

# MapeWrap 12

Structural Epoxy Putty Adhesive for Use with Structural Strengthening Systems in Warm Climates



## DESCRIPTION

*MapeWrap*<sup>®</sup> 12 is a two-component, 100%-solids, moisture-tolerant, structural epoxy used as an adhesive for the *Carboplate*<sup>®</sup> composite system in warm climates. *MapeWrap* 12 is also used for leveling uneven concrete or masonry surfaces before application of *MapeWrap* fabrics or *Carboplate* and *Mapered*<sup>®</sup> C laminates.

## FEATURES AND BENEFITS

- 100%-solids, thixotropic epoxy adhesives
- Solvent-free and VOC-compliant
- Moisture-tolerant
- For use when the ambient temperature is between 73°F and 90°F (23°C and 32°C)

## WHERE TO USE

- Use on interior/external horizontal, vertical and overhead applications
- For bonding *Carboplate* laminate systems to concrete, masonry, wood and steel
- For leveling uneven concrete or masonry surfaces before applying *MapeWrap* composite systems
- For surface sealing before epoxy crack injection
- For bonding steel plates to concrete and wood

## SUITABLE SUBSTRATES

- Use on structurally sound, fully cured concrete substrates (at least 28 days old), as well as on masonry, wood and steel.

Consult MAPEI's Technical Services Department for installation recommendations regarding substrates and conditions not listed.

## SURFACE PREPARATION

### For use as a leveler

- Apply *MapeWrap 12* to a properly prepared and primed substrate. For details on proper surface preparation, refer to the Technical Data Sheet (TDS) for *MapeWrap Primer 1*.

### For use as an adhesive

- Apply *MapeWrap 12* to a properly prepared and primed substrate. For details on proper surface preparation, refer to the TDS for *MapeWrap Primer 1*.

## MIXING

Before product use, take appropriate safety precautions. Refer to the Safety Data Sheet for details.

1. Pre-mix Part A with a low-speed mixer (at 300 to 550 rpm) and a standard Jiffy paint-mixing paddle for 3 minutes to eliminate segregation of the material accumulated during storage.
2. Pour Part B into Part A and mix with a low-speed mixer (at 300 to 550 rpm) and a standard Jiffy paint-mixing paddle for 3 minutes. Mix until the material has a smooth, homogenous consistency (the same gray color throughout).
3. Part A and Part B components are pre-proportioned (mixing ratio is 3 parts by weight of Part A and 1 part by weight of Part B) and should be mixed as full units. Partial mixing of Part A and Part B is prohibited.

## PRODUCT APPLICATION

Read all installation instructions thoroughly before installation. When applying the products in a closed environment, provide good ventilation. For further information, carefully read the SDS of each product.

### For use as a leveler

1. Apply *MapeWrap 12* with a spring steel trowel.
2. Apply the material using a tight trowel technique so that only small voids and low areas of the substrate are leveled with *MapeWrap 12*. Avoid thick or high-build applications.

### For use as an adhesive with Carboplate systems

1. Apply a uniform layer of *MapeWrap 12* from 1/32" to 1/16" (1 to 1.5 mm) thick with a flat trowel over *Carboplate* on the side where the protective film has been removed.
2. Apply a 1/32" (1-mm) layer of *MapeWrap 12* with a notched trowel on the clean and dry substrate that will receive *Carboplate*.

## CLEANUP

- Due to the high bond strength of *MapeWrap 12* on metal, clean tools with approved solvents (ethyl alcohol, toluene, etc.) before the product dries. Cured material can only be removed mechanically. Dispose of cured material in accordance with local, state/provincial and federal regulations.

## LIMITATIONS

- Apply *MapeWrap 12* when the ambient and surface temperature is between 73°F and 90°F (23°C and 32°C).
- Contact MAPEI's Technical Services Department regarding applications below 73°F (23°C) and above 90°F (32°C).
- Do not thin *MapeWrap 12* with solvents.

### Product Performance Properties\*

Laboratory Tests	Results
Consistency (mixed)	Thixotropic paste
Color (mixed)	Dark gray
Specific gravity	1.55 g per cm <sup>3</sup>
Mix ratio (by weight)	Part A to Part B = 3 to 1
VOCs (Rule #1113 of California's SCAQMD)	< 50 g per L
Set time	
At 50°F (10°C)	14 to 16 hours
At 73°F (23°C)	4 to 5 hours
At 86°F (30°C)	2-1/2 to 3 hours
Complete curing	7 days
Adhesion to concrete at 7 days and 73°F (23°C)	> 435 psi (> 3 MPa)
Tensile strength at 7 days (ASTM D638)	3,369 psi (23.2 MPa)
Tensile elongation at 7 days (ASTM D638)	1.32%
Compressive strength at 7 days (ASTM C579)	10,638 psi (73.4 MPa)
Bond strength (ASTM C882)	
2 days (moist-cured)	2,742 psi (18.9 MPa)
14 days (moist-cured)	3,188 psi (22.0 MPa)
Flexural strength (ISO 178)	5,800 psi (40 MPa)
Modulus of elasticity under compression (ASTM C579)	1.16 x 10 <sup>6</sup> psi (8 000 MPa)
Modulus of elasticity in flexion (ISO 178)	580,000 psi (4 000 MPa)

\*Based on testing of cured samples per ASTM D638 at 72°F (22°C) and 40% relative humidity

## Shelf Life and Product Characteristics

<b>Shelf life</b>	2 years in original, unopened container in a covered area
<b>Storage conditions</b>	50°F to 86°F (10°C to 30°C). Protect from freezing in shipment and storage.
<b>Working time</b>	
At 50°F (10°C)	150 minutes
At 73°F (23°C)	60 minutes
At 86°F (30°C)	35 minutes

## Packaging

### Size

Kit (Parts A and B): 1 U.S. gal. (3.79 L)

## Approximate Coverage

per 1 U.S. gal. (3.79 L)

### For use as a leveler

50 to 150 sq. ft. (4.65 to 13.9 m<sup>2</sup>)

### For use as an adhesive

At 1.97" (5 cm) width = 80 to 95 linear feet (18.3 to 22.9 m) of laminate

At 3.94" (10 cm) width = 35 to 45 linear feet (9.14 to 12.2 m) of laminate

## ADDITIONAL INFORMATION

Refer to the Safety Data Sheet (SDS) for specific data related to health and safety as well as product handling.

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-durabilite@mapei.com](mailto:sustainability-durabilite@mapei.com).

#### 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](http://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.**

## CONTACT INFORMATION

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### Technical Services

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Flooring: 1-800-992-6273

Concrete and heavy construction: 1-888-365-0614

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1-800-361-9309

### Customer Service

1-800-42-MAPEI (1-800-426-2734)

Edition Date: March 12, 2024 MK 3001020 (23-1440)

For the most current product data and BEST-BACKED<sup>SM</sup> warranty information,  
visit [www.mapei.com](http://www.mapei.com).

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