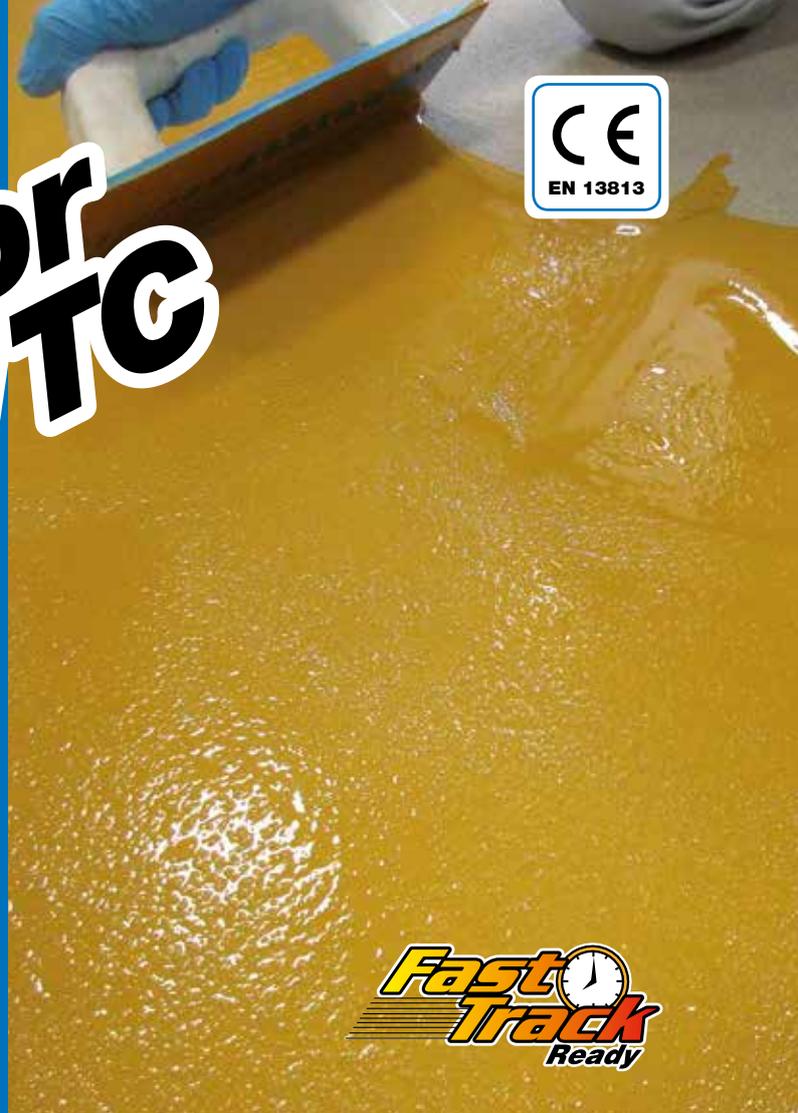




Mapecolor CPU/TC

Three-component polyurethane/cement-based formulate for coating walls and for finishing coats on polyurethane/cementitious systems for industrial floors



WHERE TO USE

Mapecolor CPU/TC is a three-component polyurethane/cement-based formulate used for finishing coats on polyurethane/cementitious systems for industrial floors and as a protective coating for concrete and cementitious walls and areas blended in between walls and floors.

Some application examples

- Finishing coat for **Mapecolor CPU/MF** polyurethane/cementitious coating systems with a smooth finish or for broadcast systems in damp environments.
- Finishing coat for areas blended in with **Mapecolor CPU/COVE**, such as between walls and floors.
- Washable, protective coating resistant to chemicals in the foodstuffs, chemical and pharmaceutical industries, etc.
- Optional finishing coat for **Mapecolor CPU/RT**, **Mapecolor CPU/HD** or **Mapecolor CPU/NZ** coating systems.

TECHNICAL CHARACTERISTICS

Mapecolor CPU/TC is a three-component formulate made from cement, selected aggregates and polyurethane resin according to a formula developed in the MAPEI R&D laboratories.

Thanks to **Mapecolor CPU/TC** it can be created seamless films characterised by high resistance to chemicals such as acids, base solutions, oil, grease, saline solutions, hydrocarbons, etc.

When **Mapecolor CPU/TC** is applied as a finishing coat for **Mapecolor CPU/HD**, **Mapecolor CPU/RT** or **Mapecolor CPU/MF** coating systems, it is resistant to thermal shock and the same service temperatures as the coating system if applied within 12 hours of the base layer hardening.

COLOURS AVAILABLE

Mapecolor CPU/TC is a neutral-beige colour and must be coloured directly on site prior to application with **Mapecolor Paste**, available in the standard colours red 855, beige RAL 1001, green 860, grey RAL 7030 and ochre yellow and in other standard RAL colours. Using a colour in complete contrast with the base colour is not recommended. **Mapecolor CPU/TC** has glossier finish than other products in the **Mapecolor CPU** range.

