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5.01.1 Roofing Asphalt

A. IKO roofing systems require the use of asphalts that meet the requirements found in ASTM D 312 or CSA A123.4 for the application of roof insulation, base sheets, ply sheets, and cap sheets. Consult the IKO Technical Services department for the specific asphalt type to be used.

B. IKO is not responsible for the performance of roofing asphalt not specified by IKO.

C. Selection of asphalts shall follow the requirements outlined in the ASTM D6510 Selection of Asphalt Used in Built-up Roofing Systems.

5.01.2 Asphalt Grades for Insulation, Base Sheets, Ply Sheets, Modified Bitumen Roofs, and Built-up Roofs

A. The CSA A123.4 Type II or Type III can be used for insulation, separation panels, base sheet, ply sheet, and cap sheet mopping on slopes one inch (1") (25 mm) / ft (8%) or less. For slopes greater than one inch (1") (25 mm) / ft (8%), Type III must be used. Mopped flashing membranes on vertical surfaces must be terminated by mechanical means at and beyond twenty-four inches (24") (610 mm) above the roof surface.

B. The ASTM D 312 Type III and CSA A123.4 Type III asphalt have a softening point between 84°C – 94°C (183°F and 201.2°F) and is applied between 219°C – 256°C (426.2°F and 474.8°F). The maximum heating temperature is 260°C (500°F).

C. The ASTM D 312 Type II and CSA A123.4 Type II asphalt has a softening point between 85°C – 95°C (185°F and 203°F) and is applied between 219°C – 255°C (426.2°F and 474.8°F). The maximum heating temperature is 260°C (500°F).

D. Easy-Melt 200 is a CSA A123.4 Type III asphalt. It has the same properties as indicated in part “B” above.

E. Modi-Melt SEBS is a premium Type III modified asphalt that conforms to all the requirements of the ASTM D 6152 and UL55A for use with glass felts, modified membranes, insulation, and separation panels with all slopes up to vertical application [up to twenty-four inches (24") (610 mm)].

5.01.3 Asphalt Identification

A. IKO recommends and endorses an identification system for mopping grade asphalts and the use of such identification information. This information should be printed on the asphalt packages or bills of lading covering bulk asphalt and should include:

1. Type III or Type IV per ASTM D 312 or Type II or III per CSA A123.4;
2. Flash Point (FP) per ASTM D 92; and
3. Equiviscous Temperature Range (EVT).

5.01.4 Asphalt Heating and Application

A. IKO requires that all mopping grade asphalt be applied at the EVT range specific to the application method as printed on the asphalt cartons or bills of lading.

B. The asphalt, at the point of application, shall be the EVT plus or minus 13°C (25°F). A viscosity of one hundred and twenty-five (125) centipoise should be achieved for hand mopping and seventy-five (75) centipoise for mechanical spreaders. Under no circumstances shall the asphalt temperature be less than 219°C (425°F) at the point of application for the formation of the waterproofing membrane.

C. The asphalt for separation panel, base sheet, ply sheet, or cap sheet applications shall be applied at the rate of twenty-five pounds per one hundred square foot (25 lbs./100 ft^2) (1.2 kg/m^2) plus or minus 20 percent (%). Note: Maximum temperature of 199°C (390°F) for polyisocyanurate insulation at the rate twenty-five pounds per one hundred square foot (25 lbs./100 ft^2) (1.2 kg/m^2) is recommended.

D. The asphalt shall be applied no more than three feet (3') (1 m) in front of the roll at all ambient temperatures. Note: This distance may need to be adjusted in accordance with weather conditions at the time of installation.

E. Thermometers on kettles and tankers should be checked periodically to ensure accuracy and proper asphalt heating temperatures.

F. Do not heat the asphalt beyond the finished blowing temperature for more than four (4) hours and never above its flash point.

G. Do not keep heated tankers above 163°C (325°F) over nights, holidays, or weekends.

H. The kettle operator shall be fully trained regarding the safe operation of the kettle and have the required clothing, personal protective equipment, and fire protection equipment.

I. Do not mix coal tar pitch with the asphalt; do not mix different types of asphalt.

5.02.1 Primers and Pre-Adhesives

A. Primers and pre-adhesives are used to prepare the substrate to enhance membrane adhesion properties. Refer to individual product data sheets for storage and handling information.

B. The drying (curing) time for the various products listed below will vary depending on the surface porosity, ambient temperature, and humidity. Cure times are generally accelerated as temperatures increase and humidity decreases.

C. The IKO Standard Asphalt Primer is a solvent-based asphalt primer suitable for general use in substrate preparation and intended to be used with hot asphalt applications, with a cure/dry time of approximately 2 – 4 hours. Coverage rates are 1.5 – 2.4 m^2/L (60 – 100 ft^2/gallon).

