RESIMIX®
ADVANCED MATERIALS FOR THE BUILDING INDUSTRY

RESICOL 100

THIXOTROPIC EPOXY ADHESIVES FOR STRUCTURAL BONDING AND CONCRETE SMOOTHING

Thixotropic adhesive paste based on solvent-free epoxy resins and hardened with modified aliphatic and cyclo-aliphatic polyamines mixed with mineral fillers.
It can be spatula applied vertically and in the intrados.

Areas of use

- Mending and structural gluing of building materials: concrete, fibre cement, iron, wood, stone, marble;
- Smoothing and stuccoing of surfaces subject to abrasion/erosion;
- Stuccoing the omegas of forming concrete;
- Stiff structural gluing of prefabs in concrete (slabs, pipes);
- Stuccoing the cracks and gluing of the injectors before the injection of RESISYSTEM 310/312 or with REPIKIT 310/312.
- Structural reinforcement of concrete beams by gluing a thin layer of steel (beton placquè) or plating with thin layers of carbon;
- Structural gluing of wood panels in enhancement of wooden floor slab.
- Gluing and lamination of tapes in carbon fibre to reinforce wooden beams.

Features

- Thanks to its high thixotropy, RESICOL 100 adhesive can be vertically applied on thicknesses up to 3 mm and in the intrados with no risk of dripping; RESICOL 102 can be applied on vertical surfaces with thicknesses up to 6 – 7 mm;
- High mechanical compression strength and bending features;
- Excellent adhesion thanks to hardening with no shrinking and excellent compatibility with different building materials: concrete, bricks, stone, wood, steel;
- Good chemical resistance to diluted acid and basic solutions;
- Good resistance to pollution and saline fogs;
- Excellent dielectric properties (low electric conductivity);
- It achieves high mechanical properties only a few hours following application;
- Pre-weighed packages, ready for use.

How to use

Preparation of the support
Smoothing: the surfaces to be coated must be compact, clean (no oil or fat), dry (support damp <5%) and mortar grout and crumbly part-free. For better adhesion the surface must be slightly roughened with sandblasting or sanding; then remove any sign of dust or dirt using an exhauster.
Gluing and mending: in case of gluing or repair of a cracked element, we recommend opening up the crack as much as possible by possibly moving away the parts to be glued (in case of doorstones, steps or non-movable parts); remove the crumbling parts with abrasive disk, brush or scraper and thoroughly clean with vacuum cleaner or compressed air. Metals must be sanded to SA 2,5 degree or alternatively grinded or vigorously cleaned with metal brush and then treated with RESICOLOR 425 specific primer. The presence of water has a negative effect on adhesion. Wet foundations must be dried up as much as possible using air or, better, using gas flame.

Preparation of the product
Pour component B into component A and blend at slow speed for 3' – 5' 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 container.

Application
Smoothing: apply the material with a steel or nylon palette knife.
Gluing and mending: apply the material on the gluing surface using a knife or trowel in 2 to 4 mm thicknesses based on the surfaces to be glued/joined and moderately press the elements until some adhesive comes out from the sides, then make sure they remain pressed/places until hardening (6 hours at 20 °C).

Notes
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
Bending strength (UNI EN 12190)	> 45 MPa
Elastic modulus UNI EN 13412)	9000 MPa
Adhesion to dry concrete (ISO 4624)	> 4,0 MPa
Adhesion to humid concrete (ISO 4624)	> 2,0 MPa
Slant shear strength (UNI EN 12188)	
at 50°	58 MPa
at 60°	64 MPa
at 70°	70 MPa
Adhesion to wood	
Pine	2,5 MPa
Larch	2,5 MPa
Chestnut	3,3 MPa
Oak	3,7 MPa
Linear shrinkage (UNI EN 12617-1)	< 0,1 mm/m
Linear thermal shrinkage (UNI EN 1770)	$3{,}9 \cdot 10^{-5}$ °C^{-1}
Glass transition point	ca. 60 °C
Density	1,95 kg/dm^3
A + B mixture ratio	100 + 6

Valori ottenuti dopo 7 giorni di indurimento a 25 °C.
Nella prova di adesione su acciaio, la rottura avviene nell'adesivo per tutti e tre gli angoli testati.
Nella prova di adesione su legno la rottura avviene sul supporto.

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Tempi di utilizzo ed indurimento

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	use (pot-life)	hardening
10°C	70’	9½ h
20°C	50’	5 h
30°C	35’	4 h
40°C	10’	3 h

Full hardening after 7 days.

For application at low temperature or even if a faster reaction time is requested, it’s available the rapid hardener RESICOL 100 Rapido Comp. B.

Consumption

Gluing and smoothing: approx. 2 kg/m² for a layer 1 mm thick.

Confezioni e stoccaggio

RESICOL 100 is available in 1kg and 5 kg packages (A + B component).
If stored in its original and sealed package, the products remains unaltered for 18 months if kept in environments with a temperature between 10 and 30 °C.

Cleaning of tools and health precautions

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 or 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.

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