

MAPECOAT I 62 W

Two-component epoxy coating in water dispersion with a gloss finish



WHERE TO USE

Mapecoat I 62 W is a two-component epoxy formulation, coloured in water dispersion used to form smooth films of resin coating with an attractive, shiny finish. **Mapecoat I 62 W** has been specifically developed for coating the surface of walls and ceilings in clean rooms.

Some application examples

- Dustproof and oil repellent coating floors stressed by light vehicles and foot traffic.
- Coating floors and ceilings in damp areas such as car-washes, agricultural and industrial warehouses where water is present, etc.
- Coating walls, ceilings and cementitious surfaces in general in clean rooms.
- Maintenance on old epoxy coatings.

TECHNICAL CHARACTERISTICS

Mapecoat I 62 W is a two-component epoxy resin formulation in water dispersion, developed in MAPEI R&D laboratories. **Mapecoat I 62 W** is applied on cementitious substrates or as finish for epoxy systems and forms a seamless coating with an attractive finish both on flooring and wall.

Mapecoat I 62 W forms a strong film with a good level of resistance to abrasion, chemicals and inorganic acids and alkalis products, does not crumble and does not form dust. It is suitable for withstanding light vehicles, foot traffic and to avoid the absorption of moderate amounts of liquid and oils on the floor.

Thanks to **Mapecoat I 62 W** it is possible to form seamless coatings specific for clean rooms with class ISO 5 airborne particle emissions according to ISO 14644-1 standards, class -7.1 VOC emissions according to ISO 14644-8 standards and excellent resistance to attack from microbiological and moulds contamination according to ISO 846 standards.

Mapecoat I 62 W meets the requirements of ISO 8690 standards for ¹³⁷Cs and ⁶⁰Co contaminants.

Mapecoat I 62 W meets the requirements of EN 1504-9 (*"Products and systems for the protection and repair of concrete structures: definitions, requirements, quality control and evaluation of conformity. General principles for the use of products and systems"*), and the minimum requirements of EN 1504-2, coating (C) according to PI, MC, PR and IR principles (*"Surface protection systems for concrete"*).

COLOURS

Please contact Head Office for a full list of colours available.

ADVANTAGES

- Easy to apply.
- No odours given off during application and when hardened.
- Solvent-free.
- Low emission of volatile organic compounds and micro-particles.

- Available in various RAL colours on request.
- Good mechanical and chemical resistance.
- Dustproof surface; easy to clean and maintain.
- Impermeable to oils and liquids in general.
- Suitable for application on floors, walls and ceilings.

RECOMMENDATIONS

- Do not apply **Mapecoat I 62 W** on substrates with capillary rising damp (contact MAPEI Engineering Department).
- Do not dilute **Mapecoat I 62 W** with solvent.
- Do not apply **Mapecoat I 62 W** on dusty or crumbling substrates.
- Do not apply **Mapecoat I 62 W** on substrates with oil or grease stains or stains in general.
- Only apply **Mapecoat I 62 W** on substrates prepared according to specification.
- Do not mix partial quantities of the components to avoid mixing errors; the product may not harden correctly.
- Do not expose the mixed product to sources of heat.
- Coatings made from **Mapecoat I 62 W** may change colour or fade if exposed to sunlight but this has no effect on their performance characteristics.
- The coating may also change colour if it comes in contact with aggressive chemicals. A change in colour, however, does not mean that it has been damaged by the chemical.
- If rooms where the product is being applied need to be warmed up do not use heaters that burn hydrocarbons; the carbon dioxide and water vapour given off into the air will affect the shine on the finish and ruin its appearance. Use electric heaters only.
- Remove aggressive chemicals as soon as possible after they come in contact with **Mapecoat I 62 W**.
- Use suitable specific cleaning equipment and detergent to clean the coating, depending on the type of dirt or stain to be removed.
- Protect the product from water for at least 24 hours after application.
- Rooms must be well ventilated after application but make sure the film of resin is not exposed to direct currents of air; if it does not dry evenly, the final colour may be patchy and the hardened film may be less shiny.
- The temperature of the substrate must be at least 3°C above the dew-point temperature.

