MAPECOAT TNS PROFESSIONAL

Multi-layered elastic system made of acrylic resins in water dispersion, for professional indoor and outdoor tennis courts

PRODUCTS TO USE

- Filler undercoat: **MAPECOAT TNS WHITE BASE COAT** or **MAPECOAT TNS WHITE BASE COAT HV**
- Base colour finish: **MAPECOAT TNS BASE COLOR**
- Coloured finish: **MAPECOAT TNS FINISH 1.3.4**
- Markings: **MAPECOAT TNS LINE** or **MAPECOAT TNS LINE TEX**

CHARACTERISTICS

MAPECOAT TNS PROFESSIONAL is a system with high resistance to wear, UV rays and adverse weather conditions.
MAPECOAT TNS PROFESSIONAL can be applied on both existing flooring and on surfaces to be covered with bituminous or cementitious conglomerate.
MAPECOAT TNS PROFESSIONAL makes it possible to create flexible floorings with a good comfort/performance ratio in events like ball rebounds or quick and safe direction changes in the athlete's movements.
MAPECOAT TNS PROFESSIONAL provides playing fields with an excellent aesthetic appearance, making them easily and quickly renewable.

PERFORMANCE AND ADVANTAGES

- Certified ITF (International Tennis Federation) as level 1
- EN 14808 & 14809 (Shock Absorption & Vertical Deformation) certified
- Excellent aesthetic appearance and high functionality.
- Excellent price-performance ratio.
- Does not contain solvents.
- Resistant to adverse weather conditions.
- High UV resistance.

FINAL USE

- Tennis
- Padel
- Pickleball

MAPEI
SPORTS SYSTEM TECHNOLOGY

1	Asphalt
2 - 3	Filler undercoat **MAPECOAT TNS WHITE BASE COAT**
4	Base colour finish **MAPECOAT TNS BASE COLOR**
5-6	Coloured Finish **MAPECOAT TNS FINISH 1.3.4.**
7	Markings **MAPECOAT TNS LINE**, **MAPECOAT TNS LINE TEX**

SURFACE PREPARATION

Characteristics of the substrate

Before applying **MAPECOAT TNS PROFESSIONAL** cycle, the substrate on which it is to be applied must be carefully analysed. For a successful application of the product, the substrate must be strong enough for the loads the surface will have to withstand when in use.

Minimum requirements for concrete substrates:

- suitably cured (minimum 28 days)
- free from rising damp (max. residual moisture 3%)
- dry
- flat
- free from detaching or loose parts
- presence of suitable slope for the flowing of rainwater.

Minimum requirements for bituminous mats:

- suitably cured (minimum 15–20 days)
- dry
- flat
- free from detaching or loose parts
- presence of suitable slope for the flowing of rainwater.

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 substrate

Concrete substrates

The surface of the floor to be treated must be prepared with a suitable mechanical process (e.g. shot-blasting or grinding with a diamond disc) to remove all traces of dirt, cement laitance and crumbling or detached portions, and to make the surface slightly rough and absorbent. Before applying the products, thoroughly remove all dust on the surface with a vacuum cleaner.
As an alternative to the mechanical treatment described above, in case of smooth and low-absorbency surfaces, rinse with a solution of clean water and 5 - 10% ULTRACARE HD CLEANER (or equivalent products from **ULTRACARE** range). Spread the solution on the whole surface using a brush or a single disc buffing machine and then rinse again with plenty of clean running water (for further information please refer to **ULTRACARE HD CLEANER** Technical Data Sheet).
In order to grant the correct adhesion of the filler undercoat, a suitable primer must be applied on the dry substrate. In the case of substrates with residual moisture up to 3%, use **MAPECOAT TNS PRIMER EPW**.
In the presence of residual moisture from 3 to 6%, apply a suitable chemical barrier using **TRIBLOCK P** three-component epoxy-cementitious primer.
Apply the first coat of the filler undercoat within 24 hours of applying **MAPECOAT TNS PRIMER EPW** and within 36 hours if **TRIBLOCK P** chemical barrier has been applied.
Repair any cracks in the surface using epoxy resins such as **EPORIP**, **EPORIP TURBO**, **EPOJET** or equivalent Mapei products. If necessary, repair damaged concrete areas with cementitious mortars from the **MAPEGROUT** or **PLANITOP** range or equivalent Mapei products.
Expansion joints must be sealed with **MAPEFOAM** and **MAPEFLEX PU 45 FT**, **MAPEFLEX PU 40** or equivalent Mapei products, and broadcasted with **QUARTZ 0.5** while the sealant is still fresh.

