Planiseal Membrane SA

Self-Adhering Sheet Membrane

DESCRIPTION

Planiseal® Membrane SA is a 63-mil, self-adhering sheet membrane consisting of 61 mils of rubberized asphalt laminated to a 2-mil PET film. The combination of these two excellent waterproofing materials provides a durable, high-performance waterproofing membrane. *Planiseal Membrane SA* is suitable for installations where the ambient and substrate temperatures are above 40°F (4°C).

FEATURES AND BENEFITS

- Factory-made, ensuring a controlled thickness
- Ideal waterproofing for new and rehab projects
- High hydrostatic head resistance
- Cold-applied
- Wide application temperature range, from 40°F to 100°F (4°C to 38°C)
- Compatible with common construction materials such as concrete, concrete masonry units (CMUs), metal, wood (pressure-treated and fire-treated), rigid insulation and insulated concrete forms (ICFs)
- Excellent heat stability compared to cross-laminated film products

WHERE TO USE

- Used for both vertical and horizontal waterproofing on structural foundation walls and decks
- Can be used on below-grade foundation walls, tunnels, balconies, split slabs, plaza decks, parking decks and bridges
- Good for interior applications such as bathrooms, kitchens, mechanical rooms and laboratories

LIMITATIONS

- Do not install over substrates containing asbestos.
- *Planiseal Membrane SA* and *Mapebond*™ contact adhesives must not be installed over damp, frozen, frosty or contaminated surfaces.
- Do not apply where the membrane will be subject to continuous exposure to sunlight. *Planiseal Membrane SA* should be covered as soon as possible.
- *Planiseal Membrane SA* should only be installed over properly prepared substrates.
- Not recommended for pond and tank liner applications except for between slab applications
- *Planiseal Mastic* must not be installed under the *Planiseal Membrane SA* membrane.

SUITABLE SUBSTRATES AND SURFACE PREPARATION

- Before installation of *Planiseal Membrane SA*, the substrate must be properly prepared.
- Preparation: Do not apply *Planiseal Membrane SA* to frozen or wet substrates. The membrane should be protected from direct sunlight as soon as possible after installation. *Planiseal Membrane SA* can be applied to concrete, metal, wood, insulated wall systems and masonry surfaces. All substrates must be clean, dry, structurally sound and free of voids, protrusions, surface irregularities, spalled areas and loose aggregate. Remove contaminants such as grease, oil and wax from exposed surfaces. Remove dust, dirt, loose stone and debris.
- Chemical additives: Concrete should be cured by the water-curing method. Any curing compounds must be clear resin-based materials without waxes, oils or pigments, and must be approved by a MAPEI representative. Form release agents must not transfer to the concrete. Remove forms as soon as possible from below horizontal slabs to prevent moisture entrapment. Excess moisture could result in blistering of the membrane. Curing compounds and form release agents that adversely affect the adhesion of *Planiseal Membrane SA* must be removed from the substrate before application.
- Temperature: Apply *Planiseal Membrane SA* only in dry weather, when the ambient and substrate temperatures are above 40°F (4°C).
- Concrete substrates: Structural concrete must be cured at least 7 days and lightweight structural concrete must cure at least 14 days before the application of *Planiseal Membrane SA*. Repair any surfaces that are not structurally sound or have voids, protrusions, rough spalled areas, loose aggregate or exposed coarse aggregate. Any voids exceeding 1/4" (6 mm) in width should be filled with latex Portland cement, concrete or epoxy concrete, and should be troweled smooth to match the existing surface. Protrusions and other rough areas should be broken off or ground down and patched per the preceding sentence. *Planitop*® *X* or *Planitop XS* may be used to fill small voids, honeycombs or bug holes.
- Masonry substrates: Install *Planiseal Membrane SA* over smooth concrete blocks (CMUs) with mortar joints flush with the face of the concrete blocks. If concrete blocks are rough or the mortar joints are tooled, the surface should be parged with a suitable MAPEI product to provide a smooth surface. The parge coat must be allowed to dry before the substrate is primed and *Planiseal Membrane SA* is installed.

