

Mapecoat TNS Comfort Elite

Premium Mat-Based, Indoor/Outdoor, Cushioned Athletic-Court System with Fiberglass Reinforcement and Acrylic Coatings



PRODUCTS USED FOR THE SYSTEM

Mapecoat™ TNS Line Tex • *Mapecoat TNS Finish 3 [NA]* • *Mapecoat TNS Base Coat Binder [NA]* (or *Mapecoat TNS Base Coat Binder Tex*) • *Mapecoat TNS Mat Sealer 1K* • *Mapenet™ Reinforced* • *Mapecoat TNS PU 3-in-1* • *Mapecomfort R [NA]*

DESCRIPTION

Mapecoat TNS Comfort Elite is a highly elastic, multi-layered, water based acrylic resin system with selected fillers applied in combination with high-performance, prefabricated, granular rubber mat and reinforcing fiberglass mesh. The system is specifically designed to create indoor and outdoor sports surfaces for both competitive and amateur use.

Mapecoat TNS Comfort Elite may be applied on previously coated floors or on new asphalt or concrete slabs. Thanks to the elastic properties of *Mapecomfort R*, the *Mapecoat TNS Comfort Elite* may be used to create high-performance sports surfaces that reduce the effect of impact trauma as well as providing a good level of comfort during play, excellent technical performance properties, quick and safe changes in direction while in motion, and a balanced grip/slide ratio for players. Also, using 7-mm-thick *Mapecomfort R* allows the system to absorb 24% to 26% of impact force.



- Asphalt
- Adhesive: *Mapecoat TNS PU 3-in-1*
- Granular rubber mat: *Mapecomfort R*
- Sealer: *Mapecoat TNS Mat Sealer 1K*
- Fiberglass reinforcement: *Mapenet Reinforced* bonded with *Mapecoat TNS Mat Sealer 1K*
- Base coat/filler: *Mapecoat TNS Base Coat Binder [NA]* or *Mapecoat TNS Base Coat Binder Tex*
- Color coat: *Mapecoat TNS Finish 3 [NA]*
- Line paint: *Mapecoat TNS Line Tex*

FEATURES AND BENEFITS

- High-elasticity, multi-layered system made from water based acrylic resin in combination with granular rubber mat for sports surfaces
- High level of comfort during play
- May be applied directly over existing coated surfaces or on new concrete or asphalt substrates
- Attenuates the effect of impacts on the surface
- Resistant to outdoor conditions
- Solvent-free
- Allows attractive, highly-functional, flat, seamless surfaces to be created
- Quick application, reducing the time required to carry out work and the downtime of surfaces
- Wide range of colors available
- Reduces the frequency of routine maintenance operations
- Good cost/performance ratio
- Designed specifically for tennis, pickleball and basketball

COLORS

Mapecoat TNS Comfort is available in a wide range of colors thanks to the ColorMap™ automatic coloring system, which can be used for *Mapecoat TNS Finish 3 [NA]* colored finishes. The eight most popular colors, available with shorter lead time, are:

- New York Green
- Forest Green
- New York Blue
- Dark Gray
- Arizona Red
- Sea Blue
- London Green
- Dark Blue

COVERAGE

The coverage rates indicated below consider application of the system at ambient temperatures between 50°F and 95°F (10°F and 35°F) on a flat, compact asphalt surface. Rougher surfaces and lower temperatures could affect coverage and extend the hardening time of the adhesive used to bond the mat. The coverage rate of the adhesive *Mapecoat TNS PU 3-in-1* in particular could vary according to the type and texture of sublayer and the way the surface has been prepared.

Bonding *Mapecomfort R: Mapecoat TNS PU 3-in-1*

About 45 sq. ft. per U.S. gal. (1.10 m² per L)

Sealer: *Mapecoat TNS Mat Sealer 1K*

About 1 coat

100 to 130 sq. ft. per U.S. gal. (2.45 to 3.18 m² per L)

Fiberglass binder: *Mapecoat TNS Mat Sealer 1K*

About 1 coat

90 to 100 sq. ft. per U.S. gal. (2.20 to 2.45 m² per L)

Base coat/filler: *Mapecoat TNS Base Coat Binder [NA]*

About 1 coat: 150 sq. ft. per U.S. gal. (3.67 m² per L) per coat

Base coat/filler: *Mapecoat TNS Base Coat Binder Tex*

About 1 to 2 coats: 100 sq. ft. per U.S. gal. (2.45 m² per L) per coat

Finish: *Mapecoat TNS Finish 3 [NA]*

About 2 coats: 140 sq. ft. per U.S. gal. (3.5 m² per L) per coat

Lines/markings: *Mapecoat TNS Line Tex*

About 1 to 2 coats: About 1 U.S. gal. (3.79 L) per tennis court or per 3 pickleball courts. Coverage for other sports will vary depending on the layout of the lines being marked.