D. The IKO Mod-Bit Primer is a solvent-based asphalt primer primarily designed to prepare substrates for heat-welded modified bitumen membranes. It is formulated with rubber polymers and fast-evaporating solvents to yield a shorter dry time (typically 60 minutes). Coverage rates are approximately 4 – 7 m^2/18.9 L (165 – 250 ft^2/5 gallon).

E. The IKO Spray Primer is a solvent-based asphalt primer in an aerosol can, used to prime small roof detail areas. A single 482 g (1 lb.) can covers approximately 3 m^2 (32 ft^2) and typically dries completely in 60 minutes (3 minutes dry to touch).

F. The IKO S.A.M. (Self-Adhering Membrane) Adhesive is a quick-drying, solvent-based surface preparation liquid used on substrates where self-adhesive membranes are specified. Gold in colour, drying time is 30 minutes minimum, and coverage rates are approximately 3 – 6 m^2/L (122 – 244 ft^2/gallon). Note : Max exposure time is four (4) hours.

G. The IKO S.A.M. (Self-Adhering Membrane) Adhesive LVC is similar to the IKO S.A.M. Adhesive in dry time and coverage rates but is green in colour and formulated with a low volatile organic content (VOC) for use on projects where low VOC materials are specified.

H. The IKO Water Based Adhesive is a water-based asphalt emulsion adhesive designed to prepare substrates for either self-adhering or heat-welded membranes. Coverage rates are 4 – 5 m^2/L (160 – 200 ft^2/gallon) with a drying time of 30 – 60 minutes. Given its water-based formulation, there are no VOCs released from the product.

I. The IKO ArmourReflect Primer is an acrylic copolymer sealant, specifically formulated to enhance adhesion and prevent staining and subsequent degradation of elastomeric surface coatings. Target surface dictates actual coverage rates. Apply at a rate of 650-1000 ft^2 per 5 gallon pail (0.5-0.75 gallons per 100 ft^2) for SBS mod-bit and smooth surface BUR roof systems. Other surface coverage rates may vary.

5.02.2 Primers and Pre-adhesives Application

A. All primers and pre-adhesives are intended to prepare the surface for subsequent material adhesion. As such, all surfaces should be clean and dry and free of oil, grease, dirt, or other materials that may limit the ability of the product to bond with the surface.
B. Generally, primers and pre-adhesives can be applied by either brush, roller, or mechanical sprayer at temperatures between -10°C and 40°C (14°F – 104°F). Water-based materials should be applied above 5°C (40°F). Follow PDS instructions for individual product application temperature.
C. Ensure that all primers are dry before proceeding with membrane installation.
D. Mineral spirits are recommended for site and tool clean-up. Clean-up should be done before curing.

5.02.2.1 IKO ArmourReflect Primer Application

A. Stir material thoroughly prior to application. Always mix (stir) from bottom to top using a paddle drill mixer for a minimum of 10 minutes for a 5-gallon pail. Avoid using pressure washers that can trap water in the existing roof assembly.
B. Apply Primer using appropriate spray equipment (preferred method) or product may be rolled with a smooth-medium nap roller or soft brush at ambient temperatures above 10°C (50°F).
C. Always spray primer straight 'up and down' or at 90° (degree) angle to enhance performance.
D. **Allow ArmourReflect primer to dry for at least 24 hours before additional applications.**

5.03.1 Adhesives

A. The IKO Cold Gold Field Adhesive is a solvent-free, single component cold-applied, moisture-cured interply membrane adhesive with low VOCs. It is suitable for use with all IKO Modiflex sand-surfaced modified bitumen membranes. It may also be used as a system flood coat for the adhesion of mineral surfacing.

B. The coverage rates for Cold Gold Adhesive can be expected at approximately 18.6 – 23.2 m^2 per 18.9 litres (200 – 250 ft^2 per 5 US gallons) when used as a membrane adhesive and approximately half these values when used as a flood coat; 9.29 – 13.94 m^2 per 18.9 litre pail (100 – 150 ft^2 per 5 US gallons). These coverage rates may vary according to site and weather conditions as well as geographic region. Cure time for Cold Gold Adhesive is typically 48 hours.

C. The IKO Cold Gold Flashing Adhesive is a solvent-free, single component cold-applied, moisture-cured flashing adhesive with low VOCs. It is specifically formulated for adhesion to vertical surfaces, and, therefore, suitable for use with all the IKO Modiflex sand-surfaced modified bitumen flashing membranes.

D. Coverage rates can be expected at approximately 0.5 m^2/L (25 ft^2/US gallon). Cure time is typically 48 hours.

E. Priming of the substrate is not required for either the IKO Cold Gold Field or the IKO Cold Gold Flashing adhesive.

5.03.2 Field Adhesives Application

F. IKO Cold Gold Field Adhesive is suitable for slopes up to 1:12 (8%) maximum.

G. Apply at temperatures above 4°C (40°F).

H. No mixing is required.

I. Apply the adhesive in a uniform layer over the entire area using a one-quarter inch (1/4") (6 mm) V-notch trowel or squeegee for smooth surfaces or a one-quarter inch (1/4") (6 mm) square-notch trowel/squeegee for rough surfaces. Maintain trowel in a vertical orientation to ensure that the adhesive is distributed properly. Use a V-notched trowel for flood coat applications.

