MAPEPLAN® PVC MECHANICALLY ATTACHED

The Mapeplan PVC Mechanically Attached Roofing System is a durable single-ply solution designed for dependable performance in commercial roofing applications. Maintaining proper jobsite protection and care during installation is essential to ensure safety, protect existing construction, and deliver a high-quality finished roof.

- Provide traffic ways, erect barriers, fences, guards, rails, enclosures, chutes and the like to protect personnel, roofs and structures, vehicles and utilities.
- Protect exposed surfaces of finished walls with tarps to prevent damage.
- Correct deficiencies in work in accordance with warranty or guarantee requirements. Repair or replace defaced or damaged finishes caused by work.

SUBSTRATE PREPARATION

Defects in the deck or existing roof substrate surface must be reported and documented to the Building Owner's Representative for assessment. The roofing contractor shall not proceed with the roof system installation until the defects in the deck or existing substrate have been corrected.

Recover or Retrofit Roofing Applications: The Designer of Record or designated representative shall identify damaged or wet insulation areas. The insulation as indicated shall be cut out and removed from the roof area. The removed insulation shall be replaced with new insulation of the proper size to fill the space (flush with existing surface±1/8") and obtain a relatively smooth surface acceptable for the installation of the new roof system.

Existing Single Ply Roof Membranes: If the existing membrane is to be left in place it must be cut into sections no larger than 100 square feet per section. All flashing must be removed at the perimeter edge, roof drains and roof penetrations.

Gravel Surfaced Built Up Roofing: The loose gravel must be removed by power brooming followed by commercial vacuuming. The surface must be leveled to prevent the insulation or recover board from bridging.

Deck or Substrate Requirements: The deck or existing roof substrate must be smooth and relatively even without high spots or depressions. Any accumulated water, ice, or snow must be removed to prevent the absorption of moisture in the new roofing components and roofing system. The substrate shall be clean and free from debris and any other foreign material.

MATERIAL HANDLING AND STORAGE

- Deliver and store products in manufacturer's unopened packaging with labels intact until ready for installation.
- Store all roofing materials in a dry place, on pallets or raised platforms, out of direct exposure to the elements until time of application. Store materials at least 4" above ground level and covered with "breathable" tarpaulins.
- Stored in accordance with the instructions of the manufacturer prior to their application or installation. Store roll goods on a clean flat surface. No wet or damaged materials will be used in the application.
- Store at room temperature wherever possible, until immediately prior to installing the roll.
- During winter, store materials in a heated location with a 50°F (10°C) minimum temperature, removed only as needed for immediate use. Keep materials away from open flame or welding sparks.
- Adhesive storage shall be as indicated on the PDS (product data sheet). Area of storage shall be constructed for flammable storage.

PROJECT CONDITIONS

- Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturers for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.
- Do not apply roofing during inclement weather. Do not apply roofing membrane to damp frozen, dirty or dusty surface.

VAPOR OR AIR BARRIER INSTALLATION

Install the barrier in accordance with the manufacturer's written instructions and the project specifications for the installation of the specified product.

WOOD BLOCKING

- Install wood blocking as indicated by the project specifications and in accordance with current Mapeplan PVC Details and Specifications. Wood blockings are always required at roof edges and through roof penetrations.
- The wood blocking is installed so the top of wood is flush with the top surface of the roof insulation and/or cover board. Use untreated wood blocking and nailers in all roof systems unless required otherwise by code or the designer of record.
- The wood blocking width should be equal to or exceed the width of the flange to be attached to the blocking.
- The securement of wood blocking shall be in accordance with current ANSI/SPRI ES-1 and FM Property Loss Prevention Data Sheet 1-49 or in a manner to meet or exceed the local building code requirements and the wind uplift pressure resistance required by the project requirements and all project documents.

THERMAL BARRIER/INSULATION/COVER BOARD OR RECOVERY BOARD

- Only install as much material that can be covered with roofing membrane and be made watertight on the same day.
- Boards are to be installed butted together with gaps no larger than ¼" in the joints. Gaps in the joints larger than ¼" must be filled.
- Top surfaces of the boards are to be aligned and flush with each other.
- Differences in the top edge alignment greater than 1/8" are not acceptable.
- Boards that are to be installed in multiple layers must have the joints staggered between each layer a minimum of 6".
- Boards are to be pre-secured by mechanically attaching to the roof deck with Polyglass Fasteners and Insulation Plates a minimum of 4 plates and fasteners per 4'x 4' board and minimum of 5 plates and fasteners per 4'x 8' board.