SURFACE PREPARATION

Characteristics of the substrate

- Before applying the *Mapecoat TNS Comfort Elite* system, carefully assess the substrate on which it will be applied.
- The substrate surface should contain no materials or debris that could impede adhesion of the coating, such as cement laitance; dust and detached or loose material; protective wax, curing products, paraffin and efflorescence; oil stains and layers of dirty resin; and traces of paint and chemical products.
- Any 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 a method is required, contact MAPEI's Technical Services Department for advice on the most suitable method.
- The pull-off strength of existing coatings on the substrate must be more than 220 psi (1.52 MPa).
- The substrate flatness should vary no more than 1/8" in 10 feet (3 mm in 3.05 m), and should slope 1" in 10 feet (2.5 cm in 3.05 m) for drainage.

- For concrete substrates, the maximum moisture content must be not higher than 4% and a suitable and properly installed vapor barrier must exist. If these conditions are not met, the surface must be treated with suitable products.
- Once treated, make sure that the surface is suitable for *Mapecoat TNS PU 3-in-1*; otherwise, the system may detach and/or blisters may form.

Substrate preparation

- It is important that the surface is prepared according to specifications to guarantee correct installation and to achieve the best performance from the *Mapecoat TNS Comfort Elite* system. The most suitable method for preparing concrete surfaces is by shotblasting or with a diamond disk to obtain a concrete surface profile (CSP) of #3 to #4. All dust must then be removed by a vacuum cleaner.
- All slabs should be acid-etched using muriatic acid to remove laitance. Any defects present such as holes, pitting and cracking must be repaired beforehand with *Mapecoat TNS CB [NA]*.
- New asphalt substrates must be installed in accordance with ASBA asphalt guidelines.
- After applying the asphalt mat, wait at least 15 to 25 days before installing the *Mapecoat TNS Comfort Elite* system, to allow the bitumen to oxidize.
- Defects such as holes, pitting and cracking must be repaired with *Mapecoat TNS CB [NA]* or *Mapecoat TNS PU 3-in-1* – depending on the width and depth of the defects and cracks.

PRODUCT APPLICATION

- Ensure that the ambient temperature is between 50°F and 90°F (10°C and 32°C) and the temperature of the substrate is at least 50°F (10°C) and rising prior to starting installation. Carefully follow the preparation instructions contained in the Technical Data Sheet (TDS) for each individual product making up the complete system.

Bonding the mat (*Mapecomfort R*)

1. Lay out the rolls of *Mapecomfort R* at least 2 hours before installing the system so they may acclimatize and relax sufficiently.
2. To bond *Mapecomfort R* on asphalt or concrete substrates, apply *Mapecoat TNS PU 3-in-1* under the mats with a notched stand-up trowel. The adhesive sets in around 2 to 3 hours (at 73°F or 23°C and 50% relative humidity). For details, refer to the product's TDS.

Sealer (*Mapecoat TNS Mat Sealer 1K*)

1. *Mapecoat TNS Mat Sealer 1K* is an easy-to-apply single-component sealant. It should be mixed before application, but it needs no dilution or Part B. Apply with a 50- to 70-durometer rubber squeegee.
2. While the product is curing and before application of 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 details, refer to the product's TDS.

Fiberglass (*Mapenet Reinforced*)

1. *Mapenet Reinforced* is a thin, strong, flexible fiberglass mesh that reinforces the playing surface and distributes impacts over a larger area of the *Mapecoat TNS Comfort Elite* system surface.



2. Lay the fiberglass into wet *Mapecoat TNS Mat Sealer 1K*.
3. Squeegee more sealer over the fiberglass to encapsulate it and remove any bumps or bubbles in the mesh.

Acrylic resurfacer (*Mapecoat TNS Base Coat Binder* [NA]).

1. *Mapecoat TNS Base Coat Binder* [NA] is a flexible, acrylic resin-based resurfacer and filler. Mix it with 11 to 13 lbs. (4.99 to 5.90 kg) of 50-mesh sand per 1 U.S. gal. (3.79 L) of product.
2. Dilute it with 0.33 to 0.5 U.S. gal. (1.25 to 1.89 L) of water per 1 U.S. gal. (3.79 L) of product.
3. Apply the mixture with a 50- to 70-durometer rubber squeegee. For details, refer to the product's TDS.

Acrylic resurfacer (*Mapecoat TNS Base Coat Binder Tex*).