J. In flood coat applications, the aggregate should be distributed onto the adhesive before curing.

K. Place membrane into the adhesive and embed using a 75 – 100 lbs. roller, rolling from the center of the sheet to the edges in a uniform manner to ensure adhesive contact and that air pockets are eliminated.

L. The outer two inches (2”) (50 mm) of all the side and end laps shall be sealed with a hot air welding gun. This process will help stabilize the field membrane in place until the adhesive is fully cured and provides for added seal integrity at all seams.

M. Mineral spirits are recommended for site and tool clean-up. Clean-up should be done before curing.

5.03.3 Flashing Adhesives Application

A. IKO Cold Gold Flashing Adhesive should be applied at temperatures above 4°C (40°F).

B. No mixing is required.

C. Apply the adhesive in a uniform layer over the entire flashing area using a one-quarter inch (1/4") (6 mm) square-notch trowel/squeegee. Maintain trowel in a perpendicular orientation to the substrate to ensure that the adhesive is properly distributed. Note: Use a V-notched trowel for smooth surfaces and square-notched trowel for rough surfaces.

D. Apply the Flashing Adhesive to all the inside and outside corners to form a liquid gusset.

E. Roll the membrane from the center of the sheet to the edges in order to ensure adhesive contact and that air pockets are eliminated.

F. The outer two inches (2") (50 mm) of all the side and end laps shall be sealed with a hot air welding gun. This process will help stabilize the flashing membrane in place until the adhesive is fully cured and provides for added seal integrity at all seams.

G. Secure the Cold Gold-adhered base flashing at upper edge on parapets with mechanical fasteners (minimum 1" [25 mm] wide termination bar), fastening every 6" (150 mm) on center. Ensure the last 2" (50 mm) of base flashing are hot air welded in place.

H. Mineral spirits are recommended for tool and site clean-up. Clean-up should be done before curing.

5.04.1 Foamable Insulation Adhesives

A. IKO Millennium is a low-viscosity foamable, urethane based, insulation adhesive.

B. A half-inch by a three-quarter inch (1/2" – 3/4") (12 – 19 mm) wide uncured adhesive bead will produce a two to three inch (2" – 3") (50 – 76 mm) wide cured adhesive bead when compressed. Coverage rates may be lower when used over irregular surfaces and will vary depending on the roughness.

C. IKO Millennium is approved for use with the following substrates and materials:

1. Polyisocyanurate;
2. Asphaltic core boards;
3. Wood, Steel or Concrete;
4. The surface of modified bitumen membranes and base sheets (sanded or granule surfaced);
5. Approved insulations (multi-layer applications);
6. Smooth or gravel surface built-up roof (re-roof applications); and
7. Gypsum-based thermal barriers.

D. Millennium Adhesive is not approved for use with wood fibreboard products. For a complete list of the approved substrates and insulation types, please contact IKO Technical Services.

E. IKO Millennium shall be stored at temperatures between 7°C and 35°C (45°F and 95°F). Bring the temperature of the material to approximately 22°C (70°F) before use. Do not store in direct sunlight or above 35°C (95°F). KEEP FROM FREEZING! Note: Material should be approximately 22°C (70°F) for best results.

5.04.1.1 IKO Millennium Adhesive

A. The IKO Millennium Adhesive is packaged in 1.5 L (0.4 gallon) cartridges with 4 cartridges per case. Each case covers approximately 55 m^2 (600 ft^2) applied in beads twelve inches (12") (300 mm).

5.04.1.2 IKO Millennium PG-1 Pump Grade Adhesive

A. The IKO Millennium PG-1 Pump Grade Adhesive is available in various sizes as shown below in Part 1 and Part 2 mixed through an approved low-pressure pump cart. The rates are based on an application pattern of 4 one-half to three-quarter inch (1/2"–3/4") (12 mm – 19 mm) ribbons spaced twelve inches (12") (300 mm) on the center per four feet by four feet (4' x 4') (1.2 m x 1.2 m) insulation board.

1. 18.9 L (5 G) - 2,500 – 3,000 ft^2 (232 – 279 m^2)
2. 56.7 L (15 G) - 7,500 – 9,000 ft^2 (697 – 836 m^2)
3. 189 L (50 G) - 25,000 – 30,000 ft^2 (2,323 – 2,787 m^2)

B. Warning: The material stored and utilized at cold temperatures will be prone to the crystallization of Part 1.

5.04.2 Foamable Insulation Adhesives Application

A. The following general procedures apply to both the cartridge and pump-grade Millennium adhesives.

B. All work surfaces should be clean and dry and free of dirt, dust, debris, oils, loose and/or embedded gravel, un-adhered coatings, deteriorated membrane, and other contaminants that may result in a surface that is not sound or is uneven.

