

Mapeflex P1 FT

One-Component, Nonsag, Elastomeric Polyurethane Sealant



DESCRIPTION

Mapeflex® P1 FT is a high-performance, one-component, fast-track, elastomeric, moisture-cured, polyurethane sealant and adhesive. *Mapeflex P1 FT* offers excellent adhesion to most surfaces, superior gunning and tooling, and excellent flexibility for moving joints.

FEATURES AND BENEFITS

- Cures to a void-free polyurethane
- Accommodates joint movement of +/- 35%
- High abrasion and tear resistance
- Tremendous adhesion
- Paintable and sandable
- Low-VOC content
- Nonstaining* and odorless
- Good resistance to weathering
- One-component; offers superior gunning and tooling
- Good resistance to ultraviolet (UV) light and exposure to salt spray

** Product will typically not stain or "shadow" surfaces that it is applied to.*

INDUSTRY STANDARDS AND APPROVALS

- ASTM C920; Type S; Grade NS; Class 35; Uses NT, T, M, G, A and O**
- TT-S-00230C, Type II, Class A
- AAMA 808.3-92
- Meets VOC limits of the South Coast Air Quality Management District (SCAQMD)

** Curing rate at 73°F (23°C) and 50% relative humidity

WHERE TO USE

- Use in moving joints of all kinds where sealant is applied between 1/4" and 1/2" (6 and 12 mm) in depth.
- Use on fascia, perimeter sealing of windows and doors, flashing, and heavy and light precast panel joints, as well as in traditional construction joints.
- Use in interior/exterior horizontal and vertical applications above and below grade on concrete, masonry, brick, wood, steel, aluminum, painted metal, PVC and natural stone.
- Use as an elastic adhesive between materials with different coefficients of expansion.
- Use as an adhesive to attach *Idrostop*™ and *Idrostop B25*.

SURFACE PREPARATION

- Surfaces must be sound, clean, dry and frost-free.
- Remove all dirt, loose particles, grease, oil, curing compounds and other bond-breaking matter.
- Clean joints of debris and contaminants – including oils, loose materials and dirt – to allow for good adhesion of the product. Expose clean, rough concrete for best results. The substrate must be dry with no vapor transfer.
- If saw-cutting is used to clean joints, remove all the dust from the prepared area. Vacuum or use oil-free compressed air to completely blow out all dust and debris.
- Before installations in cold-storage environments, ensure that the concrete is clean and frost-free. Precondition the sealant to at least 68°F (20°C) for 24 hours before application.
- Prepare nonporous surfaces by wiping them with a rag and an appropriate residue-free solvent (xylene or acetone). Follow this immediately by wiping with a clean rag and allowing the solvent to evaporate before application of the sealant.
- Use on-site testing to verify adequate bond. Most surfaces will demonstrate a suitable bond strength. For porous substrates where the bond is not sufficient and for immersed applications, apply *Primer 4 AS* before installation.

MIXING

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

- No mixing is required. Precondition *Mapeflex P1 FT* to at least 68°F (20°C) for 24 hours before application.

PRODUCT APPLICATION

Read all installation instructions thoroughly before installation.

1. *Mapeflex P1 FT* may be applied by a manual or pneumatic caulking gun.
2. Apply *Mapeflex P1 FT* with a consistent, even pressure to force the sealant into joints.
3. Once the sealant is in a joint, tool the sealant to produce a concave joint shape to achieve maximum adhesion and flexibility. Dry-tool only; do not use soapy water or liquids when tooling.
4. Close the area to traffic for at least 3 hours or until the sealant is tack-free. In horizontal applications, allow the sealant to cure overnight before opening the installation area to traffic.
5. *Mapeflex P1 FT* may be painted with an elastomeric paint after 7 days at 73°F (23°C).

JOINT DESIGN

1. Moving joints should be designed to move a maximum of +/- 35%, with a typical width of between 1/2" and 1" (12 mm and 2.5 cm).
2. The depth of *Mapeflex P1 FT* should be half the width of the joint – no less than 1/4" (6 mm) deep, and no more than 1/2" (12 mm) deep.
3. Control the depth of *Mapeflex P1 FT* by inserting a closed-cell polyethylene or non-gassing polyolefin backer rod into the joint. If the joint depth does not provide space for a backer rod, use polyethylene bond-breaker tape to prevent three-sided adhesion.
4. The closed-cell backer rod should be about 25% (and no more than 40%) wider than the joint depth.
5. For use in traffic areas, the minimum depth is 1/2" (12 mm).