Bituminous substrates

Fill and repair any cracks using fillers for high-thickness applications such as **ULTRABOND TURF 2 STARS**, **ULTRABOND TURF 2 STARS PRO** or **ULTRABOND TURF PU 2K** (two-component quick-drying products).
In the presence of hollows up to 2 cm deep, the use of a balanced mix of the above-mentioned products (**ULTRABOND TURF**) and 15-20% by weight of dry silica sand **QUARTZ 0.9** is recommended. Broadcast with **QUARTZ 0.5** or **QUARTZ 0.9** on the surface while it is still fresh, making sure it is completely saturated.
Badly damaged and worn asphalt must be removed and replaced by applying **MAPE-ASPHALT REPAIR 0/8**.

Preliminary checks before application

Make sure that all the assessments from section “Characteristics of the substrate” have been carried out and that all the operations indicated in section "Preparation of the substrate” have been carried out correctly.
The surrounding temperature must be between +10°C and +35°C (the ideal application temperature is between +15°C and +25°C) and the temperature of the substrate must be at least 3°C above dew-point.

PREPARATION AND APPLICATION OF THE PRODUCTS

Carefully follow the preparation instructions contained in the Technical Data Sheets for each single product used to form the complete system:
Consumption rates below refer to **MAPECOAT TNS PROFESSIONAL** applied on a surface as flat bituminous mat with filler grain size of 0.6 to 0.8 mm. Rougher surfaces and application at lower temperatures could lead to an increase in consumption and longer hardening times.
In particular, consumption rates of the filler undercoats **MAPECOAT TNS WHITE BASE COAT**, or **MAPECOAT TNS WHITE BASE COAT HV** may vary depending on the absorbency level and roughness of the substrate.

Yield of materials

Filler undercoat:	**MAPECOAT TNS WHITE BASE COAT / MAPECOAT TNS WHITE BASE COAT HV**	1 coat approx. 1 kg/m²
middle finish coating:	**MAPECOAT TNS BASE COLOR**	1 coat approx. 0.5 kg/m²
Finishing layer:	**MAPECOAT TNS FINISH 1.3.4**	2 coats approx. 0.3-0.5 kg/m² per coat
Markings:	**MAPECOAT TNS LINE / MAPECOAT TNS LINE TEX**	2 coats consumption to be verified according to the type of markings.

Notes:
If **MAPECOAT TNS PROFESSIONAL** is applied on cementitious substrates, apply **MAPECOAT TNS PRIMER EPW** or **TRIBLOCK P** beforehand (consult the relevant Technical Data Sheets for correct application procedures).

CLEANING

Please refer to the Technical Data Sheets of the relevant products for information about the clean operations of the tools used during the application.

HARDENING AND STEP-ON TIMES

Once the system is completely applied, at +23°C and 50% R.H., the surface sets to foot traffic after 12 hours. Lower temperatures lead to longer hardening and step-on times.

TECHNICAL DATA (referred to MAPECOAT TNS FINISH 1)

CHARACTERISTICS (after 7 days at +23°C)	
Change in colour after 1000 hours of exposure to a Weather-Ometer (according to ASTM G 155 cycle 1):	
BLUE colour:	ΔE <0.8
GREEN colour:	ΔE <0.5
LIGHT BLUE colour:	ΔE <0.5
RED colour:	ΔE <0.5
WHITE colour:	ΔE <0.5
Exposure of coatings to high temperatures (EN 1062-11) (ageing 7 days +70°C):	Complies (adhesion ≥ 1.5 N/mm²)
Slip resistance (EN 13036-4) on wet surface:	≥ 55 N/mm²
Abrasion resistance (EN ISO 5470-1) Δ wheel H22, 1000 cycles:	< 3 g

Chemical resistance - group 1 (gasoline) (EN 13529):	Class II
Chemical resistance - group 3 (oil/fuel) (EN 13529):	Class II

CLEANING AND MAINTENANCE

Regular cleaning and maintenance operations increase the flooring's service life, improve its aesthetic properties, and reduce its tendency to collect dirt. For cleaning and maintenance operations, please refer to the respective manuals.

NOTES

Information regarding safety equipment and handling of the products are contained in the Safety Data Sheets for each component of the cycle available on the website www.mapei.com. However, the use of protective clothing and equipment is recommended when mixing and applying the products.
If the cycle is applied on different surfaces from those mentioned above, or in climatic conditions and/or for final uses not mentioned above, please contact the Technical Services Department at MAPEI S.p.A.

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