C. Do not apply to wet surfaces. Not permitted for use with insulation boards larger than four feet by four feet (4' x 4') (1.2 m x 1.2 m). Do not use warped or curled insulation boards. All insulation boards must lay flat upon the roof surface.

D. As the adhesive is applied, immediately place the insulation or board product into the wet adhesive. Press into the adhesive and hold it in place until the adhesive stops rising, thus, ensuring that a contact patch of adhesive achieves the desired two to three-inch (2"–3") (50 mm–76 mm) flattened width continuously throughout the full pattern. Do not allow the adhesive to skin over. Eliminate the uneven surfaces to ensure positive contact between the insulation or board product and substrate.

5.04.2.1 IKO Millennium Adhesive Application

A. These procedures apply to the IKO Millennium cartridge adhesive:

1. With a utility knife, remove the molded tips at the groove from the Millennium mixing head.
2. Attach the included mixing nozzle to the threaded mixing head.
3. Place the cartridge into the appropriate Millennium applicator (manual, electric, etc.).
4. Before application, discard a small portion of the mixed material to ensure that the product is properly mixed. Apply the adhesive directly to the substrate using a ribbon pattern. Space one quarter to one-half inch (1/4" – 1/2") (6 mm – 12.7 mm) wide beads twelve inches (12") (300 mm) on the center to achieve proper coverage rates for insulation and suitable board product attachment.

B. Although there is technically no lower ambient temperature limit that would restrict the use of the IKO Millennium cartridge adhesive, the temperature of the adhesive itself before application should be between 18°C and 29°C (65°F and 85°F) for best results.

5.04.2.2 IKO Millennium PG-1 Pump Grade Adhesive Application

A. These procedures apply to the IKO Millennium PG-1 adhesive:

1. Insert the adhesive bladder labeled Part 1 into the tray labeled Part 1. Apply a small amount of non-lithium grease to the female end of quick-connect coupling. Attach the quick-connect fitting on the bladder to the Part 1 pump inlet hose.
2. Insert the adhesive bladder labeled Part 2 into the tray labeled Part 2. Apply a small amount of non-lithium grease to the female end of quick-connect coupling. Attach the quick-connect fitting on the bladder to the Part 2 pump inlet hose.
3. With the manifold in the OFF mode, flip the power switch to “ON.”

4. Slowly open the manifold valves and the motor will start automatically. Let a small amount of material flow into a waste container to ensure that an equal amount of material is coming out of each manifold port.
5. Shut off the manifold valves and the motor will stop automatically when the shut-off pressure is reached.
6. Wipe the threaded portion of the manifold clean with a rag and apply non-lithium grease to the threaded portion of the manifold.
7. Attach the static mixing nozzle to the applicator manifold using the retaining nut or one-piece mixing nozzle. Ensure that it is completely seated and then begin applying the adhesive.
8. Apply the adhesive directly to the substrate. Do not apply this product when the ambient temperatures are below -4°C (24.8°F).

B. The following procedure should be followed for shut down or extended breaks;

1. Close the manifold valves.
2. Turn off the power.
3. Remove the static mixing tips and discard them.
4. Relieve any pressure in the hoses by opening and closing the applicator valves.
5. Pump a non-lithium grease into both the grease fittings on the gun manifold until it flows out of the tip. Install grease into Part 1 (A) grease fitting first.
6. Caution: Remove the static mixing nozzle during any pause in application or operation. Do not allow pressure to build up in the static mixing nozzle. If the static mixing nozzle remains on the applicator manifold, the material can react and harden in the manifold and possibly the ends of the hoses. During removal and attachment of the static mixing nozzles, a wrench may be necessary for removal. Clean the manifold threads and re-grease frequently.

C. Empty cardboard containers may be recycled where facilities exist or can be used to capture adhesive pre-dispense.

D. Apply the PG-1 insulation adhesive directly to the substrate using a ribbon pattern. Space the beads twelve inches (12") (300 mm) on the center to achieve the proper coverage rates for standard insulation attachment. Note: Alternate adhesive patterns may be specified and will affect coverage rates.

E. Plastic bladders are designed for easy visibility to ensure that the adhesive maintains a 1:1 ratio. If the material is not consumed at a 1:1 ratio, stop the application and check for blockage in the hose or dispensing manifold.

F. The unused material can be applied at a later date. Properly clean and grease the dispensing wand and pump unit according to the manufacturer's recommendations.

5.05.1 Sealants

A. The IKO AquaBarrier Mastic is a modified asphalt sealant that is formulated with synthetic rubbers for flexibility and glass fibers for extra strength.

B. Its uses include sealing around terminations, penetrations, and membrane edges. It is compatible with all asphalt-based roofing materials.

