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RESICOLOR 451

EPOXY PAINTING IN WATERY EMULSION FOR FLOORS, WALLS AND CONCRETE SURFACES

Semi-glossy coloured enamel, solvent-free, based on liquid epoxy resins in water emulsion and hardened with amidic polymers, It is used for coloured protecting coatings which are very pleasant to look at for floors and walls in civilian and industrial contexts.

Areas of use

Civilian buildings:

- Painting of garages, basements, utility rooms (boiler rooms, lift pit, etc.);
- Painting of cornices, intrados and vault balconies and projecting elements
- Painting of concrete pillars and masonry already coated with fine cement plaster;

Industrial buildings:

- Reduced thickness coatings (FINOMIX varnishing cycle) of industrial floors in concrete, warehouses, deposits and laboratories in the food, mechanical, chemical, electronic, pharmaceutical and textile sector;
- Painting of horizontal, vertical and intrados surfaces, concrete structures and outdoors/indoors prefab elements to improve the esthetical appearance and protect them from decay caused by pollution and acid rains;

RESICOLOR 451 may be used alone as finishing, or as undercoat before finishing with polyurethane coatings such as RESICOLOR 475 o 480.

Features

RESICOLOR 451 is a dual-component epoxyenamel which is very pleasant to look at. It features good mechanical strength to wear and tear, moderate chemical resistance to low concentration of basic and acid solutions and good resistance to oils and fats.

Compared to standard painting, RESICOLOR 451 offers the following advantages:

- Excellent adhesion to concrete, bricks and stone;
- Waterproof against liquids but lets steam through;
- It can be varnishes with epoxy, polyurethane and acrylic products;
- It makes cleaning the surfaces easier and enables use of washer-drier machines or high pressure water jet cleaners;

This produces features low risk for the environment and for its users because it is in watery emulsion and it is solvent-free; it does not release harmful vapours and its tools can be easily cleaned with water after use. It can be applied in those environments where use of solvents is not recommended or it is dangerous, i.e. enclosed buildings or with insufficient ventilation or in environments with risk of sparks;

How to use

Preparation of the support

Floors

The surfaces to be coated must be compact, crumbly-part grout and cement cradle-cap –free, clean and with no oils, fats or waxes. Cracks, cuts or small millings must be stuccoed with epoxy adhesives like RESICOL 100.

The product can be applied on dry or damp concrete floors following washing with washer-dryer.

For better adhesion, the surface must be slightly roughened with diamond or silicon carbide wheels. Then remove any traces of dust or dirt using an aspirator. In case of closed and compact surfaces like dry-shake industrial floors, acid washing (5-10% hydrochloric acid) is recommended following sand-paper with consequent washing and neutralization.

Walls

Very porous concrete walls or with cracks and omega cavities must be levelled in advance with RESICOL 100, epoxy adhesive or with RESICEM 712, cement bi-component smoothing agent. Plasterboard must be treated in advance with an insulating agent like RESICOL 170, a single-component acrylic primer.

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, carefully scrape also the bottom and the sides of the package.

In the event of partial use of the package, the two components must be carefully weighed in weight (not in volume) following the ratios on the label.

Application

Brush, roller or airless spray apply, in at least two layers, with average consumption per layer of 100-200 g/m². The first layer must be diluted with 5 – 10% water to improve product penetration in the support. The following applications can be made with no dilution.

On plasterboard application use the product as it is.

Note

This product cannot be applied on surfaces soaked on water, with puddles or superficial coating. Apply only after the concrete is cured. Do not apply on fine mortar or lime-based plasters. Clean tools with water. Wear gloves, protective suite and goggles. In case of contact with the skin, eyes or mucosa, rinse immediately with water and soap for 10 – 15 minutes, then seek medical attention

Do not wash with solvents.

Technical characteristics

C25/30 class adhesion to concrete	>3,5 N/mm ²
Steam resistance factor(UNI EN ISO 7783-1)	3200
Water absorption (200µm thickness)	<0,5%
Resistance to abrasion: Taber (CS 17 stone,500 g, 1000 cycles)	100 mg
Resistance to impact (1 kg , Ø 20 mm)	50 cm/kg
Viscosity	3600 cP
Resistance to frost/thaw: 200µm thicknesses after 30 cycles 9h at -12C° and 8h at +18C°	intact
Specific gravity of the mixture	kg/dm ³
A + B mixture ratio	100 + 100

Chemical resistance

Exposure in days	3	10	30	60
Deionized water	0	0	0	0
Sodium chloride at 20%	0	0	0	0
Chromic acid 5%	0	0	0	0
Acetic acid 5%	1	2	-	-
Citric acid 30%	0	0	0	0
Lactic acid 2%	2	-	-	-
Sodium Hydroxide 15%	0	0	0	0
Ammonia 10%	0	0	0	1
Wine	0	0	0	1
Milk	0	0	0	0
Whisky	0	0	1	1
Vegetable oils	0	0	0	0
Mineral oils	0	0	1	1
Gas oil, petrol	0	0	1	2
Ethanol 10%	0	1	1	2

0 = no corrosion
 1 = slight degradation
 2 = marked degradation

RESICOLOR 451 features good resistance to occasional contact with low concentration acid and basic solutions, but in case of permanent contact. Dumping of solutions made with most organic and inorganic acids and solvents (methanol, benzole, toluene) must be promptly removed (cleaned and neutralised).

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	Time of use or pot life	Dust free tack free	Paintable again after
+10 °C	150'	10 h	20 h
+20 °C	100'	7 h	15 h
+30 °C	50'	4 h	10 h

Complete hardening occurs after seven days with a support temperature not below 10 °C.

After at least 48 hours from application have gone by, it is necessary to sand the surface with abrasive retina disc (120 grain), before proceeding with painting

Consumption

Type of coating	Consumption
Cement dry-shake floor	150 g/m ² per layer
Float-finished cement screed or damp soil	200 g/m ² per layer
Wall coating Fine float-finished sand-cement plaster	150 g/m ² per layer
Plasterboard	120 g/m ² per layer

Packaging and storage

Available in packages (A+B) of 10, 20 and 40 kg.

Available colours:

Yellow	1006, 1013, 1014, 1015, 1017, 1018, 1019
Orange	2000, 2003, 2010
Red	3001, 3009, 3011, 3020
Blue	5003, 5007
Green	6010, 6019, 6021, 6027
Grey	7001, 7004, 7006, 7016, 7022, 7024, 7025, 7030, 7032, 7035, 7037, 7038
Brown	8004, 8014, 8023
White	9002, 9010
Black	9004

Orders for colour on request will be accepted only for amounts of more than 100 Kg, with surcharge.

Packages must be kept vertically and closed: the product remains intact for at least 18 months if kept in a sealed and protected environment with a temperature between 10 and 30°C.

RAL codes shown in the table are filling colours and do not represent any the exact chromatic shade of the coating.

The information supplied in this sheet is the result of the best practical and laboratory experiences of RESIMIX, which guarantees its products when used according to the instructions supplied. It is nonetheless up to the customer to ensure the product is suitable for the intended use. The manufacturer declines any responsibility for incorrect use or uses beyond his control. RESIMIX reserves the right to make changes to the data. For any request, please contact the RESIMIX Technical Assistance Office.