MAPECOAT TNS BINDER

Acrylic resin-based coloured binder in water dispersion, for tennis courts, multi-purpose playing fields, cycle tracks and footpaths



WHERE TO USE

Preparing and finishing indoor and outdoor tennis courts, multi-purpose playing fields, cycle tracks and footpaths.

Some application examples

· Preparing and finishing new and old tennis courts and tennis courts already painted.
· Preparing and finishing basketball courts, volleyball courts, handball courts and five-a-side football pitches.
· Preparing and finishing cycle tracks and footpaths.

TECHNICAL CHARACTERISTICS

Mapecoat TNS Binder is formulated with a balanced mix of additives and acrylic resins in water dispersion. Before using the product, it is mixed with selected quartz sand to make a paste for preparing, filling and finishing playing surfaces.
Mapecoat TNS Binder may be applied on both old surfaces which are already painted and on new surfaces which require painting.
The various grades of quartz sand used, and their combination in appropriate proportions with **Mapecoat TNS Binder**, form a filler paste which is easy to apply. It is used to coat surfaces with a layer which is relatively soft underfoot and sufficiently elastic for comfort, while offering excellent performance characteristics, such as an even bounce of the ball, to guarantee fast, enjoyable play.
Mapecoat TNS Binder is an elastic binder which cushions jumps, and guarantees a soft, safe landing on the surface.
Mapecoat TNS Binder has excellent resistance to abrasion and guarantees the durability of playing surfaces, even when used frequently.
Mapecoat TNS Binder is resistant to all types of climatic conditions, aggression from smog and sunlight and offers hard-wearing, durable protection for substrates.
Mapecoat TNS Binder is available in 20 standard colours and in a wide range of other colours upon request.

RECOMMENDATIONS

· Do not dilute **Mapecoat TNS Binder** with solvents.
· Do not apply **Mapecoat TNS Binder** directly on dusty, crumbly or incoherent surfaces.
· Do not apply **Mapecoat TNS Binder** on substrates polluted with oil, grease or dirt in general.
· Do not use **Mapecoat TNS Binder** in combination with quartz with a high content of water or other impurities; the mix could be affected making it more difficult to apply, and compromise its durability.
· Do not use **Mapecoat TNS Binder** in combination with cement.
· **Mapecoat TNS Binder** must not be applied directly on substrates subject to water under pressure. In such cases, the surface must be treated with an appropriate product, and only after applying such a product should the possibility of using **Mapecoat TNS Binder** be assessed.
· **Mapecoat TNS Binder** may only be applied on top of other finishing products after carefully checking the state of the old layer, and after carrying out preliminary tests to verify that they are compatible and that there is good adherence between the old paint and **Mapecoat TNS Binder**.

APPLICATION PROCEDURE

Preparation of concrete substrates

Concrete surfaces to be treated with this product must be clean, free of loose parts and as flat as possible, or with a maximum slope of 1.5%. The substrate must be sufficiently strong for the loads to which the surface will be subjected when in service.
Any cracks must be repaired by filling them with **Eporip**, while any deteriorated areas of the concrete must be repaired with a cementitious mortar from the **Mapegrout** range or with **Planitop Smooth & Repair**. Before applying **Mapecoat TNS Binder**, remove all traces of dust from the surface with a vacuum cleaner.
When applying the product on concrete, on dusty substrates, on substrates which are not particularly solid, if you are not sure what material has been used to make the substrate or if the curing time of the substrate is unknown, apply 1 coat of primer **Mapecoat I 600 W** diluted 1:1 with clean water.

Preparation of the product

After diluting **Mapecoat TNS Binder** with approximately 15-20% of water, add quartz sand in the proportions indicated below and mix thoroughly with a drill at low speed to prevent entrapment of air into the product.
Examples of **Mapecoat TNS Binder** mixed with quartz sand, and the relative application cycle and number of layers for each cycle, are listed below:
- prepare the surface with 1 or 2 coats of **Mapecoat TNS Binder** mixed with **Quartz 0.25** (medium filling capacity) or **Quartz 0.5** (high filling capacity) at a weight ratio of: **Mapecoat TNS Binder**: quartz 40:60;
- apply the final layer using 2 or 3 coats of **Mapecoat TNS Binder** mixed with **Quartz 0.25** or quartz 40-200 µm at a weight ratio of: **Mapecoat TNS Binder:** quartz 60:40.§

N.B. If an intermediate layer is required, use a mixing ratio of **Mapecoat TNS Binder**: quartz of 50:50.
The number of layers applied, the grade of quartz sand used and the mixing ratio with **Mapecoat TNS Binder** considerably influence the final finish.
The smoother the surface, the lower the friction, which means a faster bounce of the ball and, therefore, faster play.
Before deciding which cycle to apply, remember that the final finish of the surface is highly dependent on the following general rules:
- if fine quartz sand (such as 40-200 µm) is used in the final layer, the surface is smoother and more compact (less friction, faster play);
- if medium coarse quartz sand (such as **Quartz 0.25**) is used in the final layer, the surface is rougher (higher friction, slower play);
- use coarse quartz sand (such as **Quartz 0.5**) for the first layer to even out imperfections in the substrate with the lowest number of layers possible, and opt for a more sandy blend whin mixing it with **Mapecoat TNS Binder** (40:60 or 50:50);
- with mixing ratio where the proportion of **Mapecoat TNS Binder** is higher than quartz sand (such as **Mapecoat TNS Binder**: quartz 60:40 or quartz 70:30), surfaces are very hard and strong, and the bounce of the ball and play are fast.