APPLICATION PROCEDURE

Preparation of the substrate

The surface of concrete floors and cementitious substrates must be dry, clean and sound and have no crumbling or detached portions. The compressive strength of the substrate concrete or mortar must be at least 25 N/mm² and its tensile strength must be at least 1.5 N/mm². The overall strength of the substrate must also be suitable for its final use and the types of load it will undergo.

The water content in the substrate must be a maximum of 4% and there must be no capillary rising damp (check by testing it with a sheet of polythene).

The surface of the floor must be prepared with a suitable mechanical process (e.g. grinding or sanding), to remove all traces of dirt, cement laitance and crumbling or detached portions and to make the surface perfectly clean, sound and slightly absorbent. Before applying the product remove all dust from the surface with a vacuum cleaner.

Any cracks must be repaired by filling them with **Eporip**, while any deteriorated areas of the concrete must be repaired with **Mapecfloor EP19**.

Before applying **Mapecoat I 62 W** remove all traces of dust from the surface with a vacuum cleaner.

Application of Mapecoat I 600 W primer (optional)

It is not usually necessary to apply a coat of primer. However, on particularly porous and absorbent substrates, or on substrates whose surface needs to be consolidated, we recommend applying a coat of **Mapecoat I 600 W** water-based epoxy primer diluted 1:1 by weight with water, with a short-pile roller.

For more technical and application information refer to the Technical Data Sheet of **Mapecoat I 600 W**.

Preparation of the product

The temperature of the two components which make up **Mapecoat I 62 W** must be at least +15°C and they must be blended together just before application.

Thoroughly mix component A and pour it all into the component B along with the water required to dilute it. The amount of water required for the first coat is 20-25% by weight of the resin for substrates that haven't been primed with **Mapecoat I 600 W** and 10% by weight if a coat of primer has been applied. The second coat should then be diluted with a maximum of 10% on the weight of the resin formulation.

Mix together until completely blended with an electric mixer at low-speed (300-400 revs./min.), to avoid entraining air into the mix. Do not mix the product for too long to prevent entraining too much air into the mix. Pour the mix into a clean container and briefly mix again.

Apply the mix within the pot life indicated in the table (at +23°C); if the temperature is higher its pot life will be reduced, while at lower temperatures the pot life will be longer.

Application of the product

Apply two or more coats of **Mapecoat I 62 W** with a short-pile roller or by airless spray. The second coat should be applied the day after the first coat, and always within 12-24 hours, after the application of the first coat, depending on the surrounding conditions on site.

Apply the product evenly and go over the surface with the roller several times in both directions. When applying colours with poor hiding power (such as bright colours), a preliminary base coat of white **Mapecoat I 62 W** will help obtain an even colour in the finished coating. Depending on the colour chosen and the type of substrate on which it is applied, a third coat of coloured resin (apart from the white base coat), may also be required. Always carry out preliminary tests beforehand.

N.B.: if the first coat of resin is applied directly on a cementitious substrate, it is preferable to use a roller.

CONSUMPTION

Primer (optional):

Mapecoat I 600 W approx. 0.2 kg/m²

Coating film:

Mapecoat I 62 W 0.20-0.25 kg/m² per coat.

The consumption rates above are theoretical and are influenced by the condition of the surface to be treated, absorbency, roughness, the actual conditions on site, etc.

CLEANING

Clean tools used to prepare and apply **Mapecoat I 62 W** with water and soap immediately after use. Once hardened the product may only be removed using mechanical means.

PACKAGING

11 kg kits (component A = 2.5 kg - component B = 8.5 kg).

STORAGE

24 months in its original packaging in a dry place at a temperature of at least +10°C.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Mapecoat I 62 W components A and B irritate the skin and eyes and may cause sensitisation to those predisposed if it comes into contact with the skin. The product contains low molecular weight epoxy resins that may cause sensitisation if cross-contamination occurs with other epoxy compounds.

When applying the product it is recommended to wear protective gloves and goggles and to take the usual precautions for handling chemicals. If the product comes in contact with the eyes or skin wash immediately with plenty of water and seek medical attention.

Mapecoat I 62 W component A is hazardous for aquatic life. Do not dispose of this product in the environment.