CLEANUP

- Remove uncured sealant with an approved solvent such as xylene.
- Cured sealant can only be removed mechanically.

LIMITATIONS

- Do not install over substrates containing asbestos.
- Do not expose to alcohol, solvents or neutral curing silicones while the product cures.
- Do not apply on wet or damp substrates.
- *Mapeflex P1 FT* can be used in permanent immersion applications if installed with *Primer 4 AS*.
- The allowable depth of *Mapeflex P1 FT* is between 1/4" and 1/2" (6 and 12 mm).
- Apply at temperatures between 41°F and 95°F (5°C and 35°C). In cold weather, precondition the material to at least 68°F (20°C) for 24 hours before application. Temperatures below 55°F (13°C) combined with low humidity will extend the curing time.
- *Mapeflex P1 FT* may exhibit discoloration due to UV light exposure; however, the product performance will not diminish.
- If *Mapeflex P1 FT* is installed on a substrate with moisture vapor transfer, blistering and/or bubbling may appear at the surface of the sealant.
- Do not install *Mapeflex P1 FT* in an environment where it could be exposed to a chlorine concentration of 5 ppm or greater.
- For chemical exposition, contact MAPEI Technical Services for more information.

- Contact MAPEI Technical Services regarding installation in cold temperatures.
- Do not cover *Mapeflex P1 FT*, as it requires access to ambient humidity to cure. Install coatings, such as *Elastocolor® Coat* and *Elastocolor Flex*, after at least 7 days of curing at 73°F (23°C).

Product Performance Properties

Laboratory Tests	Results
Movement capability – ASTM C719	+/- 35%
Shore hardness A – ASTM C661	35 +/- 5
100% modulus – ASTM D412	About 44 psi (0.30 MPa)
Elongation at break – ASTM D412	1,200%
Tensile strength – ASTM D412	230 psi (1.59 MPa)
Peel strength – ASTM C794	30 lbf/in (3.38954 N/m)
Accelerated weathering – ASTM C793	Passes; no cracks
Staining – ASTM C510	No staining or color change
Extrusion rate*** – ASTM C1183	30 mL per minute
Slump of sealant – ASTM D2202	None
Rheology (vertical) at 120°F (49°C) – ASTM C639	5/32" (4 mm) nonsag
Service temperature	-40°F to 178°F (-40°C to 81°C)
Compatibility with paints	Water-based: Yes; Solvent-based: Perform tests beforehand
VOC content (SCAQMD Rule 1168)	< 380 g per L
Typical VOC content per SCAQMD Rule 1168 testing methods	102 g per L

*** 1/8" (3 mm) orifice at 90 psi (0.62 MPa)

Shelf Life and Product Characteristics

before mixing

Shelf life	1 year when stored in original, unopened packaging at 73°F (23°C)
Storage conditions	Store at 40°F to 73°F (4°C to 23°C).
Colors	Limestone, Light Limestone, Black, White, Aluminum Gray, Beige and Medium Bronze

Protect containers from freezing in transit and storage. Provide for heated storage on site and deliver all materials at least 24 hours before work begins.

Application Properties

Application temperature range	41°F to 95°F (5°C to 35°C)
Time before skinning over	90 minutes
Time before becoming tack-free	90 minutes
Curing rate at 73°F (23°C)	1/8" (3 mm) per 24 hours

CSI Division Classification

Joint Sealants	07 92 00

Packaging

Size/Color
Cartridge: 10.1 U.S. oz. (300 mL)
Sausage pack: 20.2 U.S. oz. (600 mL)

Approximate Coverage[†]

per 20.2 U.S. oz. (600 mL) sausage pack

Depth	1/2" (12 mm) width	3/4" (19 mm) width	1" (2.5 cm) width
1/4" (6 mm)	24 linear ft. (7.32 m)	N/A	N/A
3/8" (10 mm)	N/A	12 linear ft. (3.66 m)	N/A
1/2" (12 mm)	N/A	N/A	6 linear ft. (1.83 m)

[†] Coverage shown is for estimating purposes only. Actual jobsite coverage may vary according to substrate conditions and setting practices.

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_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.**

CONTACT INFORMATION

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