Edition Date: 05/26 • Doc# Mapeplan® PVC Mechanically Attached Guide

POLYGLASS
MAPEI GROUP

RESTRICTIONS

- Precautions must be taken when installing materials with Hot Asphalt in temperatures lower than 40°F. The hot asphalt must be delivered to the application point at the asphalt manufacturer's recommended EVT.
- Adhesives and sealants must be protected when ambient temperatures are lower than 40°F. Insulated, heated storage boxes must be provided to store the products on the roof for temporary storage. Mapeplan PVC becomes more difficult to work with when less than 50°F.
- Insulation and Mapeplan PVC must be stored in a manner to keep the products dry and protected from the elements. The products must be stored on skids and covered with a breathable watertight cover.

INSTALLATION OF MECHANICALLY ATTACHED MEMBRANE

- The type of Polyglass fastener and spacing is dependent upon the wind uplift resistance required for the project, the membrane width and the deck type. If the proper fastener cannot be determined contact the Polyglass® Technical Service Department.
- The number of perimeter sheets, the fastening placement density, and the field membrane securement is dependent on the wind uplift pressure resistance required by the project specifications and physical location.
- Perimeter sheets are installed in a manner that picture frames the entire roof edge of each roof section.
    - On projects where there are multiple roof level and roof levels meet at a common wall, if the difference in height of the roof levels is greater than 3' the adjacent edge of the higher level is determined to be the perimeter edge. The roof area of the lower level where it meets the wall does not require perimeter sheets.
    - Expansion Joints, control joints, divider and fire walls in the field of the roof or roof ridges with slopes less than 3:12 are not to be considered as part of the roof perimeter when calculating half sheets.
- Seam securement based current FM Approvals for the field sheet. The perimeter and corner securement must be calculated based on FM Loss Prevention Data Sheets 1-28 and 1-29 for FM Insured Project and comply with Authorities Having Jurisdiction.
    - Mechanical Attachment for Steel Deck or Structural Concrete roof decks
    - Acceptable steel decks must meet the following minimum requirements: 18, 20 or 22 gauge, 1.5" deep, meeting ASTM A1008/A1008M-01a or A653/653M-01a SS, Grade 80/80ksi.
    - Deck installation is to be in accordance with FM requirements. Structural Concrete decks require the use of CD-10 or HD 10-14 fasteners with the appropriate seam plates.
    - For Guarantee and Warranty purposes use the following charts:

<table>
<tr><th colspan="2"></th><th>60" Sheet</th><th>120" Sheet</th></tr>
<tr><td>Building Width</td><td>Building Height</td><td>Number of PVC 30"
(.75 m) Half Sheets</td><td>Number of PVC 60"
(1.5 m) Half Sheets</td></tr>
<tr><td rowspan="2"><200'
(61 m)</td><td>0-34'</td><td>2</td><td>1</td></tr>
<tr><td>(0-10 m)</td><td>4</td><td>2</td></tr>
<tr><td rowspan="2">≥200'
(61 m)</td><td>>100'
(30m)</td><td colspan="2" rowspan="2">Install half sheet throughout the perimeter and corner region.
The width of this region is defined as the least of the following two measurements:
0.1 x building width or 0.4 x building height.

Note: The minimum width is 4' (1.2 m).
The width is defined as the narrowest dimension.</td></tr>
<tr><td>any height</td></tr>
</table>

Membrane Type	Sheet Width	Row Spacing	Fastener Type	Fastener Spacing	Uplift Rating FBC/FM
Mapeplan PVC	120"	114"	SXHD	12"	-45/90
Mapeplan PVC	120"	114"	XHD	6"	-60/120