RECOMMENDATIONS

- Do not apply **Mapecolor CPU/TC** on substrates with a film of surface water or on concrete within 10 days of pouring.
- Do not dilute **Mapecolor CPU/TC** with solvent or water.
- Do not apply **Mapecolor CPU/TC** on dusty or crumbling substrates.
- Do not apply **Mapecolor CPU/TC** on substrates with oil or grease stains or stains in general.
- Do not apply **Mapecolor CPU/TC** on substrates that have not been 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.
- Do not apply **Mapefloor CPU/TC** on ceramic substrates or stone in general.
- Coatings made from **Mapefloor CPU/TC** change colour if exposed to sunlight but this has absolutely no effect on its performance characteristics.
- The coating may also change colour if it comes into contact with aggressive chemicals. A change in colour, however, does not mean that it has been damaged by the chemical, it's only a matter of aesthetic.
- Remove aggressive chemicals as soon as possible after they come into contact with **Mapefloor CPU/TC**.
- Use suitable specific cleaning equipment and detergent to clean the product, depending on the type of dirt or stain to be removed.
- Protect the product from water for at least 24 hours after application.
- The temperature of the substrate must be at least 3°C higher than the dew-point temperature.

APPLICATION TECHNIQUE

Preparation of the substrate

The application of a coat of **Mapefloor CPU/TC** is optional and is used to even out the colour of coatings made from other products from the **Mapefloor CPU** range. To maintain the same resistance to thermal shock and the same service temperatures without it peeling, apply the coat of **Mapefloor CPU/TC** within 12 hours of the base layer hardening. After 12 hours from the base layer hardening, the surface to be treated will have to be roughened mechanically. Substrates made with products from the **Mapefloor CPU** range must be hard, dry and clean, have no traces of dust and must not be sticky. Please refer to the Technical Data Sheet for each product from the **Mapefloor CPU** range for more details on their use and application. **Mapefloor CPU/TC** may also be used to coat concrete and cementitious surfaces in general such as walls, pillars, run-off channels, etc. All surfaces must be dry or slightly damp, clean and sound and have no crumbling or detached portions. The substrate concrete must have been poured at least 10 days before applying the coating, its compressive strength must be at least 25 N/mm² and its tensile strength must be 1.5 N/mm². The strength of the substrate must also be suitable for its final use and the types of load to which it will be subjected. Remove all loose or crumbling areas mechanically. Any cracks must be repaired by filling them with **Eporip**, while any deteriorated areas of the concrete must be repaired with **Mapefloor EP19** or a cementitious mortar from the **Mapegrout** range.

Before applying **Mapefloor CPU/TC** remove all traces of dust from the surface with a vacuum cleaner.

Preparation of the product

Pour component A into a large, clean container and, after mixing it, add component B and mix again with an electric mixer at low speed until it is completely blended. Then slowly add component C in powder and **Mapecolor Paste** colouring agent (10% in weight of the **Mapefloor CPU/TC** mix) then continue mixing until an even coloured mix is obtained. Apply the mix within the pot life indicated in the table (refers to a temperature of +20°C). Higher surrounding temperatures will reduce the pot life of the mix while lower temperatures will increase its pot life.

Application of the product

For better distribution of the product, we recommend pouring **Mapefloor CPU/TC** on the substrate and applying it out in an even coat with a short or medium-haired roller on **Mapefloor CPU/RT**, **Mapefloor CPU/HD** on smooth **Mapefloor CPU/MF** on **Mapefloor CPU/NZ**.

Use a steel or rubber trowel with medium-haired roller if the surface to be coated is **Mapefloor CPU/MF** fully broadcast with quartz sand.

When coating walls or areas blended in between walls and floors or other features, apply the product directly with a roller after cleaning the surface and removing all traces of dust. Apply two coats of product in such areas.

Mapefloor CPU/TC may be treated with a second coat, or applied on the surface of other products from the **Mapefloor CPU** range, within 12 hours at +23°C.

If this time is exceeded the surface will have to be roughened mechanically. There is no time limit for coating **Mapefloor CPU/MF** when fully broadcast with quartz sand, as long as the surface is clean and there are no traces of dust.

We recommend applying the product so that each batch is applied immediately after the previous one while it is still wet and workable to reduce the marks made by the joints.

CONSUMPTION

*Finishing coat on products from the **Mapefloor CPU** range (thickness of coat 0.2-0.25 mm):*

Mapefloor CPU/TC 0.3-0.35 kg/m²
Depending on the roughness of the substrate, the application technique, the actual thickness of the coat applied, surrounding conditions, etc.

