MAPECOAT TNS COMFORT

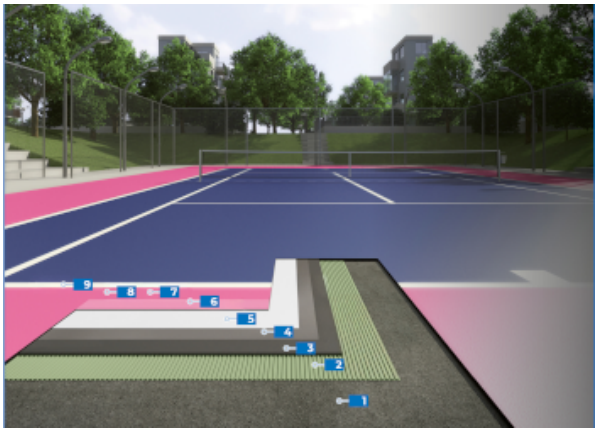
High-elasticity, multi-layered system made from acrylic resin in water dispersion in combination with granular rubber matting for sports surfaces

PRODUCTS USED FOR THE SYSTEM:

Mapecoat TNS Line Tex, **Mapecoat TNS Finish 1.3.4**, **Mapecoat TNS Base Color**, **Mapecoat TNS White Base Coat HV**, **Mapecoat TNS Primer EPW**, **Mapecomfort R** and **Ultrabond Turf 2 Stars Pro** or **Ultrabond Turf 2 Stars**

DESCRIPTION

MAPECOAT TNS COMFORT is a highly elastic, multi-layered, acrylic resin-based system in water dispersion with selected fillers applied in combination with high-performance, prefabricated, granular rubber mat. The system is specifically designed to create indoor and outdoor sports surfaces for both competitive and amateur use.
MAPECOAT TNS COMFORT may be applied on old floors already coated or on new bituminous conglomerate or cementitious floors.
Thanks to the elastic properties of **MAPECOMFORT R**, the **MAPECOAT TNS COMFORT** system may be used to create high-performance sports surfaces that reduce the effect of impact trauma, provide a good level of comfort during play, excellent technical performance properties, quick and safe changes in direction while in motion and a balanced equilibrium/slide ratio for players. Also, using 6 mm thick **MAPECOMFORT R** allows performance characteristics in line with EN 14877 to be achieved, classifying the system as class SA 11-19, that is, the capacity to absorb impacts at a rate of 11 to 19%.



1. asphalt
2. adhesive **Ultrabond Turf 2 Stars Pro / Ultrabond Turf 2 Stars**
3. granular rubber mat **Mapecomfort R**
4. primer **Mapecoat TNS Primer EPW**
5. base coat/filler **Mapecoat TNS White Base Coat HV**
6. base coat/filler **Mapecoat TNS Base Color**
7. acrylic resin **Mapecoat TNS Finish 1.3.4**
8.
9. acrylic resin **Mapecoat TNS TNS Line Tex**

MAPEI SPORTS SYSTEM TECHNOLOGY

PERFORMANCE AND ADVANTAGES

- High level of comfort during play.
- May be applied directly over existing coated surfaces or on new concrete or bituminous conglomerate substrates.
- Extends the durability of the colour of surfaces.
- Attenuates the effect of impacts on the surface.
- Resistant to outdoor conditions.
- Solvent-free.
- Allows highly attractive, highly-functional, flat, seamless surfaces to be created.
- Quick application, reducing the time required to carry out work and the down-time of surfaces.
- Wide range of colours available.
- Reduces the frequency of routine maintenance operations.
- Good cost/performance ratio.

Specifically designed for:

- Tennis
- Padel
- Pickleball

COLOURS

MAPECOAT TNS COMFORT is available in a wide range of colours thanks to the **ColorMap®** automatic colouring system, which can be used for all **MAPECOAT TNS FINISH 1.3.4** coloured finishes.

YIELD

The consumption rates indicated below consider application of the system at an ambient temperature of +15°C to+35°C on a flat, compact surface in bituminous conglomerate. Rougher surfaces and lower temperatures could affect consumption and extend the hardening time of the adhesive used to bond the mat. The consumption rate of the adhesives **ULTRABOND TURF 2 STARS PRO** and **ULTRABOND TURF 2 STARS** in particular could vary according to the type of sublayer and the way the surface has been prepared.

Bonding MAPECOMFORT R:

ULTRABOND TURF 2 STARS PRO and **ULTRABOND TURF 2 STARS**
1-2 kg/m² (according to the condition of the substrate). For concrete substrates ADESILEX G19 or ADESILEX G20 two-component adhesives may also be used and the consumption rate is approx.
0.5-0.7 kg/m².

Primer:

MAPECOAT TNS PRIMER EPW
1 coat approx.
0.15 kg/m²

Base coat/filler:

MAPECOAT TNS WHITE BASE COAT HV
1 coat
0.7-1.0 kg/m²

Intermediate finish:

MAPECOAT TNS BASE COLOR
1 coat approx.
0.5 kg/m²

Finish:

MAPECOAT TNS FINISH 1.3.4
2 coats
0.3-0.5 kg/m² (per coat according to the product used)

Lines/marking:

MAPECOAT TNS LINE TEX
2 coats
consumption according to the type of lines/marking to be carried out.