FIELD MEMBRANE SECUREMENT

- The field membrane sheets are positioned so that adjoining field membrane sheets overlap 6" at those locations where fasteners and plates are located typically along the length of the membrane.
- The end roll sections are also mechanically fastened and overlapped 6" to cover the fastener and plate and provide for an adequate hot air weld.
- The membrane is secured at the approved fastener density with the appropriate type of fastener and membrane plate approved for the deck and the wind uplift pressure resistance.
- Unroll and position the sheet starting at the low point.
- Install a fastener and plate on one end of the sheet on the appropriate fastener mark. Go to the opposite end of the sheet and pull sheet into position along the lay line and install a fastener and plate at the appropriate mark. Place the remaining fasteners and plates. The plates must be placed within 1/4 in. - 3/4 in. of the membrane edge. Plates must not be placed closer than 1/4 in. to the membrane edge.
- Hot air weld the seam and continue in sequence installing the remainder of the sheets across the roof area.
- Additional securement must be provided at the perimeter of each roof level, roof section, expansion joint or roof divider, all roof penetrations and curbs, adjacent walls and at any angle change where the slope exceeds 2:12.
- All seams must be completed by hot air welding the same day they are installed. Thoroughly probe the seams with a seam probe and repair any voids or defects discovered.

Edition Date: 05/26 • Doc# Mapeplan® PVC Mechanically Attached Guide

POLYGLASS® MAPEI GROUP

FIELD MEMBRANE SEAMING PREPARATION

- Proper preparation of the area to be heat-welded is critical to forming a long-lasting seam. Heat welding works by melting the material together, fusing it into a single piece. In order to properly weld these two pieces together, the materials must be clean and dry. Any contamination will interfere with the heat weld and, generally, the result is a poor or false weld.
- Successful heat welding requires that the membrane be clean of dirt and contaminants, and free from dew, rain, and other sources of moisture.
- The factory-fresh membrane typically will not require cleaning before welding, if welding is performed immediately after placement of the Mapeplan PVC membrane. Mapeplan PVC membrane that has been exposed for a longer period will require additional cleaning methods, depending on the type of contamination present.
- Any material rolled out and put into place needs to be welded the same day, including welding of any detail work.
- Mapeplan PVC membrane that has been exposed overnight or for more than 12 hours or has otherwise become contaminated will require cleaning with either acetone or MEK.
- All corners to be rounded a minimum of 1" (one inch).

FIELD TEST WELDS

- Take 2 pieces of "fresh" Mapeplan PVC membrane approximately 18 in. long.
- Set your automatic welder's speed and heat. For full size welders, Polyglass suggests starting at the following settings:
    - Temperatures between 800°F (427°C) and 1,148°F (620°C). Speed 10-16 feet per minute (3.05-4.88 FPM) depending on conditions.
    - For a proper setting use the following formula as a general guideline: Start at (ambient temp °F/10) + 2 = FPM (Feet Per Minute).
- Example: Start out by setting the speed at 10 FPM and the temperature at 600°F (315°C) and do a test weld. Bump temperature up 100°F (38°C) to 700°F (371°C) keeping the same 10 FPM. Perform test welds in 100°F (38°C) increments keeping speed the same until the machine is maxed out [typically 1,148°F (620°C)] to find the weld window. Set up the machine in the middle of the weld window.
- Weld 2 - 18in. pieces of Mapeplan PVC membrane together and then allow the membrane to cool for at least 10 minutes. Cut 1 in. wide strips across the welded material. The welds are tested by application of pressure causing the seam to peel apart.
- An acceptable weld will fail by exposing the scrim reinforcement. This is called a "film tearing bond" or "FTB". The film tearing bond will be between 1 in. and 1.5 in. wide.
- A partial weld will fail by partially separating between the two layers of the membrane and is "unacceptable." This is also known as a "cold weld" or "false weld".
- Proper settings required for a good weld will change based on equipment type, weather conditions and membrane thickness. Test welds should be conducted at the start of the day and at mid-day as the ambient temperature changes or at any significant weather change. Any material rolled out and put into place needs to be welded the same day, including welding of any detail work.

