MAPECOAT TNS FINISH 1

Coloured coating with selected aggregates for multi-layered systems from the Mapecoat TNS range



DESCRIPTION

Mapecoat TNS Finish 1 is a coloured coating with selected fillers, specifically formulated by the Mapei R&D laboratories as topcoat for **Mapecoat TNS** systems. It is suitable for creating both indoor and outdoor sports surfaces, such as tennis courts and multi-sport areas in general.

Mapecoat TNS Finish 1 is ITF certified with a Court Pace Rating of 1 (Slow).

WHERE TO USE

- Finish for both indoor and outdoor tennis courts.
- Finish for outdoor multi-sport areas.
- Intermediate layer between filler undercoats and topcoats from the **Mapecoat TNS** range.
- Finish for restoring existing surfaces already treated with resin coatings.
- Finish for coating cementitious or bituminous surfaces.

RECOMMENDATIONS

- Do not dilute **Mapecoat TNS Finish 1** with solvent.
- Do not apply **Mapecoat TNS Finish 1** directly on dusty, crumbling or weak surfaces.
- Do not apply **Mapecoat TNS Finish 1** on substrates with oil or grease, or dirt in general.
- The concrete substrate must be completely cured (min. 28 days with residual moisture under 3%) and free from rising damp. In case of new concrete substrates, apply a suitable vapour barrier.
- New asphalt substrates must be cured for at least 15-20 days, according to climatic conditions, to allow correct oxidation.
- **Mapecoat TNS Finish 1** must not be applied directly to substrates subject to negative water pressure. The surface of such substrates must be treated with appropriate products, and then the possibility of applying **Mapecoat TNS Finish 1** must be assessed.
- **Mapecoat TNS Finish 1** can only be applied over other finishes after careful examination of the condition of the existing coating and preliminary tests to ensure compatibility and adhesion between the old finish and **Mapecoat TNS Finish 1**.
- It is possible to apply **Mapecoat TNS Finish 1** on cementitious substrates only after priming them.
- Do not apply the product if it is about to rain or in windy weather.
- Do not apply on damp or wet surfaces.
- The temperature of the substrate must be between +10°C and +50°C.

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- Do not apply at temperatures lower than +10°C or higher than +35°C.

APPLICATION PROCEDURE

Preparation of the substrate

Mapecoat TNS Finish 1 is part of a complete application cycle. For information on substrate characteristics and surface preparation, please refer to the technical documentation of the selected system or products from the **Mapecoat TNS Base Coat** range.

If the product is applied directly on the substrate, make sure it complies with the following requirements.

Minimum requirements for application on concrete substrates:

- suitably cured (minimum 28 days)
- free from pollutants
- free from rising damp.
- primed with **Mapecoat TNS Primer EPW** in case of residual moisture up to 3%, or with **Triblock P** in case of residual moisture up to 6%.
- dry
- flat
- free from detaching or loose parts
- with slopes designed to ensure proper rainwater drainage on outdoor surfaces

Minimum requirements for application on bituminous substrates:

- suitably cured (minimum 15–20 days)
- free from pollutants
- dry
- flat
- free from detaching or loose parts
- with slopes designed to ensure proper rainwater drainage on outdoor surfaces

Notes: The absence of a suitable vapour barrier (concrete) could lead to detachment and/or blisters.

The mechanical strength of the surface must comply with its intended use and with the respective Sports Associations and Federations guidelines, if present.

Preparation of the product

Mix **Mapecoat TNS Finish 1** in its original packaging with a suitable electric mixer fitted with a mixing attachment at low speed to avoid entraining air into the product.

Dilute **Mapecoat TNS Finish 1** with water and mix for at least 2 minutes until an even mix is obtained.

It is recommended to keep the mix well blended during the application phase repeating the mixing operation.

Mapecoat TNS Finish 1	Amount of water
20 kg	From 1 to 2 L

Application of the product

Apply **Mapecoat TNS Finish 1** with a rubber trowel (50 or 70 Shore hardness such as **Trowel 65** for **Mapecoat TNS**), or by spray (with an air-HVLP spray gun).

It is recommended to apply **Mapecoat TNS Finish 1** as follows:

- 1 coat, if used as intermediate coat for preparation.
- 2 coats, if used as coating for colouring new or existing surfaces.
- When very bright/clean colours (yellow, bright red, orange, etc.) are applied, their lower hiding power requires additional coats, depending on the type of substrate and the equipment used.

