created through revolving percussion and with diameter and depth depending on the size of the threaded rod.

Ø rod	[mm]	8	12	16	20	24
Ø hole	[mm]	12	16	20	25	28
Hole depth	[mm]	80	120	160	200	240

Tensile strength of a holder made with RESIMALTA 201 UP in the above conditions is roughly based on the following relation (ø represents the hole diameter, h the hole depth):
Ultimate pull-out strength [kN] = 0,030 x ø [mm] x h [mm].

CE

1305-CPR-1070

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UNI EN 1504-6

RESIMALTA 201 UP
Anchoring product.

Pull-out strength:……...Displacement ≤ 0.6 mm at load of 75 kN.
Chloride ion content:…..……..……...…NPD.
Glass Transition Temperature:...…….……48.3°C.
Reaction to fire:….……..…F.
Creep under tensile load:.....Displacement ≤ 0.6 mm
.....after continuous loading of 50 kN for 3 months.
Elastic Modulus:……..≥ 2˙000 N/mm^2.
Dangerous substances:……..NPD.

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Use and hardening times

By pouring B component into A component, the hardening reaction starts: following mixture the time available is limited and it depends on the temperature.

Temperature	Pot life	Clamping at 120 Nm	Clamping at 400 Nm
5 °C	120’	150’	180’
10 °C	70’	90’	100’
20 °C	30’	45’	55’
30 °C	20’	35’	45’

The data in the table above refers to an M20 threaded rod in which a bolt is screwed in with driving torque of at least 120 Nm and then of 400 Nm; the same times are valid also in case of rods with different diameter.
The temperature of the product is equal to that in which it has been kept for the past 3 hours.
The support temperature is generally lower than the air temperature during the winter season and higher in the summer season.
At 20 °C complete hardening occurs after 24 hours.

On request, the specific inhibitor is available to slow down the reaction speed for applications in hot climates.

Consumption

Calculate 1.6 kg/dm3 , specific weight of non-hardened product plus 10% scrap for each hole.

Ø rod	[mm]	8	12	16	20	24
Ø hole	[mm]	12	16	20	24	28
Hole depth	[mm]	80	120	160	200	240
No. Holes/package		560	250	150	100	72

Packaging and storage

Available in 5 kg packages (1,7 kg comp. A, 3,3 kg comp. B).
If stored in its original and sealed package, at temperatures between 10 and 30 °C, away from moisture, heat sources and direct sunlight, the product remains unaltered for a year.
Protect from frost.

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Cleaning of tools and health precautions

Consult the relevant safety data sheets before handling the product.

To clean tools use solvents such as RESISOLV 111, RESISOLV 196 or alcohol.

Polyester resins may cause irritations: please avoid any contact with the skin and especially with the eyes and ensure proper ventilation during use.
Wear a mask to protect the respiratory tract, gloves, protective suit, goggles or protective visor. People who have to work with polyester resins for long periods are advised to use protective creams.

In case or contact with the skins, immediately clean with a cloth soaked in denatured alcohol and wash with water or neutral soap or handwash paste. Then use a nourishing cream.
In case of contact with eyes or mucosa, do not use alcohol. Rinse immediately with running water and neutral soap for 10/15 minutes, then seek medical advice.

Do not rinse with solvents.

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