- Priming: All surfaces including concrete, metal, masonry, wood and sheathing substrates require the use of a *Mapebond* contact adhesive. Insulated concrete forms (ICFs) require *Mapebond 720*, which is a water-based contact adhesive. MAPEI recommends an adhesion test of *Planiseal Membrane SA* on all substrates to verify proper adhesion. Apply the appropriate *Mapebond* contact adhesive using the specified coverage rate. Most contact adhesives can be applied with a lamb's wool roller, brush or spray apparatus. Allow the contact adhesive to dry to a tacky finish, but so that it will not transfer to the touch. Areas primed with a contact adhesive but not covered with *Planiseal Membrane SA* within the same day must be re-primed.

When MAPEI sheet membranes and flashings are installed over porous substrates such as CMUs, wood or gypsum sheathing with glass-mat facers, coverage rates for contact adhesives will depend on the porosity and texture of the substrate and may vary substantially by substrate. To achieve consistent coverage of the contact adhesive with adequate tack, it may be necessary to decrease the coverage rate (that is, increase the amount applied) of the contact adhesive and/or apply multiple coats. *Mapebond* contact adhesives must be allowed to dry completely (lower temperatures and/or higher humidity will extend drying time) before additional coats are applied or *Planiseal Membrane SA* is installed. Caution should be taken, as contact adhesives applied to gypsum sheathings with glass-mat facers will take longer to dry than on other substrates. Multiple adhesion tests should be performed randomly to verify proper application of contact adhesive and ensure a successful application.

PRODUCT APPLICATION

Installation on Horizontal Surfaces

1. Start at the low point of the slab (establish a starting point with a chalk line if necessary) and work toward the high point in shingle fashion so that laps shed water.
2. Install *Planiseal Membrane SA* in a straight line, avoiding wrinkles and over-correcting.
3. Install *Planiseal Membrane SA* with side laps overlapped at least 2-1/2" (6.5 cm) and end laps at least 5" (12.5 cm). Stagger all end laps.
4. Roll the entire membrane firmly and completely as soon as possible. Roll the membrane with a linoleum roller or standard water-filled lawn roller that is less than 30" (76 cm) wide with a minimum weight of 75 lbs. (34.0 kg). Cover the face of the roller with a resilient material such as 1/2" (12 mm) plastic foam or two wraps of indoor-outdoor carpet to allow the membrane to fully contact the primed substrate.
5. Apply a bead of *Planiseal Mastic*, *Mapeflex® P2 NS* or *Planiseal CR2 V* at all terminations of the membrane and T-joints. *Planiseal Mastic* must not be installed under the *Planiseal Membrane SA* membrane.
6. Install protection as soon as possible to avoid damage from other trades, construction materials or backfill. Use an appropriate *Mapedrain™* drainage composite. The *Mapedrain* drainage composite should be adhered to the membrane using *Mapebond* contact adhesive. For mud slabs or other applications where positive drainage is not desired and where reinforced concrete slabs are placed over the membrane, the use of *Mapecover™ 810* is recommended. Note that *Mapecover 810* does not provide positive drainage to the system and that various warranties require specific protection products or materials. Contact your MAPEI representative regarding questions and/or recommendations.

Installation on Vertical Surfaces

1. *Planiseal Membrane SA* can be installed either vertically or horizontally, whichever manner is easiest based on jobsite conditions. However, proper shingling technique must be followed, regardless of the orientation employed.
2. Start at the low point of the wall (establish a starting point with a chalk line if necessary) and work toward the high point.
3. Install *Planiseal Membrane SA* in a straight line, avoiding wrinkles and over-correcting.