SURFACE PREPARATION

1. Characteristics of the sublayer

Before applying the **MAPECOAT TNS COMFORT** cycle, the substrate on which it is to be applied must be thoroughly checked. For the best results, make sure the mechanical properties of the sublayer are sufficient to withstand the loads the flooring will be subjected to during play. Make sure there are no materials or substance on the sublayer that could affect the bond of successive products, such as dust, detached or poorly bonded areas, wax, curing products, paraffin, efflorescence, oil stains, layers of dirty resin or traces of old paint or chemical products. Any other kind of material or substance that could affect adhesion of the coating must be removed before starting work. If there are any such materials or substances present, it is essential that the substrate is prepared using a suitable preparation method. For concrete substrates, make sure there is a suitable vapour barrier underneath. If it is not possible to check whether there is a vapour barrier, treat the surface with a suitable product and then verify if the surface is suitable to receive **MAPECOAT TNS COMFORT**, otherwise blisters could form and/or the mat could become detached. If the level of residual moisture is between 3 and 6%, apply a suitable chemical barrier using Triblock P three-component, epoxy-cementitious primer. For new bituminous substrates, it is recommended to apply a bituminous mat at least 3 cm thick with a particle size of 0 to 6 mm. Once the asphalt mat has been applied, it is recommended to wait at least 20–25 days to allow the bitumen to oxidise correctly. Make sure the sublayer is as flat as possible and that its pull-off strength is more than 1.5 N/mm². Adhesives for bonding **MAPECOMFORT R** may only be used on other types of coating after checking the compatibility between the old coating and the adhesive.
If required, contact Mapei Technical Services for advice on the most suitable preparation method.

2. Sublayer preparation

Substrates must be flat and free of any defects before applying the **MAPECOAT TNS COMFORT** system.
For cementitious substrates, the most suitable preparation method is to grind the surface with a diamond disc and then remove all traces of dust with a vacuum cleaner, or whenever power tools are used to remove any traces of cementitious laitance. Any cracks in the substrate must be repaired by filling them with epoxy resin such as **EPORIP**. If required, repair damaged areas of the concrete with a cementitious mortar from the **MAPEGROUT** line, **PLANITOP** or **ULTRAPLAN**. Seal expansion joints by applying **MAPEFOAM** and **MAPEFLEX PU45 FT** or **MAPEFLEX PU 40** and broadcast the
sealant while wet with QUARTZ 0.5.
For bituminous substrates, fill and repair cracks with a reactive product such as **ULTRABOND TURF 2 STARS PRO**, **ULTRABOND TURF 2 STARS** or **ULTRABOND TURF PU 2K**. For hollows up to 2 cm deep, we suggest using a balanced mix of the products mentioned above (**ULTRABOND TURF**) and 15-20%
in weight of **QUARTZ 0.5** or **QUARTZ 0.9**; in addition, broadcast the surface while still wet with **QUARTZ 0.5** or **QUARTZ 0.9**, making sure it is completely saturated.

3. Preliminary checks before application

Make sure that all the checks indicated in point 1 "*Characteristics of the sublayer*" have been carried out, and that all the operations indicated in point 2 "*Sublayer preparation*" have been carried out correctly. The ambient temperature must be between +15°C and +35° (the ideal application temperature is +15°C to +25°C) and the temperature of the sublayer must be at least 3°C higher than the dew-point temperature.

4. Preparation and application of the products

Carefully follow the preparation instructions contained in the Technical Data Sheet for each single product used to form the complete system.

ULTRABOND TURF 2 STARS PRO or **ULTRABOND TURF 2 STARS**, **MAPECOMFORT R, MAPECOAT TNS PRIMER EPW**, **MAPECOAT TNS WHITE BASE COAT HV**, **MAPECOAT TNS BASE COLOR**, **MAPECOAT TNS FINISH 1.3.4** and **MAPECOAT TNS LINE TEX**.

Bonding the mat (Mapecomfort R)

It is recommended to leave open the rolls of **MAPECOMFORT R** at least 24 hours prior to application of the system so they may acclimatise sufficiently. To bond **MAPECOMFORT R** on bituminous conglomerate substrates use **ULTRABOND TURF 2 STARS PRO** or **ULTRABOND TURF 2 STARS** and for concrete substrates use **ADESILEX G19** or **ADESILEX G20**. The adhesive hardens in around 12–24 hours (+23°C and 50% R.H.). For further information, please refer to the relative product Data Sheet.

Primer (Mapecoat TNS Primer EPW)

MAPECOAT TNS PRIMER EPW is a two-component epoxy primer in water dispersion and should be applied diluted 1:0.5 with water using a medium or long-pile roller or by spray. Wait at least 5-6 hours for the primer to dry, and a maximum of 24 hours at +23°C and 50% R.H., before applying the next product. While the product is drying and before applying the next product, protect the surface from rain, falling leaves and any other material or substance that could affect the quality of the surface. For further information please refer to the relative product Data Sheet.