C. The set time is typically 24 hours.

D. The product complies with ASTM D 4586 and ASTM D 3409.

5.05.2 Sealants Application

A. The IKO AquaBarrier Mastic can be applied to damp or dry surfaces at temperatures as low as -10°C (15°F).

B. Products packaged in 10 kg (22.5 lb) pails may be applied as needed via the trowel directly to the roof surface. Alternately, where appropriate, caulking tubes are available in either the standard 300 ml (10 oz) tubes or contractor-sized 825 ml (28 oz) tubes.

C. The material dispensed from the caulking tubes onto the roof surface must be tooled into place as a final step to ensure a proper bond.

D. Mineral spirits are recommended for tool and site clean-up. Clean-up should be done before curing.

5.06.1 Liquid Membrane

A. The IKO MS Detail is a modified silane-based, solvent-free, and liquid-applied roofing accessory that serves as an excellent waterproofing option for hard to reach roof areas. It is ideally suited for coating and protecting detail areas such as flashings, mechanical equipment, and roof/wall penetrations.

B. The IKO MS Detail cures as a result of a chemical reaction with the ambient humidity to become a tough, monolithic waterproofing membrane.

C. The coverage rates are typically 2.5 m^2/3.8 L (25 ft^2/US gallon) at a typical trowel application yielding a nominal applied thickness of one-eighth inch (1/8") (3 mm) per application.

D. The product skins over in approximately 30 – 60 minutes and is fully cured in 48 hours per one-eighth inch (1/8") (3 mm) thickness.

5.06.2 Liquid Membrane Application

A. The IKO MS Detail liquid membrane is packaged in 315 ml (11 oz) sausage tubes.

B. The product may be applied at temperatures as low as -10°C (15°F).

C. Insert the sausage tube into the delivery gun or notch the sausage tube and extrude the material manually onto the surface. Distribute the IKO MS Detail to the desired coverage using a brush or trowel.

D. For holes and cracks spanning a distance greater than one-eighth (1/8") (3 mm), the following procedure should be used:

1. Apply the IKO MS Detail to both sides of the crack extending a minimum of six inches (6") (150 mm) on either side.
2. Allow this initial layer to partially cure (approximately 15 minutes).
3. Embed an open weave, woven fabric of either polyester or fiberglass across the crack, into the full width of the IKO MS Detail.
4. Apply a second coating layer of the IKO MS Detail to fully coat the mesh forming a continuous membrane.

E. The MS Detail may be used to waterproof pitch pans. A minimum depth of two inches (2") (50 mm) of the MS Detail shall be allowed to flow freely and self-level in the pitch pan. To prevent the MS Detail from flowing through the bottom of the pitch pan, first, insert the scrap pieces of roof insulation or other similar material to restrict the liquid membrane flow.

F. Mineral spirits are recommended for tool and site clean-up. Clean-up should be done before curing.

5.07.1 Surface Coatings

A. The IKO ArmourReflect White Coat is a highly reflective styrene ethylene butylene styrene (SEBS) roof coating.

B. The coverage rates are approximately one coat of ArmourReflect coating at 2-2.5 gallons per 100 ft^2 (7.6-9.5 L/9.3 m^2). 200-250 ft^2 per 5-gallon pail (19-23 m^2 per 18.9-liter pail). Approximate wet mil thickness of 30-40 mils. Additional coats can be added after full drying time is allowed.

Note : Drying time is 4-8 hours and will vary depending upon weather conditions.

5.07.2 Surface Coatings Application

A. ArmourReflect Primer must be installed (as per 5.02.2) prior to ArmourRelect White Coat.

B. Ensure roof surface is dry, clean and free from dirt, loose rust and foreign substances.

C. Stir material thoroughly prior to application. Always mix (stir) from bottom to top using a paddle drill mixer for a minimum of 10 minutes for a 5-gallon pail. Avoid using pressure washers that can trap water in the existing roof assembly.

D. The IKO ArmourReflect White Coat can be applied using appropriate spray equipment (preferred method) or may be rolled with a smooth-medium nap roller or soft brush.

E. Apply at ambient temperature above 4°C (40°F).

F. Remove all filters from spray unit or spray guns.

G. Use heavyduty (XHD) tips without a diffuser or atomizer bar. Tip sizes range from 625 to 633 and 725 to 733. Tips may need to be adjusted depending on slope.

H. Apply product holding spray wand no higher than 12 inches from the target substrate with 50% overlap and allow product to flow and self-level. Always spray straight ‘up and down’ or at 90° angle to enhance performance.

I. **Always remix product after work stoppage of 20 minutes or more. Do not apply when precipitation is expected within 2 hours.**

J. The second coat, if specified, should not be applied until the initial coat is fully dry to the touch, which typically takes about four to eight hours depending on the ambient temperature and humidity conditions.

K. Note that the roll or spray marks may be visible in the finished roof surface. Such marks are normal and not indicative of defective coating or application.