WELDING OF FIELD SEAMS

1. Successful automatic welding is a function of proper machine adjustment and ensuring a consistent power supply.
2. Mapeplan PVC membrane must be cleaned and free from all dirt and debris prior to hot air welding of seams.
3. Determine proper welder speed and temperature settings by performing the test weld procedure as shown above.
4. Mark all locations where automatic welding starts and stops to identify locations of nonuniform welding. These areas should be carefully probed and repaired if required.
5. Membrane laps must be heat-welded together. All welds must be continuous, without voids or partial welds. Mapeplan PVC membrane should exhibit bleed-out when properly welded.
6. All reinforced Mapeplan PVC field seams should be made using an automatic hot air welder to the greatest extent possible.
7. At all T-joints carefully press each joint down by using the silicone rollers edge or other hardedged tool immediately after the T-joint has emerged from the welder. All corners must be rounded.
8. PVC membrane T-joints will require the installation of a heat-welded Mapeplan P T-Patch.

HAND WELDING

1. Hand welding involves individual technique, developed and refined over time. Operators should be familiar with using different nozzle sizes and configurations. Selection of the hand welder temperature and choosing the correct nozzle width can have an effect on the quality of the hand weld.
2. Membrane must be cleaned and free from all dirt and debris prior to hand-welding.
3. During hand welding, the hot air welder is held in one hand, and a hard silicone roller is held in the other hand. When hand welding with a roller, finger pressure is may be used to place and tack the upper piece of membrane in position. A silicone roller must always be used for final welding.
4. The membrane should be heat-welded together using the "two-pass method". Weld from the interior on the first pass which will create a heat dam and finish the weld with the second pass.
5. The welding nozzle is placed between the two layers of the PVC membrane, and the silicone roller is rolled back and forth perpendicular to the nozzle mouth to press the membrane together and accomplish the weld. The roller should remain flat to properly fuse the layers together.
6. All welds must be continuous, without voids or partial welds Seaming of PVC membrane should exhibit bleed-out when properly welded.
7. The weld must provide a film-tearing bond of at least 1.5" and a minimum 1" film-tearing bond.

SEAM PROBING

1. Seam probing is the physical inspection of a hot air weld area by running a suitable blunt probe along the length of a seam with horizontal pressure applied into the bottom edge of the weld. Seam probing checks the integrity of the weld to help ensure a water-tight roofing system and is critical to locating small openings in a welded lap. Seam probing is not a replacement for conducting test welds.
2. Contractors are responsible for the initial probing of the seam welds. Do not wait for a Polyglass® Technical Services Representative to find issues with the welds during the roof evaluation for warranty/guarantee after the roof is already completed. This could lead to more difficult and costly repairs requiring additional observation reports conducted by Polyglass®.

Edition Date: 05/26 • Doc# Mapeplan® PVC Mechanically Attached Guide

POLYGLASS® MAPEI GROUP

DEFECTS AND REPAIR

- Voids are repaired by cleaning the two sections of membrane and inserting the nozzle of the hand welder into the void. Apply pressure with the silicon roller and roll the top surface towards the outer edge to cause the membrane to fuse together.
- Wrinkles in the seam, burn marks or overheated areas, or any area where the adhesive has contaminated the seam must have a patch installed over the defective area.
- When installing a patch, the area to receive the patch must be cleaned thoroughly.
- The patch is to be made from the reinforced plain backed membrane.
- The patch should be sized to extend past all edges of the defective area a minimum of 2" with all corners rounded.
- The patch is hot air welded to the existing membrane.

FLASHING

- **General Flashing Conditions**

  Mapeplan PVC Membrane is to be installed for the flashing of gravel stop, drip edge, parapet walls, roof equipment curbs, expansion joints and roof dividers, and for most other roof detail flashing areas. Mapeplan P Detail Membrane (non-reinforced flashing membrane) may be used for those details where the use of pre-formed accessories cannot be installed such as certain pipe penetrations, corners, and scuppers details.
  1. Reroofing Flashing Conditions. Existing flashings must be removed prior to installing the new Mapeplan PVC Membrane flashing.
  2. Termination Bars, surface mounted reglets, or surface mounted counter flashings must be installed directly to the wall surface.