Base coat (Mapecoat TNS White Base Coat HV)

Mapecoat TNS White Base Coat HV is an elastic, acrylic resin-based base coat and filler containing rubber granules and is applied diluted with up to 15% of water. **MAPECOAT TNS WHITE BASE COAT HV** may be applied with a rubber spreader such as a **SPATOLA 65** for **MAPECOAT TNS** or with a metal spreader. Wait 12–24 hours at +23°C and 50% R.H. before applying the next product. While the product is drying, protect the surface from rain, falling leaves and any other material or substance that could affect the quality of the surface. When the **MAPECOAT TNS WHITE BASE COAT HV** has hardened, sand the surface to eliminate any uneven areas and remove all traces of dust with suitable equipment. For further information, please refer to the relative product Data Sheet.

Intermediate coat (MAPECOAT TNS BASE COLOR)

Mapecoat TNS Base Color is an intermediate, pigmented acrylic coating product with selected fillers in water dispersion and is applied diluted with up to 10% of water. **MAPECOAT TNS BASE COLOR** may be applied with a rubber spreader such as a **SPATOLA 65** for **MAPECOAT TNS**. Wait 12-24 hours at +23°C and 50% R.H. before applying the next product. While the product is drying and before applying the next product, protect the surface from rain, falling leaves and any other material or substance that could affect the quality of the surface. For further information, please refer to the relative product Data Sheet.

Finishing coat (MAPECOAT TNS FINISH 1.3.4)

Mapecoat TNS Finish 1.3.4 are coloured acrylic coating products with selected fillers in water dispersion and are applied diluted with up to 10% of water. **Mapecoat TNS Finish 1.3.4** may be applied with a rubber spreader such as a **SPATOLA 65** for **MAPECOAT TNS. 2** coats of product should be applied 12-24 hours apart at +23°C and 50% R.H. While the product is drying, protect the surface from rain, falling leaves and any other material or substance that could affect the quality of the surface. For further information please refer to the relative product Data Sheet.

Lines and markings (MAPECOAT TNS LINE TEX and MAPECOAT TNS LINE SEAL)

Mapecoat TNS Line Tex is a coloured acrylic coating product with selected fillers in water dispersion and is applied by brush, with a roller or by spray. In order to create a clear separation and contain **MAPECOAT TNS LINE TEX**, consider a preliminary application of **MAPECOAT TNS LINE SEAL**. For further information, please refer to the relative product Data Sheets.

5.Hardening and step-on times

Once the complete system has been applied, the step-on time is around 12 hours at +25°C. Lower temperatures could extend the hardening time and, therefore, the time before flooring can be put into service.

CLEANING AND MAINTENANCE

Regular cleaning and maintenance of sports surfaces made using the **Mapecoat TNS Comfort system** helps maintain their attractive finish and reduces dirt pick-up, resulting in better performing surfaces with extended durability. In general, surfaces made using the **MAPECOAT TNS COMFORT** system are quick and easy to clean. It is recommended to refer to the **Maintenance Guide for Mapecoat TNS systems.**
Our Technical Services Department is also available for any information required.

NOTE

Dispositions and guidelines regarding the safe handling of the products may be found in the Material Safety Data Sheet for each single product in the system. The use of protective clothing and equipment is recommended when mixing and applying the products.
For applications on surfaces, in climatic conditions and/or for final uses different to those mentioned in the system Data Sheet, please contact the Technical Services Department at MAPEI S.p.A.

TECHNICAL DATA

PERFORMANCE CHARACTERISTICS according to EN 14877 for the MAPECOAT TNS COMFORT system consisting of the following products: Mapecoat TNS Line Tex, Mapecoat TNS Finish 1.3.4, Mapecoat TNS Base Color, Mapecoat TNS White Base Coat HV, Mapecoat TNS Primer EPW, Mapecomfort R 6 mm and Ultrabond Turf 2 Stars Pro

STANDARD	TEST	RESULTS AND COMPLIANCY	
EN 14808	Impact absorption	(%) result/class	SA 11 ÷ 19 18
EN 14808	Impact absorption after accelerated ageing	(%) result/class	SA 11 ÷ 19 17
EN 14809	Vertical deformation at 23 ± 2°C	mm result/class	≤ 3.0 0.7
EN 12235	Vertical ball bounce	% / m result/class	≥ 85 (≥ 1.19) 88 (= 1.23)
EN ISO 5470-1	Resistance to abrasion at 23 ± 2°C-H18 disc	g result/class	≤ 4 g 500-150 cycles 0,073
EN ISO 5470-1	Resistance to abrasion at 23 ± 2°C-H18 disc, after accelerated ageing	g result/class	≤ 4 g 500-1500 cycles 102
EN 12230	Tensile strength at 23 ± 2°C	MPa result/class	≥ 0,4 0,53
EN 12230	Elongation at failure	% result/class	≥ 40 99
EN 12230	Tensile strength after accelerated ageing	MPa result/class	≥ 0,4 0,44
EN 12230	Elongation at failure after accelerated ageing	% result/class	≥ 40 78

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