



RESICOLOR 480/S

COLORED BI-COMPONENT POLYURETHANE PAINT

High quality bi-component colored paint based on polyurethane, aliphatic isocyanide resins for protections requiring high chemical resistance, excellent mechanical resistance to wear and tear and perfect colour-fastness and gloss-fastness in both indoors and outdoors applications.

Areas of use

Realization of waterproof protective coatings with high aesthetical value for concrete, plaster and steel (treated in advance) walls and floors for indoors and/or outdoors applications subject to weathering effect; more specifically it is the finishing layer for FINOMIX floors painting cycle.

RESICOLOR 480/S is also successfully used for the following applications:

- Food industry: floors in warehouses, seasoning cells (sausages, cheeses), food distribution centres, supermarkets, fishing industry.
- Varnishing in the chemical, galvanic and pharmaceutical industry which require good resistance to diluted acid and basic solutions.
- Thanks to easy cleaning, it can be used in the precision mechanical industry and the goldsmith's industry.
- Sports facilities: floors in gyms, corridors and changing rooms, stand finishing.

Features

RESICOLOR 480/S creates a glossy thermal-hardening film with high hardening power, excellent appearance and mechanical resistance to wear and tear and scratch. It features good resistance to diluted acid and basic solutions, fuels, oils and lubricants.

- Excellent colour fastness in time and towards UV rays and weathering, enabling both indoors and outdoors application;
- Its high covering power allows varnishing with extremely low consumptions;
- Hardening by means of poly-addition and therefore extremely reduced shrinkage;
- Smooth or "orange peel" finishing;
- Fast hardening and commissioning approx 48 hours after application;
- Physical and mechanical characteristics which do not alter in time.

How to use

Preparation of the support

The surface to be treated must be clean, healthy, dry, crumbly part and cement grout-free: best adhesion is achieved by hardening it with sand-blasting, sand-papering, acid washing, smoothing or shot-peening treatment. Remove any trace of dust and dirt using an aspirator.

Cement supports affected by rising damp must be treated with two coats of RESICOL 118 (vapour barrier).

Very porous concrete surfaces or surfaces with cracks and Ω (omega) cavities, e.g. forming concrete, must be levelled in advance with RESICOL 100, epoxy adhesive.

Application on metals requires accurate preparation of the support: elimination of oils, fats, varnishes and rust through abrasive process or white metal sanding (SA 2 – SA 3 degree).

Application of primer or bottom coat

In case of concrete supports, apply an epoxy bottom coat like RESICOLOR 451 (see FINOMIX varnishing cycle sect. 1.1) or AUTOMIX R70-R72 epoxy-cement. On steel, apply RESICOLOR 425 primer. Concrete and bricks may be varnished after application of RESICOL 160, a highly penetrating epoxy compound which aids adhesion on very porous materials (200 g/m² consumption) and wait at least 24 hours before applying RESICOLOR 480/S.

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 bucket.

Application of the product

Brush, roller or airless spray apply, one or two coats, with an average consumption per coat of 80 - 120 g/m².

In case of roller applications where there are no strict technical needs, use short hair Mohair rollers specific for polyurethane finishing.

To achieve an averagely anti-slippery surface, add a small amount of glass microspheres.

This product can be diluted with 5-10% specific polyurethane thinner.

Notes

Application of a new coat of RESICOLOR 480/S, 48 hours after the previous one, is possible only following sanding with fine abrasive paper, dust suction and washing using solvents. During the hot season it is recommended not to use the product. In the hottest hours of the day and on surfaces that are especially exposed to the sun.

Do not use in conditions of high humidity, during rainy days or with possible rain and in the hours following application.

Presence of water has a negative effect on adhesion: wet foundations must be dried out as much as possible with air or better with gas flame.

Technical characteristics

Solid content (by weight)	58 – 70%
Color	According to RAL file
Density of the A+B blend	1,090 – 1,280 kg/dm ³
Viscosity of the A+B liquid blend (@ 25 °C)	128 cP
Mix ratio (by weight)	100+50

Mechanical properties	
Adhesion on concrete (primer RESICOLOR 451)	> 3,5 MPa
Adhesion on steel (primer RESICOLOR 425)	> 2,5 MPa
Adhesion, Cross-hatch test	
on steel	ASTM 5B
on RESICOLOR 451	ASTM 5B
Wear resistance (Taber, CS 17, 500 g, 1000 cycles)	80 mg

