

# Mapecoat TNS Comfort

**HIGH-ELASTICITY MULTI-LAYERED SYSTEM MADE FROM ACRYLIC RESIN IN WATER DISPERSION AND GRANULAR RUBBER MATTING FOR PROFESSIONAL INDOOR AND OUTDOOR TENNIS COURTS**

## **Products used for the system:**

**Mapecoat TNS Line, Mapecoat TNS Finish 1.3.4, Mapecoat TNS Grey Base Coat, Mapecoat I 600 W, Mapecomfort 4/5 mm and Adesilex G19**

### **DESCRIPTION**

#### **MAPECOAT TNS COMFORT**

is a highly elastic, multi-layered system made from acrylic resin in water dispersion with selected fillers applied in combination with granular rubbing matting and is used to make playing surfaces suitable for professional-level tennis with high resistance to wear, UV rays and various weather conditions.

#### **MAPECOAT TNS COMFORT**

may be applied on existing painted surfaces or on new cementitious or asphalt surfaces that need to be coated.

#### **When MAPECOAT TNS**

**COMFORT** is applied on surfaces it forms an elastic playing surface that has excellent playing comfort and excellent performance characteristics, such as perfect bounce of the ball, quick, safe changes in direction and an excellent compromise between balance and slide for players. The elasticity of **MAPECOAT TNS COMFORT** allows high-performance dressings to be applied which reduce the effect of impact trauma.

Surfaces coated with

#### **MAPECOAT TNS COMFORT**

also have a very attractive finish and may be renewed easily and rapidly.

### **PERFORMANCE AND ADVANTAGES**

- Excellent playing comfort.
- Durable, characterised by high resistance to wear and abrasion from constant foot traffic.
- Resistant to outdoor conditions.
- Solvent-free and eco-friendly.
- Forms attractive, flat, seamless and highly functional surfaces.
- Quick application, reduces the time required to carry out work and the down time of playing surfaces.
- Wide range of colours available.
- Guarantees an excellent cost-performance ratio.

### **CHEMICAL RESISTANCE**

Floors coated with **MAPECOAT TNS COMFORT** are resistant to:

- diluted acids;

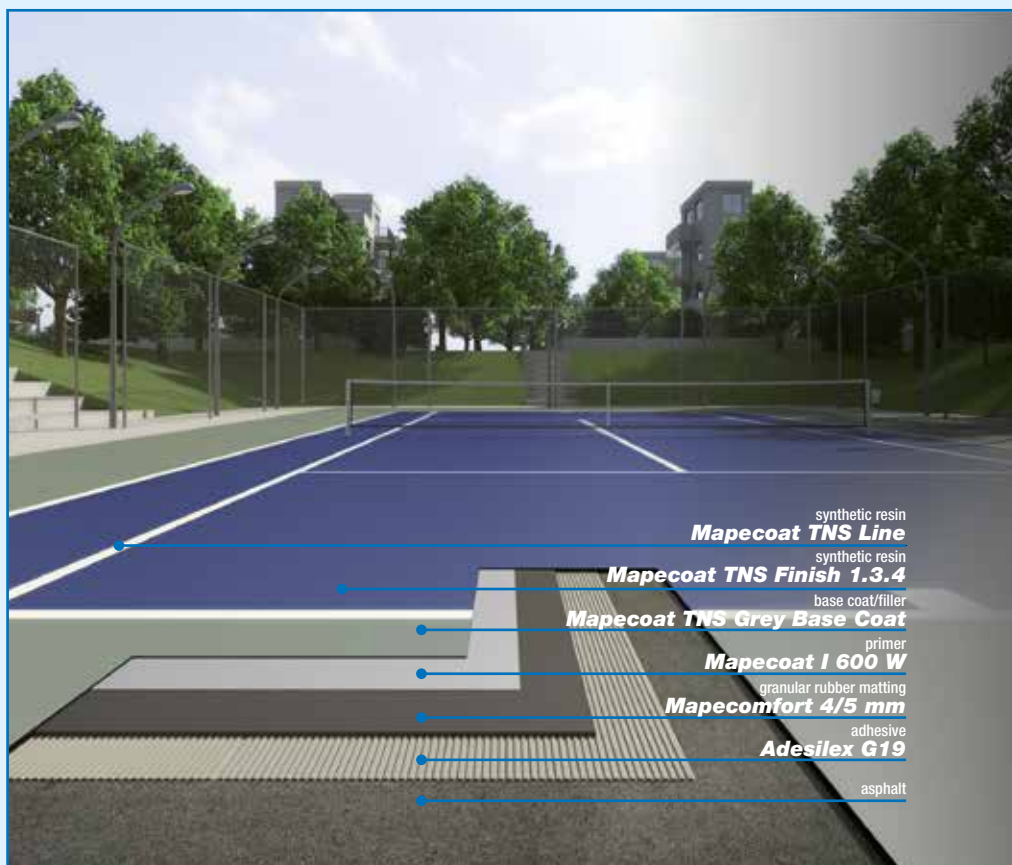
- alkalis, including 50% sodium hydroxide and detergents normally used for cleaning floors up to a concentration of 20-30%;
- mineral oils, diesel, petrol and kerosene.