*Finishing coat on **Mapefloor CPU/MF** with a dry-shake finish of quartz sand:*

Mapefloor CPU/TC 0.3-0.6 kg/m²
Consumption rates are highly influenced by the particle size of the sand used for the dry-shake finish on the surface of the **Mapefloor CPU/MF** and the tools used to apply the product.

TECHNICAL DATA (typical values)

PRODUCT IDENTITY

	BASE			PIGMENT
	comp. A	comp. B	comp. C	Mapecolor Paste
Consistency:	liquid	liquid	powder	thick liquid
Colour:	milky white	amber	white	red 855, green 860, ochre yellow, grey RAL 7030, beige RAL 1001
Density (g/cm³):	1.05	1.20	–	1.60 ÷ 1.80
Bulk density (g/cm³):	–	–	0.700 ÷ 0.800	–
Viscosity at +23°C (mPa·s):	800 ± 100 (# 2 - rpm 20)	110 (# 1 - rpm 5)	–	3000 ± 1000 (# 4 - rpm 20)

APPLICATION DATA

Mixing ratio:	A + B + C + Mapecolor Paste = 1.6 / 1.4 / 1.7 / 0.47 in weight
Colour of mix:	grey, beige, red, green, ochre yellow
Consistency of mix:	fluid
Density of mix (kg/m³):	1,300 ÷ 1,400
Viscosity at +23°C (mPa·s):	2500 ± 300 (#4 - 20 rpm)
Pot life of mix at +20°C:	15 mins.
Surface temperature:	from +8°C to +30°C

FINAL PERFORMANCE

Dust dry at +23°C and 50% R.H.:	2 ÷ 4 hours
Set to foot traffic at +23°C - 50% R.H.:	24 hours
Complete hardening time:	5 days
Bending strength after 28 days (EN 196-1) (N/mm²):	9
Compression strength after 28 days (EN 196-1) (N/mm²):	46
Adhesion strength (EN 13892-8) (N/mm²):	≥ 1.5
Shore D hardness after 28 days (DIN 53505):	77
Taber Test after 28 days (at +23°C, 50% R.H., Cs17 disk, 1,000 g/1,000 revs) (mg):	150
Thermal shock test (UNI EN 13687-05) (N/mm²):	2.60

Performance feature	Test method	Requirements accordance to EN 13813 for synthetic resin based screeds	Product performance
BCA Durability:	EN 13892-4	≤ 100 µm	< 5 µm
Adhesion force:	EN 13892-8; 2004	≥ 1.5 N/mm ²	2.40 N/mm ²
Reaction to fire:	EN 13501-1	from A _{fl} to F _{fl}	B _{fl} -s1

Mapefloor CPU/TC

Cleaning tools

Clean tools used to prepare and apply **Mapefloor CPU/TC** with polyurethane thinner immediately after use. Once hardened, the product may only be removed using mechanical means.

HARDENING TIME

Floors coated with **Mapefloor CPU/TC** set to foot traffic after approx. 24 hours at +23°C. They may be opened to light vehicle traffic after approximately 24-36 hours at +23°C. The product develops its full strength after 4 to 5 days at minimum +23°C, although it depends on the actual surrounding conditions on site.

PACKAGING

Mapefloor CPU/TC: 4.7 kg kits (component A = 1.6 kg - component B = 1.4 kg - component C = 1.7 kg).

STORAGE

Mapefloor CPU/TC may be stored for 12 months in a dry area in its original packaging at a temperature of between +5°C and +30°C.

Part C conforms to the prescriptions of Reg. (EC) N. 1907/2006 (REACH) - Annex XVII, item 47.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Mapefloor CPU/TC component B may irritate the skin, eyes and respiratory track. **Mapefloor CPU/TC** component B may cause irreversible damage if used for lengthy periods and in case of frequent contact with the skin it may cause allergic reactions in those subjects sensitive to isocyanates. **Mapefloor CPU/TC** component B used at +60°C temperature may become harmful and cause sensitisation if inhaled. In case of sickness, seek medical attention. **Mapefloor CPU/TC** component C contains cement that when in contact with sweat or other body fluids causes irritant alkaline reaction and allergic reactions to those predisposed. It can cause damage to eyes. When applying the product, we recommend using protective cloths, gloves and goggles, protecting the respiratory tracks wearing a mask and working in well ventilated areas. If the product comes into contact with the

eyes or skin, wash immediately with plenty of clean water and seek medical attention. **Mapefloor CPU/TC** component A is also hazardous for aquatic life. Do not dispose of these products 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.

PRODUCT ONLY 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

LEGAL NOTICE

The contents of this Technical Data Sheet ("TDS") may be copied into another project-related document, but the resulting document shall not supplement or replace requirements per the TDS in force at the time of the MAPEI product installation.

The most up-to-date TDS can be downloaded from our website www.mapei.com.

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