Chemical resistance		
	Type of surface alteration	total loss of protective capability [months]
Hydrochloridric acid, 5%	blistering	52
Hydrochloridric acid, 10%	blistering	36
Sulfuric acid, 5%	blistering	> 52
Sulfuric acid, 10%	blistering	36
Sulfuric acid, 20%	blistering	36
Sulfuric acid, 30%	blistering	2
Sulfuric acid, 50%	blistering	2
Nitric acid, 5%	blistering	52
Nitric acid, 10%	blistering	13
Phosphoric acid, 5%	blistering	> 52
Phosphoric acid, 10%	blistering	52
Phosphoric acid, 50%	blistering	52
Boric acid, 10%	blistering	> 52
Formic acid, 5%	swelling	2
Formic acid, 10%	swelling	2
Acetic acid, 5%	swelling	6
Acetic acid, 10%	swelling	2
Fatty acids of linseed oil	color change	> 52
Fatty acids of coconut	color change	> 52
Oleic acid		> 52
Oxalic acid, 10%		> 52
Succinic acid, 10%	blistering	> 52
Maleic acid, 10%	color change	> 52
Tartaric acid, 5%	blistering	> 52
Citric acid, 10%	swelling, color change	> 52
Lactic acid, 10%	blistering	> 52
Lactic acid, concentrate	blistering	46
Sodium hydroxide, 5%	loss of brilliance	> 52
Sodium hydroxide, 10%	loss of brilliance	> 52
Sodium hydroxide, 20%	loss of brilliance	> 52
Sodium hydroxide, 30%	loss of brilliance	> 52
Sodium hydroxide, 40%	loss of brilliance	> 52
Potassium hydroxide, 5%	loss of brilliance	> 52
Potassium hydroxide, 10%	loss of brilliance	> 52
Potassium hydroxide, 20%	loss of brilliance	> 52
Ammonia, 5%	swelling	2
Ammonia, 10%	swelling	1
Ammonia, 20%	swelling	0,5
Hydrazine hydrate	swelling, softening	7 days
Tap water	blistering	>52
Distilled water	blistering	52
Sodium chloride, 5%		>42
Saturated sodium chloride		>52
Sodium carbonate, 5%	blistering	>52
Sodium carbonate, 10%	blistering	>52
Sodium bicarbonate, 10%		>52
Ammonium chloride, 30%		>52
Calcium chloride, 1%		>52
Metanol	softening	42
Ethanol, 15%	softening	52
Ethanol, 40%	softening	>52
Ethanol, 70%	softening	>52
Ethanol, 96%	softening	>52
Isopropanol	softening	>52
Butanol	softening	>52
Ethyl glicol		>52

Glycerin	percloroetilene	>52
Cyclohexanol	softening	>52
Benzyl alcohol	softening	20
Diacetone alcohol	softening	>52
White spirit		>52
Gasoline		>52
Benzene		>52
Toluene		>52
Xylene		>52
Ethyl acetate	softening	>52
Butyl acetate		>52
Methyl glycol acetate	softening	>52
Ethyl glycol acetate		>52
Methyl acrylate	softening, color change	>40
Acetone	softening	24
Methyl ketone	softening	36
Methyl isobutyl ketone		>52
Cyclohexanone	softening	>52
Carbon tetrachloride		>52
Dichloroethane	softening	0,5
Dichloropropane	softening, color change	>43
Trichlorethylene	softening, color change	>43
Perchloroethylene		>43
Chlorobenzene	color change	>37
Formaldehyde, 40%	loss of brilliance	>52
Caprolactam, 20%		>52
Caprolactam, 30%		>52
Caprolactam, 50%		>52
Caprolactam, 100%		>52
Tricresyl phosphate		>52
Aviation fuel		>41
Electroplating paint		>30
Detergent, 3%	blistering	>52

Use and hardening times

Following mixture, the reaction between the two components takes place immediately. Processing time is therefore limited and depends on temperature.

Hardening times			
Temperature	Pot-life	Tack free	Overcoatability
10 °C	7 hours	30-60 minutes	8 hours
25 °C	5 hours	10-20 minutes	4 hours
30 °C	2 hours	5 minutes	30 minutes

Application with temperatures lower than +5 C° and higher than +30 C° is not recommended. Full hardening takes place after seven days with a temperature not lower than +20 C°. After 8 hours from application, it is necessary to roughen the surface with abrasive tools (120 grain), before proceeding with overapplication.

Consumption

To achieve hard and compact films, consumption ranges from 80 to 120 g/m² per layer; higher consumption results in reduction of surface hardness. Typical application thickness is 40-50 µm.

Packaging and storage

RESICOLOR 480/S is available in 30 kg packages (A + B).

If stored in its original and sealed package, the product remains unaltered for at least a year if kept in a closed and protected environment with a temperature between 5 and 35 °C.

Cleaning of tools and health precautions

Before handling, always consult the product safety data sheet.

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.

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.