

# MAPECOAT TNS CUSHION ELITE

Multilayer, elastic acrylic system with SBR rubber granules for indoor and outdoor sports surfaces



## BENEFITS AND FEATURES

- Certified by ITF (International Tennis Federation) as level 3
- Compliant with EN 14808 and 14809 shock absorption and vertical deformation
- High play comfort
- High flexibility
- Durability
- Wide variety of colours available
- Reduces the effect of impact shocks
- Resistance to weathering and UV rays

## PRODUCTS TO USE

- Primer: **TNS Primer EPW** (for cementitious and old resin surfaces only) / **TRIBLOCK P** (for cementitious substrates with residual moisture only)
- Filler undercoat: **MAPECOAT TNS WHITE BASE COAT HV** (with sand) / **MAPECOAT TNS BASE COAT BINDER** (concentrated without sand)
- Flexible undercoat (cushion): **MAPECOAT TNS BASE COAT ULTRA PLUS**, **MAPECOAT TNS BASE COAT ULTRA**, **MAPECOAT TNS BASE COAT GREY**
- Intermediate layer: **MAPECOAT TNS BASE COLOR**
- Coloured finish: **MAPECOAT TNS FINISH 1.3.4**
- Markings: **MAPECOAT TNS LINE** or **MAPECOAT TNS LINE TEX**

## CHARACTERISTICS

**MAPECOAT TNS CUSHION ELITE** is a system with high resistance to wear, UV rays and adverse weather conditions.

**MAPECOAT TNS CUSHION ELITE** can be applied on both existing flooring and on surfaces to be covered with bituminous or cementitious conglomerate.

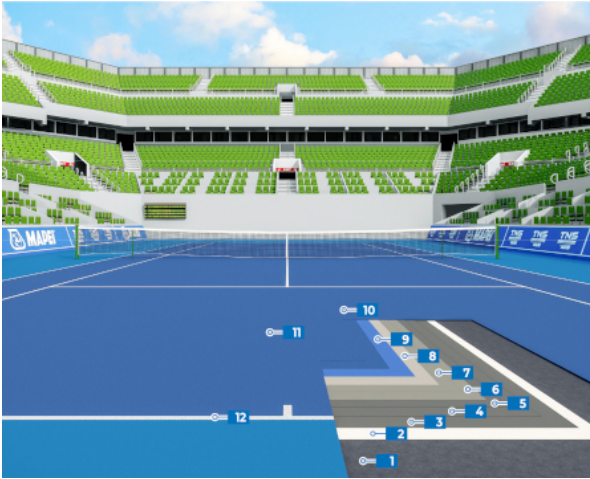
**MAPECOAT TNS CUSHION ELITE** makes it possible to create flexible flooring with a good comfort/performance ratio in events like ball rebounds or quick and safe direction changes in the athlete's movements.

**MAPECOAT TNS CUSHION ELITE**, thanks to the properties of **MAPECOAT TNS BASE COAT ULTRA** and **MAPECOAT TNS BASE COAT ULTRA PLUS** flexible undercoat (cushion), makes it possible to create high performance flooring providing reduced impact trauma and a good comfort, as well as excellent technical performances and a good slide/balance ratio for the final user.

## FINAL USE

- Tennis
- Padel

- Pickleball
- Multi-sport areas



1	Asphalt
2	Filler undercoat: <b>MAPECOAT TNS WHITE BASE COAT HV</b> or <b>MAPECOAT TNS BINDER</b>
3-4-5	Flexible undercoat (cushion): <b>MAPECOAT TNS BASE COAT ULTRA PLUS</b>
6-7	Flexible undercoat (cushion): <b>MAPECOAT TNS BASE COAT ULTRA</b>
8	Flexible undercoat (cushion): <b>MAPECOAT TNS BASE COAT GREY</b>
9	Intermediate layer: <b>MAPECOAT TNS BASE COLOR</b>
10-11	Coloured finish: <b>MAPECOAT TNS FINISH 1.3.4</b>
12	Markings: <b>TNS LINE TEX</b>

## SURFACE PREPARATION

### Characteristics of the substrate

Before applying **MAPECOAT TNS CUSHION ELITE** cycle, the substrate on which it is to be applied must be carefully analysed. For a successful application of the system, 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 rainwater drainage.

### Minimum requirements for bituminous mats:

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

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 substrate must be prepared with suitable power tools (e.g. shot-blasting or grinding with a diamond disk) 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 product, carefully vacuum off the dust from the surface.

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 filler undercoat within 24 hours of applying **MAPECOAT TNS PRIMER EPW** and within 36 hours if a **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 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 CUSHION ELITE** applied on a surface of 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 HV**, or **MAPECOAT TNS WHITE BASE COAT BINDER (concentrated)** may vary depending on the absorbency level and roughness of the substrate.

### Material consumption

Filler undercoat:	<b>MAPECOAT TNS WHITE BASE COAT HV</b>	1 coat: approx. 1 kg/m <sup>2</sup>
	<b>MAPECOAT TNS BASE COAT BINDER (concentrated)</b>	1 coat: approx. 0.4 kg/m <sup>2</sup>

Flexible undercoat (rubber granules):	MAPECOAT TNS BASE COAT ULTRA PLUS	3 coats: approx. 1.1 kg/m <sup>2</sup> (for each coat)
Flexible undercoat (rubber granules - fine):	MAPECOAT TNS BASE COAT ULTRA	2 coat: approx. 0.8 kg/m <sup>2</sup> (for each coat)
Flexible undercoat (rubber dust):	MAPECOAT TNS GREY BASE COAT	1 coat: approx. 0.6 kg/m <sup>2</sup>
Coloured undercoat:	MAPECOAT TNS BASE COLOR	1 coat: approx. 0.5 kg/m <sup>2</sup>
Coloured finish:	MAPECOAT TNS FINISH 1.3.4	2 coats: approx. 0.3-0.5 kg/m <sup>2</sup> (for each coat)
Markings:	MAPECOAT TNS LINE TEX	2 coats: consumption to be verified according to the type of markings

## Note:

If **MAPECOAT TNS CUSHION ELITE** is applied on cementitious substrates or existing resin flooring, apply **MAPECOAT TNS PRIMER EPW** or **TRIBLOCK P** beforehand (consult the respective 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)

### PERFORMANCE CHARACTERISTICS OF MAPECOAT TNS CUSHION PRO SYSTEM

Average thickness of the system	4 mm
Shock absorption (EN 14808:2005)	4.5%
Vertical deformation (EN 14809:2005)	0.3 mm

### TECHNICAL DATA REFERRING TO MAPECOAT TNS FINISH 1.3.4. (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:	$\Delta E < 0.8$
GREEN colour:	$\Delta E < 0.5$
LIGHT BLUE colour:	$\Delta E < 0.5$
RED colour:	$\Delta E < 0.5$
WHITE colour:	$\Delta E < 0.5$
Slip resistance on a wet surface (UNI EN 13036-4) class III for exteriors, (according to EN 1504-2) unit:	$\geq 55 \text{ N/mm}^2$

Abrasion resistance  $\Delta$  weight loss of grinding wheel H22, 1000 cycles (EN ISO 5470-1):

< 3 g

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](http://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.**

**Mapei S.p.A.**

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