RESIMIX®
ADVANCED MATERIALS FOR THE BUILDING INDUSTRY

RESICOL 116

SOLVENT-FREE EPOXY RESIN WITHOUT COLD SHUT CASTING, FOR WET SURFACES

Slightly thixotropic adhesive primer, based on solvent-free epoxy resins hardened with modified amide polymers, with mineral fillers and thixotropic agents added. Specific for wet surfaces.
Also available as AF version with improved reaction to fire characteristics, low flammability and reduced flame spread.
RESICOL 116 AF is approved as maritime material within the ARDENON cycle. The certificate issued by RINA is marked with the number MED036517CS.

Areas of use

- Rigid structural bonding of various building materials such as concrete, iron, steel, wood, brick, stone, marble, tuff, glass;
- smoothing and pore sealing of concrete walls;
- primer for epoxy mortars: RESIMALTA 204, 205, 210, 220 and 250;
- cold shut casting for rounded shells made with RESIMALTA 205/250;
- impregnation for bonding fabrics and fibers in structural reinforcement using composite materials (carbon, glass, aramid fibers);
- impregnation of non-woven glass fiber fabric for the creation of laminated coatings inside tanks requiring high chemical resistance.

The AF version of RESICOL 116 enhances reaction to fire characteristics compared to the standard version and is suitable for use in conditions bearing strict requirements of resistance to fire and reduced flame spread.
RESICOL 116 AF is specifically used as an adhesion-promoting primer within the surface coating cycle for the marine equipment called ARDENON prior to the application of AUTOMIX FLEX PU flexible screed.

Characteristics

RESICOL 116 is a fluid, slightly viscous product with thixotropic behaviour up to 1.5 - 2 mm thick. It can adhere excellently to all building materials because it hardens without shrinkage.
It achieves high mechanical properties within hours of application guaranteeing:

- excellent adhesion on dry and damp concrete, brick, stone, steel;
- excellent dielectric properties (low electrical conductivity);
- excellent resistance to aggressive chemical reactants (acids and bases) and good resistance to solvents;
- ease of use thanks to pre-dosed packages.

It can be applied by spatula brush, roller or spray.

How to use

Preparing the substrate
Sandblast, hammer, abrade the substrate to remove brittle parts, traces of release oils, grease, paint, cement latex. Then remove dust with pressurized air and vacuum it.
The concrete can be damp but must not be saturated, have water stagnation or capillary rise phenomena (humidity under negative pressure) and must have completed curing (28 days).
Application on metals requires careful preparation of the substrate: remove oils, grease, paints and rust by abrasion or sandblasting to white metal (SA 2 - SA 3 grade).
Preparing the product
Pour component B into component A according to the weight ratio indicated on the packages.
Mix for 3' - 5' at low speed with a drill equipped with propeller/spiral in order to take in as little air as possible; during this operation, carefully mix the product also on the package bottom and walls.
Application
Apply by spatula, brush, roller or spray as needed.
Before applying, make sure that the temperature of the substrate and of the layers already applied is always at least 3 °C higher than the dew point and that this condition remains in place at least until the film has hardened to avoid the formation of condensation. A good rule in the application of synthetic resin-based coatings is to apply successive coats on the primer not perfectly cured in order to promote the wettability of the film and chemical adhesion between layers. It is also advisable to apply a 0.3-0.9 mm dusting with quartz on the fresh primer to increase the specific surface and also promote mechanical adhesion. If it is impossible to over-apply within 48 hours, it is advisable to proceed as described in the "Preparation of the substrate" section and then reapply the primer.

Notes
The packages are pre-dosed by weight: use all component A and component B. If you want to subdivide the package, the products must be weighed respecting the A+B ratio indicated on the label and must not be dosed by volume.
Three basic rules apply to all bi-component systems: weigh well, mix primer and walls thoroughly, and respect the times of use.
The use as cold-shut casting applies only to epoxy resin mortars.

Technical characteristics

Bending strength	>25 N/mm²
Shearing strength	>15 N/mm²
Compression elastic modulus	~ 5000 N/mm²
Adhesion on fir wood	> 3 N/mm²
Adhesion on dry concrete	> 4.5 N/mm²
Adhesion on wet concrete	> 2.8 N/mm²
Adhesion on sandblasted carbon foil	> 2.6 N/mm²
Adhesion on steel	3.1 N/mm²
Viscosity	~ 3600 cP
Density	1.13 kg/dm³
(A+B) Mixture ratio	100 + 44
(A+B) Mixture ratio with RESICOL 116 FAST comp. B	100 + 40

* test performed on specimens glued at a 60° angle.

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Usage and hardening times

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

Temperature [°C]	Pot-life [min.]	Hardening [ore]
10	180	10
20	80	4
30	35	2.5
40	15	1.5

Do not apply at temperatures above 35 °C or below 5 °C, avoid direct exposure to sunlight. Do not apply in case of possible rain or frost, in conditions of heavy fog or with R. H. above 70%.

In case of use at low temperatures, packages should be kept at about 20÷25 °C for at least 24 hours before use. However, it is possible to increase the reaction speed of the product with the H31 accelerator for epoxy systems which should be weight-dosed from 0.75 to 3.75% on component A, depending on the degree of acceleration required. The product should be added to component B and mixed thoroughly before being added to component A.
Alternatively, RESICOL 116 FAST component B can be used as hardening agent.
However, it is advisable to carry out preliminary tests to verify the correct usage and hardening time depending on the environmental conditions.

Consumption

Consumption varies from 0.3 to 0.8 kg/m² depending on the porosity of the substrate.
To impregnate fabrics and fibers, consumption varies from 0.8 to 1.5 kg/m^2.

Packaging and storage

Available in (component A + B) packages of 1.08 and 4.32 kg (standard), 1.05 and 4.2 kg (fast).
Package sizes of 1.4 and 4.2 kg are available for RESICOL 116 AF.
The product is preserved for at least one year if kept in its original and sealed packaging, and at a temperature between 10 and 30°C.

Tool cleaning and hygiene precautions

Please read the safety sheet before handling the product.
Use RESISOLV 111 solvent to clean tools.

Epoxy resins and hardeners may cause irritation: therefore, avoid any contact with the skin and in particular with the eyes and air premises during use.
Wear gloves, coveralls, closed goggles or face shield. The use of a protective cream is recommended in case of prolonged exposure to epoxy resins. In case of contact with the skin, wipe immediately with a cloth soaked in denatured alcohol and then rinse with water and mild soap or hand wash paste, then use a nourishing cream.

In case of contact with the eyes or mucous membranes, do not use alcohol, but wash immediately with running water and a neutral soap for 10/15 minutes, then seek medical advice.

Do not wash with solvent.

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