To have a medium to fast playing surface, use 2-3 final coats of **Mapecoat TNS Binder** mixed with 40-200 µm quartz sand at a ratio of 60:40.
Since the final result is highly dependent on the aforementioned factors and how the cycle is applied, we recommend that the type of finish required (and therefore the speed of the court or pitch) is carefully assessed before applying the product.

Application of the product

Apply **Mapecoat TNS Binder** with a rubber trowel.
The cycle comprises the application of a various number of coats of **Mapecoat TNS Binder** mixed with quartz sand. Wait approximately 12-24 hours between each coat in normal temperature and humidity conditions.
When applying the product on uneven surfaces or on top of particularly bright colours (lemon yellow, bright red, orange, etc.) which are difficult to cover perfectly, we recommend the following application procedure:
- apply 1 or 2 coats of white **Mapecoat TNS Binder**. The number of coats required depends on the colour of the surface on which the product is applied and/or the degree of cover required;
- apply 2 or 3 coats of **Mapecoat TNS Binder** in the colour selected. In this case, the number of coats depends on the intensity of colour required (the colour is brighter if more coats are applied) and the covering capacity of each colour.

Provide adequate protection for surfaces freshly coated with **Mapecoat TNS Binder** to prevent rain coming into contact with the product and compromising adhesion and final quality.

PRECAUTIONS TO BE TAKEN DURING PREPARATION AND APPLICATION

Do not apply **Mapecoat TNS Binder** if it is about to rain or in windy weather.
Do not apply **Mapecoat TNS Binder** on damp or wet surfaces, adhesion could be compromised.
Do not apply if the temperature is lower than +10°C or higher than +35°C.
Do not apply if the level of humidity is higher than 85%.

CLEANING

Clean tools used to apply **Mapecoat TNS Binder** with water before the product dries.

CONSUMPTION

Consumption of the first coats is heavily influenced by the absorption and roughness of the substrate. Consumption is approximately 0.9-1.2 kg/m² for application on even substrates with a rubber trowel (refers to concentrated product applied as indicated above in the “Preparation of the product” section).

PACKAGING

Mapecoat TNS Binder is supplied in 18 kg plastic drum.

STORAGE

24 months if stored in a dry place away from sources of heat at a temperature of between +5°C and +35°C. Protect from freezing weather.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Mapecoat TNS Binder is not considered hazardous according to current norms and guidelines regarding the classification of mixtures. However, we recommend taking the usual precautions for handling chemical products. If the product is applied in closed environments, make sure the area is well ventilated.
For further and complete information about the safe use of our product please refer to our latest version of the Material Safety Data Sheet.
PRODUCT FOR PROFESSIONAL USE.

TECHNICAL DATA (typical values)	
PRODUCT IDENTITY	
Appearance:	pasty liquid
Dry solids content (%):	approx. 50
Density (g/cm³):	approx. 1.2
Viscosity of product (mPa·s):	30,000 ± 5,000
Taber abrasion test mixed 60:40 with Quartz 0.25 after 7 days at 23°C - 50% R.H. CS17 disk, weight 1000 g, loss in weight after 500 revs. (g):	0.16
Failure load DIN 53504 after 7 days at 23°C (complete cycle with Quartz 0.25) (%):	0.5
Elongation at failure DIN 53504 after 7 days at +23°C (complete cycle with Quartz 0.25) (N/mm²):	90
Change in colour after 1,000 hours exposure to a Weather-Ometer (according to ASTM G 155 cycle 1): – blue: – green: – sky blue: – red: – white:	 ΔE < 0.8 ΔE < 0.5 ΔE < 0.5 ΔE < 0.5 ΔE < 0.5
Vapour diffusion resistance coefficient (μ) (UNI EN ISO 7783-2) (complete cycle with Quartz 0.25):	550
Resistance to the passage of vapour of a 0.4 mm thick dry layer S_D (m) (UNI EN ISO 7783-2) (complete cycle with Quartz 0.25):	0.22
Capillary action water absorption coefficient W_{24} [(kg/(m²·h$^{0.5}$)] (UNI EN 1062-3) (complete cycle with Quartz 0.25):	0.04

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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