5.08.1 Fasteners

L. Fasteners used shall be of sufficient number, length, and gauge appropriate to the level of the roof system performance specified. Specific plates shall be used as needed to achieve the required wind uplift resistance performance.

M. Fasteners and plates shall be corrosion-resistant.

N. Typically, the screw portion of the fastener is common to many fasteners, but the stress plate may vary in design depending on the materials being fastened. For example, some plates may require barbs for additional holding capacity. Contact the IKO Technical Services department for specifics.

5.08.2 Fasteners Installation

A. The following minimum penetration requirements shall apply to the mechanical fasteners used to fasten into each deck type. The penetration is measured from the top surface of the deck and includes the tapping point of the fastener.
- Steel: 3/4 inch (19 mm).
- Concrete: 1 inch (26 mm).
- Plywood or Wood Plank: 1 inch (26 mm).

B. Install the fasteners vertically to ensure proper thread engagement into the deck.

C. Do not over-drive the fasteners to the point where the fastening plates cup and the insulation dimples.

D. Do not under-drive the fasteners so that the fastener head is exposed above the fastening plate.

E. Do not drive the fasteners into any utility lines such as electrical, conduit, or gas pipes.

F. Three-inch (3") (76 mm) diameter metal or plastic fastening plates are required when mechanically attaching insulation. Do not use plastic fastening plates for assemblies requiring a heat-applied membrane.

G. For mechanical attachment of the SBS membrane base sheets, a barbed metal plate shall be specified in the diameter needed to achieve the required wind uplift resistance performance.

H. To compensate for the anticipated increased wind loads for corners and perimeters, it may be necessary to increase fastener densities. Consult the IKO Technical Services department for specific recommendations.

I. Fasteners in steel decks shall penetrate male deck flutes only.

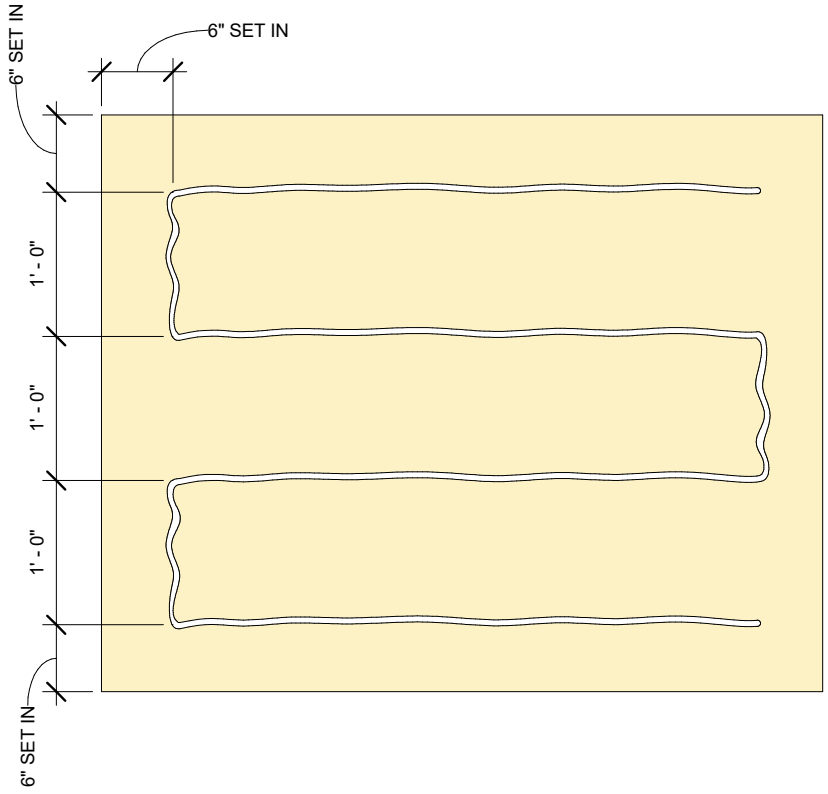
J. Fastening patterns suitable for use with the IKO insulations and separation panels are outlined in Part 8 of this manual.

