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RESIMALTA 212

TRI-COMPONENT THIXOTROPIC EPOXY MORTAR

Pre-packaged thixotropic, tri-component, anti-shrinkage solvent-free mortar based on fluid epoxy resins, amino hardening agents and German spheroidal quartz inerts with particle size distribution.

Areas of use

RESIMALTA 212 is a product which was specifically designed for the creation of adjusting block of stones under tracks for railway superstructure: it is placed between the connection plates of the tracks and the extrados of the support concrete.

Other uses are:

- Realisation of spatula screed with 5 to 12 mm changeable thickness for flooring in the chemical, mechanical, food industry, etc. featuring extremely high mechanical and chemical resistance
- Reconstruction of expansion joints, recovery and adjustment of concrete degraded industrial floors;
- Execution of supports, basements and filling of voids created by scarification;
- Realization of new inclination on exiting floor to discharge liquids;
- Creation of ramps suitable for vehicles.

Features

- Very high mechanical resistance (strength, bending) and high abrasion and shock resistance;
- Fast hardening (50 N/mm^2 reached after 4 hours) and with no shrinkage;
- Possibility of carrying out low thickness and high resistance restorations;
- Good waterproofing following sealing with solvent-free fluid epoxy compounds like RESICOLOR 421 or AUTOMIX R90/2;
- Excellent resistance to lubricating oils and emulsifying agents and fuels in general;
- Excellent adherence to concrete, bricks, stones and iron, following application of epoxy primers like RESICOL 115, RESICOL 116;
- Good workability both by hand and with mechanical plastering trowel.

How to use

Preparation of the basement

The surface to be treated must be clean, healthy, dry and mortar grout and crumbly part-free. Best adhesion is achieved by roughening it by sandblasting.
Application on metals follows careful preparation of the support: remove oils, fats, varnishes and rust by abrading or sandblasting with white metal (SA2 – SA 3 degree).
After sandblasting, suck up the dust and then roller or brush apply the epoxy primer RESICOL 115 both on concrete and on reinforcement rods is they are exposed (in case of damp support use RESICOL 116 primer): concrete must be applied immediately after laying the primer, layer upon layer.

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 bucket, then slowly add with agitation component C until an even mixture is reached.
Application
Apply the mortar on the primer, layer upon layer, respecting the times of use (see table) with trowel, palette knife or other suitable tool based on the type or work.
RESIMALTA 212 can be applied on low and high thicknesses with no hardening or shrinkage problems. In case of thicknesses greater than 3 cm applied on vertical or overhead surfaces we recommend supporting the mortar with a board or formwork until hardening.
If the surface treated with RESIMALTA 212 must ensure perfect waterproofing, roller and/or brush apply one or more layers of RESICOLOR 421, a coloured solvent-free epoxy compound,

Notes
Packages are weight pre-measured out: fully use all three components A, B and C.
If you wish to divide the package, products must be weighed by respecting the A+B+C ratio on the label and must not be weighed out based on the volume.
Three essential rules are valid for all bi-component and tri-component systems: weigh well, carefully mix bottom and walls, observe times of use.

Technical characteristics

Compression strength	
4 hours GT 3.1 (*)	50 N/mm^2
6 hours	60 N/mm^2
8 hours	70 N/mm^2
1 day	85 N/mm^2
7 days (complete maturation) UNI EN 196-1	110 N/mm^2
Compression elastic modulus UNI EN 196-1	23400 N/mm^2
Bending strength UNI EN 196-1	32 N/mm^2
Adhesion to dry concrete	3 N/mm^2
Adhesion to concrete with RESICOL 121 primer	4,5 N/mm^2
Specific gravity	2,06 kg/dm^3
A + B + C mixture ratio	100 + 30 + 870 2,5 + 0,75 + 21,75

(*) Hardening at 25 °C: with lower temperature, compression strength will be lower than the value in this table.

Chemical resistances

Exposure in days	7	14	21	28
Deionised water	0	0	0	0
Seawater	0	0	0	0
Sulphuric acid 10%	0	0	1	1
Hydrochloric acid 10%	0	0	0	0
Hydrochloric acid 30%	0	1	1	1
Phosphoric acid 10%	0	0	0	0
Caustic soda 20%	0	0	0	0
Ammonia 10%	0	0	0	1
Ethanol 20%	0	0	0	0
Gas oil	0	0	0	0
Lubricant oil	0	0	0	0

Degree of surface alteration
0: no effect on the surface
1: surface eaten into
2: damaged surface
3: heavily damaged surface

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	hardening
10°C	90’	9 h
20°C	60’	7 h
30°C	35’	5 h
40°C	20’	4 h

Full hardening is achieved after 7 days.

Maximum time of application of the mortar following primer buttering.

temperature	RESICOL 115	RESICOL 116
10°C	90’	120’
20°C	30’	45’
30°C	15’	25’
40°C	10’	15’

Consumption

Primer RESICOL 115: 0.4 – 0.5 kg/m²
To execute a carry 1cm thick with RESIMALTA 212 the consumption is of approx.21 kg/m².

Packaging and storage

Available in 25 kg packages (A + B + C component).
RESIMALTA 212 remains unaltered for 18 months if stored in a dry and sheltered place at a temperature between +10°C and +30°C in its original sealed containers.

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.