MAPEI

IN COMPLIANCE WITH EUROPEAN STANDARD
EN 1504-2 (C)
PRINCIPLES
PI-MC-PR-IR
MAPEI
SURFACE PROTECTION SYSTEMS FOR CONCRETE

Mapecoat W

CE
EN 1504-2

Two-component epoxy paint in water dispersion for the protection of cement based surfaces

WHERE TO USE

Painting of concrete surfaces or cement-based renders inside tunnels, reservoirs, water pipes. Areas in the food, chemical, and electronic industries, cafeterias, industrial kitchens and clinics.

Anti-corrosion protection of concrete kerbs, the inside of water tanks, and areas underground where the use of solvents is not recommended.

Some application examples

- Protection of civil and industrial structures subject to weak chemical aggression caused by weak acids and alkali, hydrocarbons, etc.
- Protection of antiseptic areas in the food preparation, chemical and pharmaceutical industries and hospitals.
- Protection of piers and vaulting in road tunnels and cement kerbs against de-icing salts.
- Protection of surfaces in clinics, cafeterias, kitchens, public areas.
- Protection of surfaces in badly ventilated areas where the use of solvents is not recommended.
- Protection of holding tanks for water or slightly aggressive liquids.
- Protection of industrial floors subject to light foot traffic.

TECHNICAL CHARACTERISTICS

Mapecoat W is a two-component epoxy resin-based paint in water dispersion and special high-coverage pigments.

When hardened **Mapecoat W** resists the aggressive action of weak acids, hydrocarbons and oils.

Mapecoat W resists abrasion caused by the brushes of scrubbing machines and can be washed with high-pressure water and industrial detergents.

Mapecoat W is odourless and solvent-free, and is therefore recommended for use on the walls and bottoms of underground tanks, or in closed or badly ventilated rooms. The hardened **Mapecoat W** film gives surfaces a smooth, semi-gloss appearance and makes artificially lit areas brighter.

Mapecoat W can be applied on slightly damp surfaces provided they are sufficiently cured and without shrinkage.

RECOMMENDATIONS

- Do not use **Mapecoat W** on substrates subject to water pressure (use **Biblock** or **Triblock** as a primer).
- Do not apply **Mapecoat W** when rain is likely (the product may wash out).
- Do not dilute **Mapecoat W** with solvents.

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- Do not apply **Mapecoat W** on friable or dusty substrates.

- Do not apply **Mapecoat W** at temperatures below +5°C or above +35°C.

- Do not apply **Mapecoat W** if the level of humidity is higher than 85%.

HOW TO USE

Preparation of the substrate

The surfaces to be treated must be solid and compact, dry or with slight residual moisture provided it does not result from rising capillary action or counter pressure from the water table. Completely remove loose particles, cement laitance, dust, paint, oil, form release compounds and other deleterious substances.

Concrete superficially impregnated with oils and grease must be vigorously cleaned with a 10% water and soda solution or detergents and then rinsed thoroughly several times with clean water.

If deleterious substances have penetrated deeply into the substrate, the contaminated concrete must be removed by scarifying.

The substrate should then be repaired with special mortars from the **Mapegrout** range.

Renders can be levelled with **Nivoplan** mixed with **Planicrete** or with **Nivorapid** (only on surfaces in interiors), or with **Planitop 100**, if the thicknesses involved can be measured in millimetres.
When levelling or repairs are not necessary, **Mapecoat W** can be applied directly onto clean and solid cementitious surfaces, even if slightly damp.
In normal conditions **Mapecoat W** does not require the use of a primer unless:

- water counter pressure is a problem;

- surfaces contain loose particles.

In the first case apply a coat of **Biblock** diluted 10% with water followed by a finishing coat of **Triblock**. In the second case, simply apply a coat of **Biblock** diluted 15 to 20% with water (consult the technical data sheets or call the MAPEI Technical Services Department).

Preparation of the paint

Carefully mix the two components, component A (resin) and component B (catalyst), taking care to scrape the sides of the containers with a brush so as to mix all of the product. Mix **Mapecoat W** with a drill at low speed to prevent entraining air (always keep the propeller immersed while mixing). Mix for several minutes until the product is completely homogenised. Avoid mixing partial quantities of material from the containers so as not to risk accidentally mistaking the dosage. This could cause **Mapecoat W** to fail to harden or fail to harden completely.

Applying the paint

Mapecoat W can be applied with the conventional techniques of brush, roller or airless spray. If the substrate is very absorbent, the first coat of **Mapecoat W** may be diluted 5 to 10% with clean water.

Mapecoat W should be applied in at least two coats and should be left to dry for 6 to 24 hours, depending on the ambient temperature and humidity. High temperatures and low humidity reduce the waiting time, while low temperatures and high humidity increase it. Protect the fresh product from rain for at least 12 hours. At temperatures around +20°C **Mapecoat W** is ready for traffic after 24 hours.