- **Application**

  Adhere the flashing membrane to walls, curbs and other vertical surfaces with the appropriate Mapeplan PVC Adhesive. The adhesive is applied to both the membrane and the surface to which it is bonded. The coverage rate is dependent on the type of substrate but should average approximately 60 square feet per gallon for both the membrane and the substrate. Porous substrates may require a double application of adhesive. The flashing adhesive is allowed to dry until it is tacky, and the flashing membrane is rolled into the adhesive.
  1. Complete all seams of the flashing membrane by the hot air welding method.
  2. Refer to the current Mapeplan PVC details for applicable detail requirements.

POLYFORZA™ PERIMETER EDGE METAL

- Install PolyForza™ Perimeter Edge Metal (includes both gravel stop and coping) according to the included application instructions.

MAPEPLAN P CLAD METAL FLASHING

- Mpeplan P Clad Metal must be formed in accordance with Polyglass® construction details and designed to meet/exceed ANSI/SPRI/FM4435/ES-1 design criteria.
- Mapeplan P Clad Metal sections used for gravel stops, drip edges, base flashings, and coping must be butted together with a ¼" gap to allow for expansion and contraction. Heatweld a 6" wide non-reinforced membrane strip to both sides of the joint.
  A 2" wide aluminum tape must be applied over the joint as a bond-breaker, to prevent welding in this area.
- Mapeplan P Clad Metal used for sealant pans and scupper inserts, and corners of roof edging, base flashing, and coping, must be overlapped or provided with separate metal pieces to create a continuous flange condition, and pop-riveted securely. Mapeplan P Clad Metal flashings must be stripped in using 6" membranes.
- All exposed metal edges must have a ½" hem to provide corrosion protection and edge reinforcement.
- When installing over an existing wall or curb flashing, and the flashing is in good condition and adhered tightly, removal is not required prior to using Mapeplan P Clad Metal flashing.

FLASHINGS FOR CURBS, PARAPETS AND WALLS

For Mapeplan PVC

- After application of adhesive, carefully position the membrane flashing, avoiding wrinkles and buckles.
- If selvage edge, overlap onto the roof membrane a minimum of 6 in. (152 mm) to heat-weld. All seams are attached 6 in. o.c.
- Heat-weld all laps with smooth reinforced flashing membrane.

For Mapeplan Fleece-Back Membrane

- Non-selvage butt ends of adjacent sheets should be stripped in using Mapeplan P Trim Strip product or 8 in. wide field fabricated strip of reinforced membrane over the joint.
- When installing fleece-back membranes to a vertical surface in adhesive, the material should be rolled in with hand rollers and the top edge fastened or termination bar installed immediately to avoid membrane slippage.

Vertical Sheet Method for Walls (Smooth and Fleece-back Mapeplan PVC)

- 60-inch width
  1. Non-adhered - 12 ft. max height with vertical in seam attachment 12 in. o.c.
  2. Adhered - Unlimited height with vertical in seam attachment 12 in. o.c.

Supplemental Horizontal Fastening

1. At inside and outside corners (three sheets wide) and at end of the wall (three sheets wide).
2. Install termination bar or plates fastened 12 in. o.c. beginning at 6 ft. high and incrementally every 12 ft. until the height of the wall.

- 120-inch width
  1. Adhered - 12 ft. max with vertical in seam attachment 12 in. o.c. (For bonding adhesive only)
  2. Adhered - Unlimited height with vertical in seam attachment 12 in. o.c. (For spray canister only)

Edition Date: 05/26 • Doc# Mapeplan® PVC Mechanically Attached Guide

POLYGLASS® MAPEI GROUP

FLASHINGS FOR CURBS, PARAPETS AND WALLS *(CONT.)*

Horizontal Sheet Method (Unlimited Height - Smooth and Fleece-back Mapeplan PVC)

1. Non-adhered/Loose - 30 in. sheets incrementally fastened with a termination bar or plates fastened 12 in. o.c. until the height of the wall.
2. Adhered - 60 in. sheets incrementally fastened with a termination bar or plates fastened 12 in. o.c. until the height of the wall. (For bonding adhesive)
3. Adhered – 120 in. sheets incrementally fastened with termination bar or plates fastened 12 in. o.c. until the height of the wall. (For spray canister only)

FLASHINGS TERMINATION (CURBS, PARAPETS, & WALLS)

Exposed Termination Bar - 8 in. height minimum

1. Apply Polyglass HPS Sealant between the substrate and membrane flashing. Secure membrane flashing at the top horizontal edge with an exposed termination bar or sheet metal slip flashing mechanically fastened 6 in. o.c. and apply Polyglass HPS Sealant at top of termination bar.