Drying

In 12–24 hours at +23°C and 50% humidity.

Always check drying times based on weather conditions (low or high temperatures, potential shadow areas, high humidity), which strongly affect drying and re-coat times.

CLEANING

Clean tools with water while the product is still fresh. Once dry, **Mapecoat TNS Finish 1** can only be removed mechanically.

CONSUMPTION

Coats	Consumption for direct application on asphalt	Consumption for application on multilayer TNS systems or cementitious substrates
First coat	0.8-1 kg/m^2	0.4-0.5 kg/m^2
Second coat	0.4-0.5 kg/m^2	0.4-0.5 kg/m^2

PACKAGING

Mapecoat TNS Finish 1 is supplied in 20 kg plastic buckets.

STORAGE

24 months in a cool, dry place away from sources of heat at a temperature between +5°C and +30°C. Protect from frost.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Instructions for the safe use of our products can be found on the latest version of the SDS available from our website www.mapei.com

PRODUCT FOR PROFESSIONAL USE.

TECHNICAL DATA (typical values)

PRODUCT IDENTITY	
Consistency:	thick liquid
Dry solids content:	70%

Density:	approx. 1.40 g/cm³
Viscosity:	19,000 ± 1,000 mPa·s

APPLICATION DATA

Damp abrasion DIN 53778:	> 15,000 cycles
Taber abrasion test after 7 days at +23°C and 50% R.H. - H22 wheel, 500 revs/1,000 g (loss in weight):	2.8 g (6%)
Taber abrasion test after 7 days at +23°C and 50% R.H. - CS17 wheel, 1000 revs (loss in weight):	< 0.1 g after 1000 revs
Shore A hardness:	60
Breaking load (DIN 53504) – after 7 days at +23°C (N/mm²):	0.7
Elongation at break (DIN 53504) – after 7 days at +23°C:	140%
Change in colour after 1000 hours of exposure to a Weather-Ometer (according to ASTM G 155 cycle 1):	
- blue:	ΔE < 0.8
- green:	ΔE < 0.5
- light blue:	ΔE < 0.5
- red:	ΔE < 0.5
- white:	ΔE < 0.5
Water-vapour transmission resistance (EN ISO 7783):	250 μ
Resistance to water vapour for 0.5 mm dry thickness S_D (EN ISO 7783):	0.12 m
Water absorption due to capillary action W_{24} (EN 1062-3):	0.09 kg/(m²h$^{0.5}$)
Recoat time:	24 hours in normal humidity and temperature conditions

FINAL PERFORMANCE

Performance characteristic	Test method	Product performance
CO2 permeability	EN 1062-6	
μ:		408,790
sd (m):		818
dry thickness according to sd (m):		0.002
Capillary absorption and permeability to water:	EN 1062-3	0.02
thermal compatibility: ageing: - 7 days at +70°C:	EN 1062-11 4.1	adherence ≥ 0.8 N/mm²
Thermal compatibility: freeze-thaw cycling with de-icing salt immersion:	EN 13687-1	adherence ≥ 0.8 N/mm²

Thermal compatibility: thunder-shower cycling:	EN 13687-2	adherence ≥ 0.8 N/mm²
Thermal compatibility: thermal cycling without de-icing salt impact:	EN 13687-3	adherence ≥ 0.8 N/mm²
Resistance to temperature shock	EN 13687-5	adherence ≥ 0.8 N/mm²
Bond strength by pull-off:	EN 1542	adherence ≥ 0.8 N/mm²
Slip resistance:	EN 13036-4	> 55 units per test on wet surface
Abrasion resistance, (Δ wheel H22, 1000 cycles):	EN ISO 5470-1	< 1.5 g
Chemical resistance group 3 (oil / fuel) Δ Shore D (EN ISO 868):	EN 13529 – group 3	<50% a 28 days

SOLAR REFLECTANCE				
Condition	Method	Product performance (on average)		
		16 Dark Blue	1 Light grey	20 Dark green
Direct normal irradiance:	ASTM E903	19.3	37.0	22.8
Global irradiance on a 37° tilted plane:		19.0	36.9	22.2
Global horizontal irradiance:		18.7	36.5	21.6

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.

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

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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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