4. Install *Planiseal Membrane SA* with side laps overlapped at least 2-1/2" (6.4 cm) and end laps at least 5" (12.5 cm). Stagger all end laps. For walls over 8 ft. (2.44 m), the membrane should be placed in lifts with the upper overlapping the lower by at least 5" (12.5 cm).
5. The membrane must be rolled into place immediately after its placement to ensure full adhesion to the primed substrate. Roll the entire membrane and laps with a hard-rubber hand roller using firm hand pressure.
6. Apply a bead of *Planiseal Mastic*, *Mapeflex P2 NS* or *Planiseal CR2 V* at terminations, cut edges, T-joints, drains and penetrations. *Planiseal Mastic* must not be installed under the *Planiseal Membrane SA* membrane.
7. Install protection as soon as possible to avoid damage from other trades, construction materials or backfill. Use an appropriate *Mapedrain* drainage composite or *Mapecover 810*. *Mapedrain* drainage composite and *Mapecover 810* should be adhered to the membrane using a *Mapebond* contact adhesive. Note that *Mapecover 810* does not provide positive drainage to the system and that various warranties require specific protection products or materials. Contact your MAPEI representative regarding questions and/or recommendations.
8. Place backfill as soon as possible. Use care during backfill operation to avoid damage to the waterproofing system. Follow generally accepted industry practices for backfilling and compaction. Backfill should be added and compacted in lifts from 6" to 24" (15 to 61 cm). For areas that cannot be fully compacted, a termination bar is recommended across the top termination of the membrane.

Detailing

Wall/footing transitions:

1. Create a cant at all vertical-to-horizontal transitions by applying a cant bead of *Mapeflex P2 NS* or *Planiseal CR2 V* sealant measuring 3/4" (19 mm) and allow it to cure for 16 hours before covering it with the membrane.
2. Prime the footing and wall with an appropriate *Mapebond* contact adhesive and allow it to dry.
3. Install a detail strip of *Planiseal Membrane SA* measuring 9" (23 cm) centered on corners.
4. Install *Planiseal Membrane SA* field membrane completely covering the detail strip and extending 12" (30 cm) onto footing.
5. Apply a bead of *Planiseal Mastic*, *Mapeflex P2 NS* or *Planiseal CR2 V* measuring 1" (2.5 cm) wide over all terminations and seams within 12" (30 cm) of the corner.

Elevated interior floor slabs:

1. Where the bottom of the interior floor slab is 6" (15 cm) or more above the footing, the inside corner does not have to be detailed.
2. Prime the wall with an appropriate *Mapebond* contact adhesive and allow it to dry.
3. Install *Planiseal Membrane SA* field membrane extending at least 6" (15 cm) below the bottom of the interior floor slab.
4. Apply a bead of *Planiseal Mastic*, *Mapeflex P2 NS* or *Planiseal CR2 V* measuring 1" (2.5 cm) wide over the termination edge.

Deck/curb or parapet flashing:

1. Create a cant at all vertical-to-horizontal transitions by applying a cant bead of *Mapeflex P2 NS* or *Planiseal CR2 V* measuring 3/4" (19 mm) and allow it to cure for 16 hours before covering it with the membrane.
2. Prime the deck and curb or parapet with an appropriate *Mapebond* contact adhesive and allow it to dry.
3. Install a 9" (23 cm) flashing strip of *Planiseal Membrane SA* centered on corners.
4. Install *Planiseal Membrane SA* field membrane on the deck extending over flashing and terminating at the corner.

5. Apply a bead of *Planiseal Mastic*, *Mapeflex P2 NS* or *Planiseal CR2 V* measuring 1" (2.5 cm) wide over all terminations and seams within 12" (30 cm) of the corner.

Wall inside corners:

1. Create a cant at all wall inside corners by applying a cant bead of *Mapeflex P2 NS* or *Planiseal CR2 V* measuring 3/4" (19 mm) and allow it to cure for 16 hours before covering it with the membrane.
2. Prime the wall with an appropriate *Mapebond* contact adhesive and allow it to dry.
3. Install a detail strip of *Planiseal Membrane SA* measuring 9" (23 cm) centered on corners.
4. Install *Planiseal Membrane SA* field membrane completely covering the detail strip and extending around corners at least 12" (30 cm) onto the footing.