Termination Bar with Counterflashing - 8 in. height minimum

1. Apply Polyglass HPS Sealant between the substrate and the membrane flashing. Secure membrane flashing at the top edge with a termination bar and mechanically fasten 6 in. o.c. Termination bars that are counter-flashed must be fastened a minimum 12 in. o.c.

Termination using Coping Metal at Parapets and Walls

1. Wrap the Mapeplan PVC membrane up and over and extend down the exterior face of the parapet wall a minimum of 1 ½ inches.
2. Install the continuous cleat along the exterior face of the wall and securing a minimum of 6 inches o.c. The coping metal should be then locked on to the cleat. The interior face should either use a continuous cleat or be mechanically fastened a minimum of 12 inches o.c. with bonded washer fasteners. All coping metal should be designed in accordance with the applicable building code for the region.

ROOF DRAINS

- Roof drains should have a minimum 36 in. x 36 in. sumped area. Tapered insulation used within the drain sump area should not exceed 1:12.
- Extend the roofing membrane over the drain opening. Locate the drain and cut a hole in the roofing membrane directly over the drain opening. The membrane must extend ½ in past the drain rings clamping bolts. Make holes through the roofing membrane at drain bolt locations before bolting.
- The roofing membrane must be set in a full bed of Polyglass HPS Sealant on the drain flange prior to securing with the clamping ring.
- When a seam runs within 12 inches of the drain flange or in the sump area, a target must be installed. Cut the membrane back past the drain bowl and remove. Add reinforced membrane target large enough to extend out of the sump area onto the flat area to make a minimum 1 ½ inch weld.
- If the seam does not run under the clamping ring, the exposed seam can be covered with a 4-inch-wide reinforced membrane drain target strip heat welded to the membrane.
- Tighten the drain compression clamping ring in place.

MAPEPLAN COATED METAL SCUPPERS

- Flash wall scuppers with pre-manufactured Mapeplan PVC Scupper or field fabricate from reinforced membrane and Mapeplan P Clad Metal.
- Mapeplan Manufactured Scupper
  1. Pre-manufactured scuppers are available by special order in standard and custom sizes. Contact Polyglass® or your local distributor for details.

- Mapeplan P Clad Metal Scupper (Shop-Fabricated)
  1. Through the wall, Mapeplan P Clad Metal wall or overflow scuppers must be provided with 4 in. wide flanges, with additional corner pieces pop-riveted to the flange(s) to create a continuous flange. All flange corners must be rounded.
  2. On the interior side, install wall scuppers over the roof or wall flashing membrane and secure to the roof deck/wall with Polyglass® fasteners 6” o.c., with a minimum of fasteners per side. At the exterior side, it must be made waterproof by the installer.
  3. Strip in the scupper with a flashing membrane target sheet allowing for a minimum 2” weld.

MAPEPLAN SEALER POCKETS

- PVC Pourable sealer pockets are available by special order and require field membrane securement around the penetration. A minimum of four (4) fasteners and plates are required around the penetration.
- Fill the pourable sealer pocket with Sealant to the top of the pocket.
- If Mapeplan Sealer Pocket must be cut, strip in the cut with unreinforced PVC strip minimum 4" wide and run out onto membrane sheet a minimum of 2" and weld.

MAPEPLAN P CLAD METAL SEALANT BOX/PITCH PAN

- Fabricate 4 in. flanged sealant pans formed of Mapeplan P Clad Metal, secured to the deck through the roof membrane with Polyglass® Fasteners at a minimum of four (4) fasteners per box.
- Strip in metal flanges with 8” wide membrane flashing strips and the vertical pop riveted seam(s) with 4” unreinforced membrane and weld.
- The inside surface of Mapeplan P Clad Metal sealant box (metal side) and conduit/stanchion/etc.) must be clean and dry before filling with sealant.
- Fill the lower half of the pan with quick-set non-shrink grout. Once set, fill the Mapeplan P Clad Metal sealant box with sealant to the top of the pocket.

