REPIKIT EP 315

CARTRIDGE OF EPOXY ADHESIVE PASTE FOR STRUCTURAL INJECTIONS

EN 1504-6

High viscosity, solvent-free, bi-component epoxy resin-based structural adhesive to strengthen through injections, cracks, and damages in the building and civil engineering sector. 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

REPIKIT EP 315 is used to carry out structural strengthening injections in blind cracks 4-10 mm wide passing on compact materials like concrete, bricks, stone, tuff, wood and more in general for:

- Fixing steel and fibreglass plugs and connectors on concrete and wood for comb seam of the structural lesions and in collaborating wood-concrete floor slabs;
- Gluing and grouting of cracks nipples before performing injections of consolidation with RESISYSTEM 310-312 and REPIKIT 310-312;
- Consolidation of structural elements with the technique of Beton-Plaquet thanks to the excellent adhesion to steel;
- Bonding of elements in stone or marble as sills, steps and thresholds to the substrate.

Features

REPIKIT EP 315 is a structural adhesive plaster-like consistency that comes in a cartridge.
Its thixotropic consistency makes sure that the product possesses a low viscosity when subjected to a force kinetics (injection pressure) and high viscosity when it is in a state of rest. The injected material then penetrates with ease in lesions 4 - 10 mm wide and, once the injection pressure, thickens and congeals without dripping and spread further.
After mixing the components, which takes place inside the cartridge, the contents should be completely used.

- The system features internal mixing with pre-weighed resin and hardening agent which are packaged in two separate chambers in the same cartridge;
- It ensures high mechanical properties;
- Excellent adhesion to all building materials with dry or damp bottom;
- Practical and safe use with hand gun or compressed air and apply with a paint brush or spatula;
- High work safety and sanitary conditions of the work: the operator never gets in contact with the product.

REPIKIT has been patented and standardized with PATENT no. 86810563.6.

How to use

Preparaion of the support
The substrate must be clean, free of loose particles, dust and cement grout. The most appropriate treatment is sandblasting; if you cannot, you must at least be mill, bushhammer or brush.
The application on metals involves the removal of oil, grease, paint and rust by sandblasting or abrasion to white metal (SA 2 - 3 SA).
In the case of bonding of a cracked element, it is advisable to open the crack as much as possible, possibly by removing the parts to be bonded (this applies in the case of thresholds, steps or removable parts): remove the loose particles with hard abrasive brush or scraper and thoroughly cleaned with a vacuum cleaner or compressed air.

Preparation of the product
To mix the resin with the hardening agent make a hole in the aluminium seal on the head of the cartridge and slowly insert the stirring rod until the stop. Screw the rod clockwise and carefully push it to the bottom of the cartridge. Move the rod backwards and forwards for at least 3-4 minutes until complete blending. Remove the rod by turning it counter-clockwise.
For 450 and 900 mℓ cartridges screw the static mixer on top of the cartridge, insert it in the appropriate injection gun and extrude the product.

Application
Insert the cartridge into the gun and extrude the product on the bonding surface: spread with a spatula or a trowel. Combine the elements to be bonded immediately; the curing time varies from 12 to 24 hours, depending on ambient temperatures. Maintain pressed the items until full cure.

Notes
To apply REPIKIT 315 in hard-to-reach places, use the special nozzle for injection (length 11 cm) screw-on top of the cartridge in place of the standard one.

Technical characteristics

Compression strength	(UNI EN 12190)	> 80 N/mm^2
Tensile strength	(UNI EN ISO 527)	> 25 N/mm^2
Ultimate elongation	(UNI EN ISO 527)	0,4 %
Resistance to bending	(UNI EN 12190)	> 30 N/mm^2
Traction elasticity modulus	(UNI EN ISO 527)	7780 N/mm^2
Adhesion to dry concrete (*)	(ISO 4624)	> 4,5 N/mm^2
Adhesion to damp concrete (*)	(ISO 4624)	> 3,0 N/mm^2
Adhesion to steel (*)		3,0 N/mm^2
Viscosity at 20 °C		20000 cP
Density at 25 °C		1,50 kg/dm^3

Values achieved after 7 days hardening at 25 °C.
(*) Adhesion test carried out through direct traction.

Anchoring product testing with the method of extraction – UNI EN 1881:2007

	Ø bar [mm]	Ø hole [mm]	Hole depth h [mm]	Tensile strength [kN]	Displacement at load of 75 KN [mm]	Type of failure
REPIKIT EP 315	16	20	150	122,14	0,31	3*
	16	20	150	135,47	0,28	3*
	16	20	150	122,86	0,30	3*

3: Extraction of the bar and the anchoring product from the concrete.*

RESIMIX S.r.l. - Via A. Pacinotti, 12/14 - 36040 Brendola (VI) - Tel. 0444-400773 r.a. - Telefax 0444-601662
www.resimix.com - email: info@resimix.com

CE

1305-CPR-1070

RE.SI.MIX S.r.l., via Pacinotti 12/14, 36040 Brendola (VI)

14

UNI EN 1504-6

REPIKIT EP 315
Anchoring product.

Pull-out strength:……...Displacement ≤ 0.6 mm at load of 75 kN.
Chloride ion content:…..……..……...…NPD.
Glass Transition Temperature:...……..……..…50 °C.
Reaction to fire:…..……..…F.
Creep under tensile load:.....NPD.
Elastic Modulus:…….....> 10000 MPa.
Dangerous substances:……..NPD.

Use and hardening times

When mixing the reaction between the two components starts: time available is therefore limited and it depends on the temperature.

Temperature	Use (pot-life)	Hardening
10°C	80’	18 h
20°C	30’	10 h
30°C	20’	6 h
40°C	12’	4 h

Full hardening after 7 days.

RESIMIX S.r.l. - Via A. Pacinotti, 12/14 - 36040 Brendola (VI) - Tel. 0444-400773 r.a. - Telefax 0444-601662
www.resimix.com - email: info@resimix.com

Consumption

The consumption indicated in the table refers to the fixing of concrete and is considered indicative; for brick or stone masonry, the consumption is from two to three times higher.

Bar diameter [mm]	Hole diameter [mm]	Hole depth [mm]	450 ml cartridge number of fixings (approx.)	900 ml cartridge number of fixings (approx.)
8	10	80	100	200
10	12	90	60	120
12	14	110	35	70
16	18	120	20	40
20	24	170	8	16
24	28	210	4	8

Packaging and storage

450 mℓ cartridges in boxes of 12 pieces including static mixers.
900 mℓ cartridges in boxes of 10 pieces including static mixers.

Packages must be kept vertically and closed: the product remains unaltered for at least a year if kept in a place with temperature between 10 and 30 °C.

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.

Epoxy resins and hardening agents may cause irritations: please avoid any contact with the skin and especially with the eyes and ensure proper ventilation during use.
Wear gloves, protective suit, goggles or protective visor. People who have to work with epoxy resins for long periods are advised to use protective creams.

In case of contact with the skin, 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.

RESIMIX S.r.l. - Via A. Pacinotti, 12/14 - 36040 Brendola (VI) - Tel. 0444-400773 r.a. - Telefax 0444-601662
www.resimix.com - email: info@resimix.com