### **COLOURS AVAILABLE**

**MAPECOAT TNS COMFORT** is available in 24 different colours from the standard colour chart and personalised colours upon request.

### **CONSUMPTION RATES**

The consumption rates indicated below are for a cycle applied at +15°C to +25°C on a smooth, compact concrete surface. Rougher surfaces and lower temperatures lead to higher consumption rates and longer hardening times.



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The consumption rate for **ADESILEX G19** adhesive in particular may vary according to the type of substrate and the depth of the preparation method used.

## MAPECOAT TNS COMFORT

average thickness of the system  
5.5-6.5 mm

### Bonding:

**ADESILEX G19** 0.8-1.5 kg/m<sup>2</sup>  
(depending on the roughness of the substrate)

Bonding of the **MAPECOMFORT 4/5 mm** granular rubber matting.

Priming with **MAPECOAT I 600 W** diluted 1:1 with water, consumption approximately 100 g/m<sup>2</sup>.

### 1° layer:

**MAPECOAT TNS GREY BASE COAT** 0.7 kg/m<sup>2</sup>  
(one coat)

### Finish:

**MAPECOAT TNS FINISH 1.3.4** 1.5 kg/m<sup>2</sup>  
(3 coats)

## SURFACE PREPARATION

### 1. Characteristics of the substrate

Before applying the **MAPECOAT TNS COMFORT** system the substrate on which it is to be applied must be carefully analysed. To get the best results, the following must be checked:

- there must be no materials or debris on the substrate which could potentially impede adhesion of the dressing, such as:
  - cement laitance;
  - dust or detached or loose material;
  - protective wax, curing products, paraffin or efflorescence;
  - oil stains or layers of dirty resin;
  - traces of 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 such materials or substances are present, it is ESSENTIAL that the substrate is prepared using a suitable preparation method. If required, contact Mapei Technical Services for advice on the most suitable method.

- The pull-off strength of the substrate must be more than 1.5 N/mm<sup>2</sup>.
- The substrate must be as flat as possible, and in all cases with a maximum slope of 1.5%.
- For concrete substrates, the maximum moisture content must be not higher than 4% and there must be a suitable vapour barrier. If these conditions are

## TECHNICAL DATA OF MAPECOAT TNS FINISH 1.3.4 (after 7 days at +23°C)

Wet abrasion DIN 53778 (cycles):	> 15,000
Taber abrasion test after 7 days at +23°C - 50% R.H. H22 disk, 500 revs/1,000 g (loss by weight):	2.8 g (6%)
Taber abrasion test after 7 days at +23°C - 50% R.H. CS17 disk, 1000 revs (loss by weight):	< 0.1 g (< 1%)
Shore A hardness:	60
Ultimate tensile strength (DIN 53504) after 7 days at +23°C:	0.7 N/mm <sup>2</sup>
Elongation at failure (DIN 53504) after 7 days at +23°C:	110%
Change in colour after 1,000 hours exposure to a Weather-Ometer (according to ASTM G 155 cycle 1)	
– blue:	ΔE < 0.8
– green:	ΔE < 0.5
– sky blue:	ΔE < 0.5
– red:	ΔE < 0.5
– white:	ΔE < 0.5
Vapour diffusion resistance coefficient (μ) (ISO 7783/2):	200
Resistance to the passage of vapour of a 0.10 mm thick dry layer S <sub>D</sub> (m) (ISO 7783/2):	0.02
Capillary action water absorption W <sub>24</sub> [kg/(m <sup>2</sup> ·h <sup>0.5</sup> )] (ISO 1062/3):	0.09
Adhesion to concrete (N/mm <sup>2</sup> ):	2.40

not met the surface must be treated with suitable products. Once treated, make sure the surface is suitable for **ADESILEX G19**, otherwise the dressing may detach and/or blisters may form.

**ADESILEX G19** may only be applied over other types of acrylic resin-based finishing products after carefully checking that the old finish and **ADESILEX G19** are compatible.

### 2. Substrate preparation

It is very important that the surface is prepared according to specification to guarantee correct installation and to get the best performance from the **MAPECOAT TNS COMFORT** system. The most suitable method for preparing concrete surfaces is by shot-blasting or with a diamond disk. All dust must then

be removed with a vacuum cleaner. Do not use chemical preparation methods, such as acid rinsing, or aggressive percussion tools, to prevent damaging the substrate. Any defects present, such as holes, pitting, cracking, etc. must be repaired beforehand with **EPORIP**, **MAPEGROUT** or **PLANITOP SMOOTH & REPAIR**, depending on the width and depth of the defects and cracks. For asphalt surfaces, we recommend applying a 3 cm thick bitumen mat made from particles 0 to 6 mm in size. After applying the asphalt mat, we recommend waiting around 10 days before applying **ADESILEX G19** to allow the bitumen to oxidise. Apart from the checks carried out as described in section 1 "Characteristics of the substrate" no other surface preparation is required. Defects such as holes, pitting, cracking, etc. must be

repaired with **ADESILEX G19**.