Edition Date: 05/26 • Doc# Mapeplan® PVC Mechanically Attached Guide

POLYGLASS® MAPEI GROUP

ACCESSORIES

- Walkway Pads
  1. Install walkway pads in those locations as designated in the specifications.
  2. Thoroughly clean and prepare the area of the roof membrane that is to be hot air welded to the walkway pad.
  3. The Mapeplan PVC Walkway Pad is installed in maximum lengths of 10'.
  4. Position sections of the walkway pad to leave a space between adjacent sheets approximately 2" wide.
  5. Do not cover field seams with the Mapeplan PVC Walkway Pads. Position the pads to leave minimum 4" wide area exposed at the field seams.
  6. Hot air weld all four sides of the walkway pad to` the field membrane.

- Pavers
  1. Either a protection sheet of Mapeplan PVC membrane or a Geotextile Separation Layer must be installed under all concrete paver blocks.

NIGHT SEAL

- The new roof membrane must be sealed at the end of each workday to prevent water infiltration.
- The membrane may be temporarily sealed by securing the down slope edge with HPS sealant, roof cement, hot asphalt, spray urethane foam or similar water blocking materials.
- Embed the membrane into the sealant product and insure continuous contact.
- The following day when the installation is resumed cut away and discard the membrane where the night seal was applied before continuing with installing the adjoining section.

SPECIAL NOTE CONCERNING "PICTURE FRAMING" AND FM INSURED PROJECTS

Picture framing is not an acceptable method of attachment for mechanically attached systems when utilizing FM Global Roofnav assemblies.

- Intermediate fastening is needed to meet FM Global LPDS 1-29 requirements. Only the most recent version of the 1-29 LPDS is acceptable. FM Global requirements must be met for their insured projects and any deviation from those requirements must be acceptable to their field engineering staff.
- FM Global has its own wind uplift calculator. The FM Global wind uplift calculator and their LPDS must be used on properties insured by FM Global. "Picture Framing" refers the installation of half-sheets around the perimeter area of a single-ply roofing system and is not suitable for these insured projects.
- Please note that certain local building codes and certain designers may also use the FM Global method for perimeter and corner attachment, however this method is Not Generally Required to obtain a Warranty or Guarantee.

Ensure the distance between rows of roof cover fasteners are the following maximum percentages of the FM Approved spacing and are shown in the table below:

Roof Perimeters

- Increase the number of fasteners per board by 50% minimum in Zone 2, but at least one fastener per 2 ft^2 (1 per 0.19 m^2). It is not necessary to install fasteners closer than one per 1 ft^2 (1 per 0.09 m^2).

Roof Corners

- Distance between rows is <50% of the FM Approved roof field spacing, or two rows of intermediate fasteners (fingers) are provided in between.

Side Laps

- Intermediate rows of fastener and seam plates (fingers) may be installed through the membrane using the heat welded coverstrip method.
- Induction Welding may be used instead of fastener/seam plate/coverstrip method.
- Refer to LPDS 1-28 and 1-29 for additional FM Global requirements.
- It is the responsibility of the contractor to contact the assigned FM engineer for issues or questions concerning FM Insured Projects.

Membrane Type	Sheet Width	Row Spacing Perimeter	Row Spacing Corner	Fastener Spacing	Length of Fingers
Mapeplan PVC	120"	80"	60"	Same as Field	Based on ASCE
Mapeplan PVC	60"	40"	30"	Same as Field	Based on ASCE

CALCULATING PERIMETER AND CORNER ZONES

Based on ASCE 7-16 (2018 IBC), the perimeter (Zone 2) and corner (Zone 3) zones are as follows:

- Perimeter (Zone 2): width dimension is equal to 0.6 times the building eave height(h)
- Corner (Zone 3): length dimension is equal to 0.6 times the building eave height and the width dimension is equal to 0.2 times the building eave height(h)

Based on ASCE 7-10 (2012 & 2015 IBC), the perimeter (Zone 2) and corner (Zone 3) zones would be equal to the smaller of the following:

- 0.1 times the building width, or 0.4 times the building eave height whichever is smaller.

Edition Date: 05/26 • Doc# Mapeplan® PVC Mechanically Attached Guide

POLYGLASS
MAPEI GROUP