Concrete joints and cracks:

1. Install *Idrostop*™ *B25* in all cold concrete pour joints. *Planiseal Membrane SA* membrane is not intended to function as the primary joint seal.
2. Prime concrete with an appropriate *Mapebond* contact adhesive and allow it to dry.
3. Pre-strip all slab and wall cracks less than 1/16" (1.5 mm) and all construction and control joints with a sheet membrane strip measuring 9" (23 cm) wide.
4. Saw-cut all cracks greater than 1/16" to 1/4" (1.5 to 6 mm) wide and 1/4" (6 mm) deep. Remove dust from saw cuts and fill with *Mapeflex P2 NS* or *Planiseal CR2 V*.
5. Install *Planiseal Membrane SA* field membrane.

Penetrations:

1. Prime concrete with an appropriate *Mapebond* contact adhesive and allow it to dry.
2. Install *Planiseal Membrane SA* field membrane. Cut *Planiseal Membrane SA* to closely fit around penetrations and install over the penetrations.
3. Apply *Planiseal Mastic*, *Mapeflex P2 NS* or *Planiseal CR2 V* with a 3/4" (19 mm) cant bead extending 90 mils onto the penetration and at least 3" (7.5 cm) onto the membrane.

Terminations:

1. Terminate the membrane 4" to 6" (10 to 15 cm) below grade level.
2. Apply a bead of *Planiseal Mastic*, *Mapeflex P2 NS* or *Planiseal CR2 V* over the edge of terminations. A rigid termination bar may be used to ensure a tight seal.
3. *Planiseal 88* or *Planiseal 288* can be used from the *Planiseal Membrane SA* termination extended up to above grade to complete the waterproofing of the wall.

Membrane Repairs

1. Patch inadequately lapped seams and damaged areas. “Fish-mouths” and severe wrinkles should be slit, with flaps overlapped, and rolled flat. Blisters measuring 4" (10 cm) and larger in diameter should be slit open and rolled flat.
2. Cut and remove any loose membrane.
3. Clean the membrane with a damp cloth and dry the membrane surface.
4. Prime areas with an appropriate *Mapebond* contact adhesive.
5. Install *Planiseal Membrane SA*, covering the damaged area by at least 6" (15 cm) in all directions.
6. Detail all edges of the patch with *Planiseal Mastic*, *Mapeflex P2 NS* or *Planiseal CR2 V*.

Detail Requirements

For standard installation details and non-standard installation instructions, contact your local MAPEI representative.

Product Performance Properties

Laboratory Tests	Results
Thickness – ASTM D3767	63 mils
Tensile strength, membrane – ASTM D412	425 psi (2.93 MPa)
Tensile strength, film – ASTM D882	15,000 psi (103 MPa)
Elongation – ASTM D412	> 300%
Permeance – ASTM E96	0.05 perms
Low-temperature flexibility – ASTM D1970	Unaffected at -25°F (-32°C)
Peel strength – ASTM D903	9 lbs./in. (1.0168 N/m)
Lap adhesion – ASTM D1876	9 lbs./in. (1.0168 N/m)
Puncture resistance – ASTM E154	60 lbs. (27.2 kg)
Water absorption – ASTM D570	0.1% maximum
Hydrostatic head – ASTM D5385	Pass at 231 ft. (70.4 m) of water

Shelf Life and Product Characteristics

Shelf life	1 year when stored in original, unopened packaging at 73°F (23°C)
Color	Black
Application temperature range	40°F to 100°F (4°C to 37°C)

CSI Division Classification

Self-Adhering Sheet Waterproofing	07 13 26

Packaging and Coverage

Size
Roll: 2.99 x 66.9 ft. (0.91 x 20.4 m), covering 200 sq. ft. (18.6 m^2)

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).

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.

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