### 3. Preliminary checks before application

Make sure that all the checks from section 1 "Characteristics of the substrate" have been carried out, and that all the operations indicated in section 2 "Substrate preparation" have been carried out correctly.

The surrounding temperature must be between +15°C and +30°C and the temperature of the substrate must at least +3°C above 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:

**ADESILEX G19, MAPECOMFORT 4 mm, MAPECOAT I 600 W, MAPECOAT TNS GREY BASE COAT, MAPECOAT TNS FINISH 1.3.4 and MAPECOAT TNS LINE.**

#### Thickness of system 5-5.5 mm

- Base layer (**ADESILEX G19** and **MAPECOMFORT 4/5 mm**)  
We recommend rolling out the rolls of **MAPECOMFORT 4/5 mm** so they may acclimatise sufficiently before they are laid. Apply the **MAPECOMFORT 4/5 mm** on the **ADESILEX G19** while it is still wet, within one hour at +23°C, and then carefully massage the surface from the centre working outwards to make sure there is full contact between the adhesive and mat and to remove all air bubbles. If the mat is not perfectly flat, put weights (such as bags of sand) on the surface of the uneven areas, and on the joints and ends of the mat, until the **ADESILEX G19** has hardened (12-24 hours). For further information, please refer to the **ADESILEX G19** Technical Data Sheet.

- Application of **MAPECOAT I 600 W** primer diluted 1:1 with water, consumption rate approximately 100 g/m<sup>2</sup>.

#### Thickness of system 1-1.5 mm

- Base layer (**MAPECOAT TNS GREY BASE COAT**) Apply **MAPECOAT TNS GREY BASE COAT** as is or diluted with 5-10% of clean water, depending on the application method used. Mix the product mixture with a drill at low-speed with a mixing attachment to form a smooth, even paste. Pour the mix prepared according to the indications above onto the surface to be dressed and spread it out in an even layer with a smooth trowel or a rubber spreader. This cycle requires one coat, consumption rate 0.7 kg/m<sup>2</sup>.

- Sanding and removing the dust with a vacuum cleaner  
When **MAPECOAT TNS GREY BASE COAT** has hardened, sand the



surface to eliminate any uneven areas and remove all traces of dust with an industrial vacuum cleaner.

- **Protecting the surface (MAPECOAT TNS GREY BASE COAT)**  
Protect the surface just treated with **MAPECOAT TNS GREY BASE COAT** from rain, strong air currents, high temperatures, falling leaves or other such objects which could damage the surface.
- **Cleaning**  
Clean tools used to apply **MAPECOAT TNS GREY BASE COAT** with clean water. Once dry, traces of the product must be removed mechanically.
- **Finish (MAPECOAT TNS FINISH 1.3.4)**  
Apply **MAPECOAT TNS FINISH 1.3.4** diluted with 10-15% of clean water. Mix with a drill at low-speed drill with a mixing attachment to form a smooth even paste. Pour the mix prepared according to the indications above onto the surface to be dressed and spread it out evenly and uniformly using a rubber spreader. This cycle requires three coats of **MAPECOAT TNS FINISH 1.3.4**. Wait 12 hours between each coat in normal temperature and humidity conditions.
- **Protecting the surface (MAPECOAT TNS FINISH 1.3.4)**  
Protect the surface just treated with **MAPECOAT TNS FINISH 1.3.4** from rain, strong air currents, high temperatures, falling leaves or other such objects which could damage the surface.
- **Cleaning**  
Clean tools used to apply **MAPECOAT TNS FINISH 1.3.4** with clean water. Once dry, traces of the product may only be removed mechanically.
- **Horizontal lines (MAPECOAT TNS LINE)**  
Apply **MAPECOAT TNS LINE** directly

on dry **MAPECOAT TNS FINISH 1.3.4**. Dilute with 10-15% of clean water and mix with a drill at low-speed with a mixing attachment to form a smooth, even paste. Apply the product prepared according to the indications above with a brush, roller or by spray. To improve the cover of **MAPECOAT TNS LINE**, we recommend applying two coats at 8-12 hours between each coat.

#### 5. Hardening and step-on times

At +25°C **MAPECOAT TNS FINISH 1.3.4** sets to foot traffic after 12 hours. Never allow vehicles to drive over the finish. Lower temperatures lead to longer hardening and step-on times.

#### CLEANING AND MAINTENANCE

Regular cleaning and maintenance operations increase the life of dressed surfaces, improves their appearance and reduces their tendency to collect dirt. Playing surfaces made using the **MAPECOAT TNS COMFORT** cycle are generally easy to wash with neutral or alkali detergents diluted with 5 to 10% of water. Suitable detergents and cleaning tools are readily available for cleaning this type of surface. Manufacturers of these detergents supply all the information required on the cleaning procedures to apply. Our Technical Services Department is available for any information required.

#### NOTE

Procedures regarding the safe handling of the products are contained 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.

If the system is applied on different surfaces to those mentioned above, or in climatic conditions and/or for final uses not mentioned in the System Data Sheet, please contact the Technical Services Department at MAPEI S.p.A.