DETAIL NUMBER: **M-1**

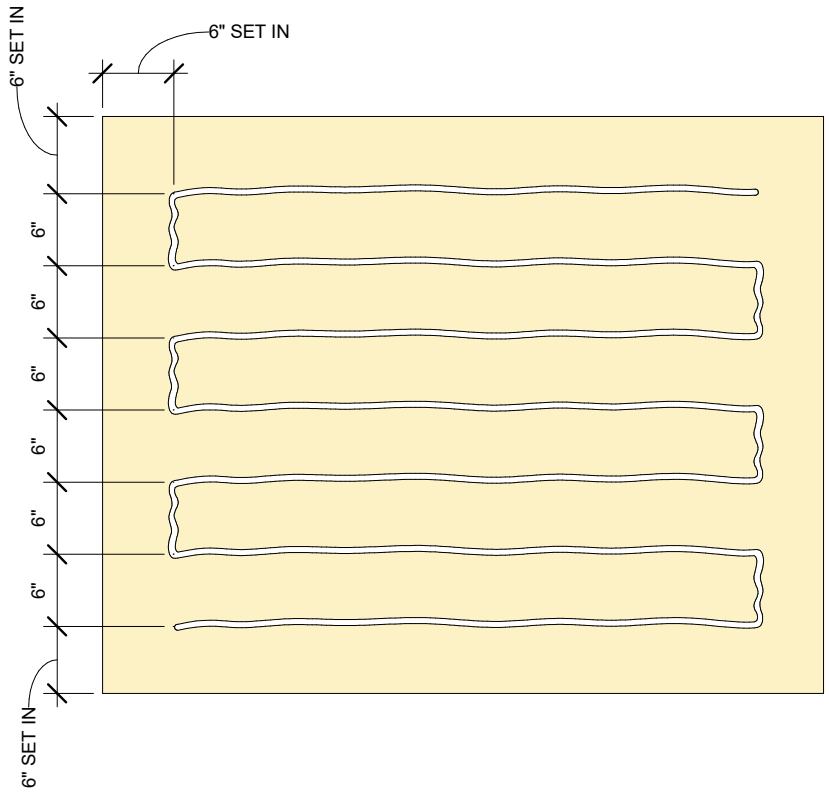
IKO COMMERCIAL®

Specify *with* Confidence

IKO Millennium™ Adhesive Pattern 12" O.C. — Rigid Board Products (4'x4' and 4'x5')



IKO Millennium™ Adhesive Pattern 6" O.C. — Rigid Board Products (4'x4' and 4'x5')



DETAIL NUMBER: **M-3**

IKO COMMERCIAL®

Specify *with* Confidence

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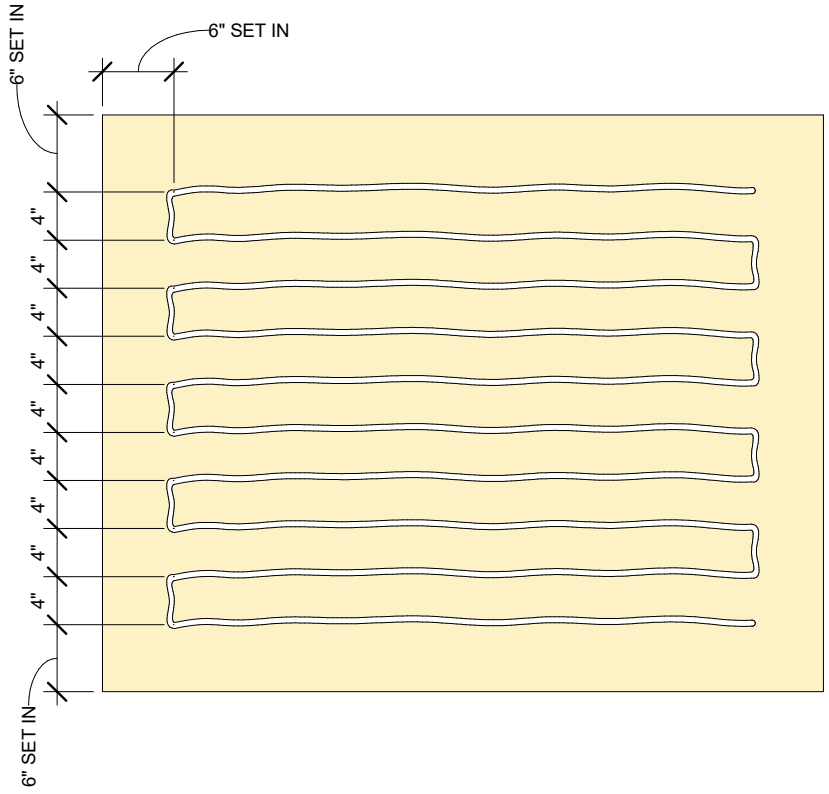
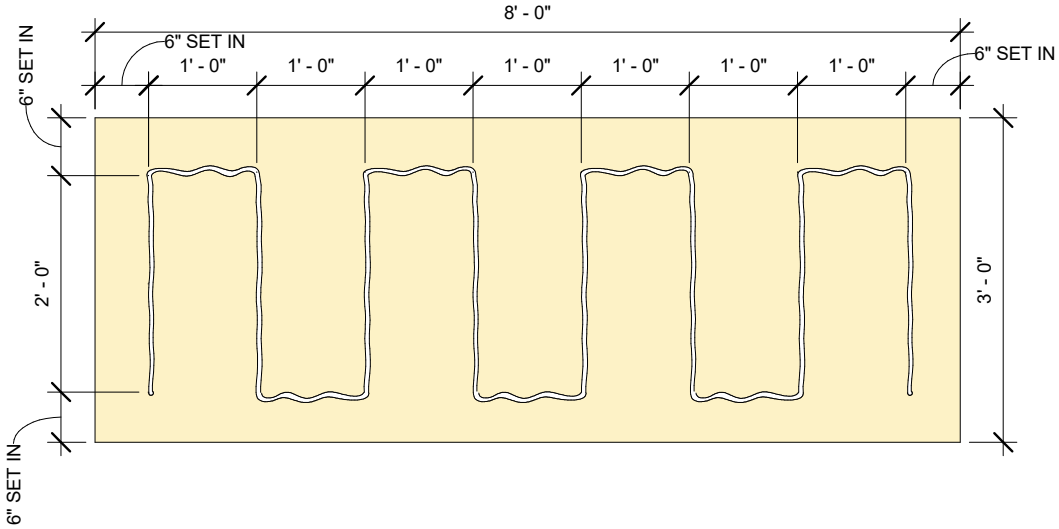