For further and complete information about the safe use of our product please refer to the latest version of our Safety Data Sheet.

PRODUCT ONLY FOR PROFESSIONAL USE.

TECHNICAL DATA (typical values)		
PRODUCT IDENTITY		
	component A	component B
Colour:	transparent	RAL colour
Consistency:	liquid	thick liquid
Density (g/cm ³):	1.12	1.30
Brookfield viscosity at +23°C (mPa·s):	1500 ÷ 2700 (# 2 - 10 rpm)	1700 ÷ 2600 (# 3 - 50 rpm)
APPLICATION DATA (at +23°C and 50% R.H.)		

Mixing ratio:	component A : component B = 1 : 3.4
Colour of mix:	RAL colour
Consistency of mix:	thick liquid
Density of mix (kg/m ³):	1,240
Brookfield viscosity of mix at +23°C (mPa·s):	approx. 3000 ÷ 5000 (# 5 - 20 rpm)
Workability time at +23°C (mins.):	20 (visible pot-life)
Application temperature (°C):	+10° to +30° (referring to surroundings, material and substrate)
Waiting time between coats at +23°C and 50% R.H.: – on Mapecoat I 600 W (optional): – on Mapecoat I 62 W:	min. 8 hours max. 24 hours min. 12 hours max. 24 hours
Hardening time at +23°C and 50% R.H.:	24 hours
Complete hardening time:	7 days
The times above are for indication purposes only and are influenced by actual site conditions (e.g. temperature of the surroundings and substrate, relative humidity of the surrounding air, etc.)	
FINAL PERFORMANCE	
Taber Test after 7 days (EN ISO 5470-1) (at +23°C, 50% R.H., 1,000 cycles/1,000 g, CS 17 disk) (mg):	55
Gloss:	approx. 80

MAIN PERFORMANCE CHARACTERISTICS FOR CE MARKING ACCORDING TO EN 1504-2 – TAB. ZA.1d; ZA.1e; ZA.1f (coating C, principles PI-MC-PR-IR)

Main characteristics	Test method	Requirements according to EN 1504-2	Performance of product
Abrasion resistance (TABER test) Note: testing methods for flooring systems according to EN 13813 are also acceptable	EN ISO 5470-1	P Loss in weight less than 3000 mg with an H22 abrasive disk / 1,000 cycles / 1,000 g load	350 mg
Permeability to CO ₂	EN 1062-6	S _D > 50 m	S _D 204 m
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 (impermeable to water vapour)	Class I
Capillary absorption and permeability to water (kg/m ² ·h ^{0.5})	EN 1062-3	w < 0.1	0.002
Impact strength measured on MC (0.40) coated concrete samples according to EN 1766. Note: the design thickness and impact load influence which class is chosen	EN ISO 6272	No cracks or delamination after loading Class I: ≥ 4 Nm Class II: ≥ 10 Nm Class III: ≥ 20 Nm	Class III

Direct traction adherence test Reference substrate: MC (0.40) as specified by EN 1766, curing time: – 28 days for one-component systems containing concrete and PCC systems: – 7 days for reactive resin systems:	EN 1542	Average (N/mm ²) Cracking or flexible systems: with no traffic: ≥ 0.8 (0.5) ^{b)} with traffic: ≥ 1.5 (1.0) ^{b)} rigid systems ^{c)} with no traffic: ≥ 1.0 (0.7) ^{b)} with traffic: > 2.0 (1.0) ^{b)}	3.62 MPa (rigid system with traffic)
Reaction to fire	EN 13501-1	da A1 _{FL} a F _{FL}	B _{FL} -s1 C-s1-d0

CLEANROOM TESTING (STANDARD)			
Performance characteristic	Test method	Test parameters	Classification
Concentration of airborne particles from the material when subjected to friction:	ISO 14644-1	vs. PA6 Normal force: 300 N	ISO Class: 5
Evaluation of volatile organic compound (VOC) emissions at +23°C and +90°C:	ISO 14644-8	From class 0 (high concentration of VOC, equal to 1 g/m ³) to -12 (VOC emissions equal to 10 ⁻¹² g/m ³ or 0.001 ng/m ³)	ISO-ACCm Class -7.1

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

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