1. *Mapecoat TNS Base Coat Binder Tex* is a flexible, acrylic resin-based resurfacer and filler that already contains carefully portioned sand.
2. Dilute it with 0.33 to 0.5 U.S. gal. (1.25 to 1.89 L) of water per 1 U.S. gal. (3.79 L) of product.
3. Apply the mixture with a 50- to 70-durometer rubber squeegee. For details, refer to the product's TDS.

Color coats (*Mapecoat TNS Finish 3* [NA]).

1. Dilute *Mapecoat TNS Finish 3* [NA] with 0.25 to 0.67 U.S. gal. (0.95 to 2.54 L) of clean water per 1 U.S. gal. (3.79 L) of product.
2. Use a drill with a mixing attachment and mix at a low speed to form a smooth, even paste.
3. Pour the mixed product onto the surface in an even windrow. Spread it evenly and uniformly using a 50- to 70-durometer rubber squeegee. This system requires three coats of *Mapecoat TNS Finish 3* [NA].
4. Wait 3 to 4 hours between each coat at 73°F (23°C) and 50% relative humidity. For details, refer to the product's TDS.

Lines and markings (*Mapecoat TNS Line Tex*).

1. *Mapecoat TNS Line Tex* is a highly pigmented, water-based, acrylic coating product with selected fillers. To prevent any line paint bleed, seal the edges of high-performance painter's tape with leftover *Mapecoat TNS Finish 3* [NA] in the same color as the underlying surface.
2. Use a brush or roller to apply *Mapecoat TNS Line Tex*. For details, refer to the product's TDS.

HARDENING AND LIGHT FOOT TRAFFIC

Once the complete system has been applied, the waiting time before allowing light foot traffic is around 12 hours at 77°F (25°C). Lower temperatures could extend the hardening time and, therefore, the time before the court can be put into service.

CLEANING AND MAINTENANCE

Regular cleaning and maintenance of the *Mapecoat TNS Comfort Elite* system helps maintain the attractive finish and reduces dirt pick-up, resulting in a better performing surface with extended durability. In general, surfaces made using the *Mapecoat TNS Comfort Elite* system are quick and easy to clean. Refer to the reference

guide “Maintenance of *Mapecoat TNS* courts” at www.mapei.com or contact MAPEI’s Technical Services Department for additional required information.

NOTE

Guidance regarding safe product handling may be found in the Safety Data Sheet for each individual 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 from those mentioned in this Technical Data Sheet, contact MAPEI’s Technical Services Department.

Technical Data

Taber abrasion test after 7 days at 73°F (23°C) and 50% RH, H-22 wheels, 1 kg, 500 cycles (mass loss)		< 4 g
Taber abrasion test after 7 days at 73°F (23°C) and 50% RH, CS-17 wheels, 1 kg, 1,000 cycles (mass loss)		< 4 g
Force reduction – EN 14808:2005		24.7%
Pickleball vertical ball rebound – EN 12235 (Modified)		0.78 m
Change in color after 1,000 hours’ exposure to a weatherometer – ASTM G155, Cycle 1		
Blue		$\Delta E < 0.8$
Green		$\Delta E < 0.5$
Red		$\Delta E < 0.5$
White		$\Delta E < 0.5$

ADDITIONAL INFORMATION

For information on MAPEI’s commitment to sustainability and transparency, as well as how MAPEI products may contribute to green building standards and certification systems, contact sustainability_USA@mapei.com (USA) or sustainability-durabilite@mapei.com (Canada).

WARNING

The test results shown in the TECHNICAL DATA table were obtained in compliance with test methods and curing cycles, if applicable, defined in the industry standards referenced on the Technical Data Sheet. Please note that the use of test procedures or methods other than those indicated in the table could lead to different values and that, in such cases, any liability of our company is excluded.



LEGAL NOTICE

The contents of this Technical Data Sheet ("TDS") may be copied into another project-related document, but the resulting document shall not supplement nor replace requirements per the TDS in effect at the time of the MAPEI product installation. For the most up-to-date TDS and warranty information, please visit our website at www.mapei.com. **ANY ALTERATIONS TO THE WORDING OR REQUIREMENTS CONTAINED IN OR DERIVED FROM THIS TDS SHALL VOID ALL RELATED MAPEI WARRANTIES.**

Before using, the user must determine the suitability of our products for the intended use, and the user alone assumes all risks and liability. **ANY CLAIM SHALL BE DEEMED WAIVED UNLESS MADE IN WRITING TO US WITHIN FIFTEEN (15) DAYS FROM DATE IT WAS, OR REASONABLY SHOULD HAVE BEEN, DISCOVERED.**

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Edition Date: February 20, 2026 MK 3000578 (25-2629)

For the most current product data and BEST-BACKEDSM warranty information,
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