12" O.C. IKO Millennium™ Adhesive Pattern for Protectobase™ and ShieldBase™

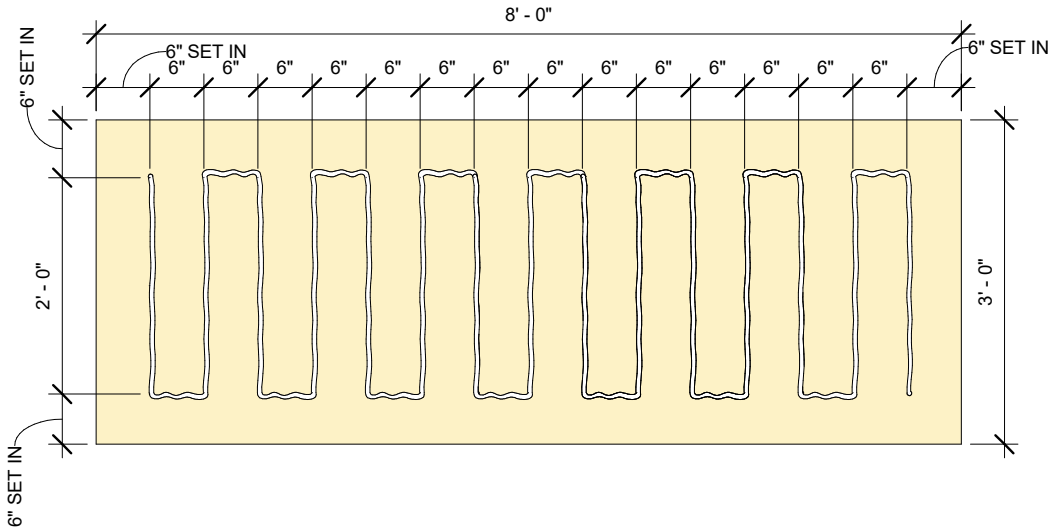


DETAIL NUMBER: **M-5**

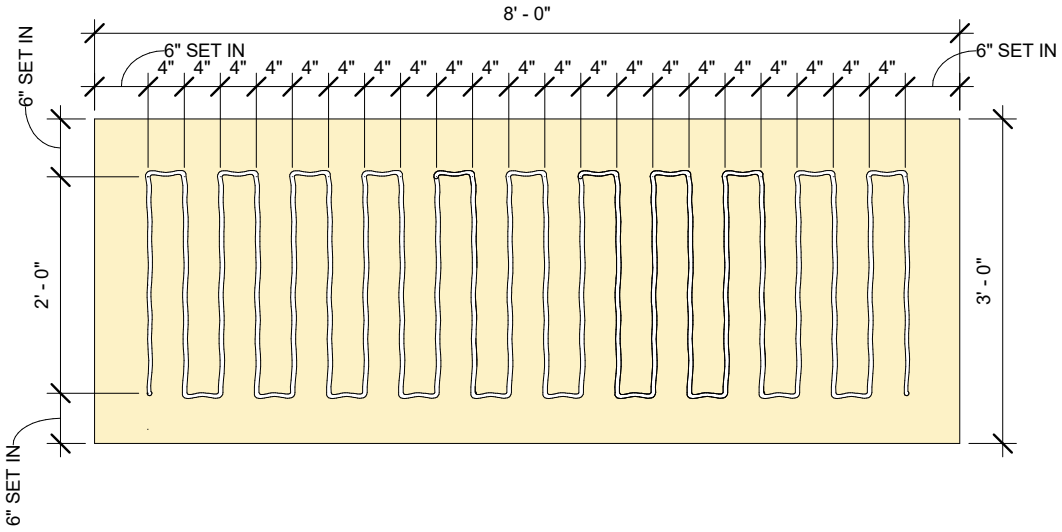
IKO COMMERCIAL®

Specify *with* Confidence

6" O.C. IKO Millennium™ Adhesive Pattern for Protectobase™ and ShieldBase™



4" O.C. IKO Millennium™ Adhesive Pattern for Protectobase™ and ShieldBase™



End of Section