Cleaning

Brushes, rollers and airless spray guns should be cleaned thoroughly with water before the products harden. Afterwards, solvents (xylol, acetone) can be used or mechanical means.

CONSUMPTION

Consumption is heavily influenced by the absorption and roughness of the substrate, by the colour of the paint applied and according to the application technique used. Under normal conditions, consumption is generally 0.25-0.30 kg/m^2 per coat, corresponding to 0.10-0.14 mm dry thnickness.

PACKAGING

10 kg units (component A 2.5 kg + component B 7.5 kg).

20 kg units (component A 5 kg + component B 15 kg).

STORAGE

12 months if stored in a dry place, away from sources of heat and open flames, at a temperature between +5°C and +30°C. Protect from frost.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Mapecoat W is irritant for the skin and for the eyes. Both component A and component B may cause sensitization to those predisposed. During the application it is recommended to wear protective gloves and goggles and to take the usual precautions when handling chemical products. In case of contact with the eyes or the skin, wash immediately with plenty of water and seek medical attention. Furthermore, **Mapecoat W** components A and B are hazardous for the aquatic life, do not dispose of the product in the environment.
For further and complete information about the safe use of our product please refer to the latest version of our Material Safety Data Sheet.

TECHNICAL DATA (typical values)

PRODUCT IDENTITY		
	component A	**component B**
Colour:	transparent	white or grey
Consistency:	fluid	thick paste
Density (EN ISO 2811-1) (g/cm³):	approx. 1.15	approx. 1.35
Viscosity (mPa·s):	ca. 850 (rotor 2 - 20 rpm)	ca. 2,000 (rotor 3 - 20 rpm)

APPLICATION DATA (at +23°C - 50% R.H.)	
Mixing ratio:	component A : component B = 1 : 3
Density A + B (g/cm³):	1.3
Viscosity A + B (mPa·s):	ca. 2,500 (rotor 3 - 20 rpm)
Colour A + B:	white, grey
Consumption (kg/m²):	0.25-0.30 per coat
Dry thickness (mm):	0.10-0.14 per coat
Application temperature:	from +5°C to +35°C
Open time:	40-60 minutes
Dust dry:	1-2 hours
Setting time of film applied:	6-10 hours
Waiting time between coats:	6-24 hours
Complete hardening:	8-10 days

PERFORMANCE CHARACTERISTICS FOR CE CERTIFICATION ACCORDING TO EN 1504-2, SYSTEMS 2+ AND 3, CLASSES ZA.1d, ZA.1e, ZA.1f (coating (C), principles PI - MC - IR - PR)

Performance characteristic	Test method according to EN 1504-2	Requirements	Product performance
Abrasion resistance (Taber test):	EN ISO 5470-1	Weight loss less than 3 000 mg abrading wheel H22 / rotation 1 000 cycles / load 1 000 g	1400 mg; in conformity
Permeability to CO_2:	EN 1062-6	s_D > 50 m	200 m; in conformity
Permeability to water vapour:	EN ISO 7783	Class I: s_D < 5 m (permeable to water vapour) Class II: 5 m ≤ s_D ≤ 50 m Class III: s_D > 50 m (not permeable to water vapour)	2 m; Class I
Capillary absorption and water permeability:	EN 1062-3	w < 0.1 kg/(m²·$h^{0.5}$)	< 0.01 kg/(m²·$h^{0.5}$); in conformity
Resistance to thermal shock (1x):	EN 13687-5	No bubbles, cracks and delamination; rigid systems with trafficking: ≥ 2.0 N/mm²	4.0 N/mm²; in conformity
Impact resistance:	EN ISO 6272-1	After loading no cracks and delamination; Class I: ≥ 4 Nm Class II: ≥ 10 Nm Class III: ≥ 20 Nm	≥ 4 Nm; Class I
Pull-off test:	EN 1542	No bubbles, cracks and delamination; rigid systems with trafficking: ≥ 2.0 N/mm²	4.0 N/mm²; in conformity
Reaction to fire:	EN 13501-1	Euroclasses	B_{fl}-s1

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PRODUCT FOR PROFESSIONAL USE.

WARNING

Although the technical details and recommendations contained in this product data sheet correspond to the best of our knowledge and experience, all the above information must, in every case, be taken as merely indicative and subject to confirmation after long-term practical application; for this reason, anyone who intends to use the product must ensure beforehand that it is suitable for the envisaged application. In every case, the user alone is fully responsible for any consequences deriving from the use of the product.

Please refer to the current version of the Technical Data Sheet, available from our website www.mapei.com

All relevant references for the product are available upon request and from www.mapei.com

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