
Table of Contents

Title	Number
General	5.01.1
IKO AquaBarrier FP — Product Description	5.02.1
IKO AquaBarrier FP — Uses and Installation	5.02.2
IKO AquaBarrier TG — Product Description	5.03.1
IKO AquaBarrier TG — Uses and Installation	5.03.2
IKO ArmourBridge — Product Description	5.04.1
IKO ArmourBridge — Uses and Installation	5.04.2

5.01.1 General

- A.** This section will outline the key aspects of IKO's below-grade waterproofing products.
- B.** The use and installation information provided shall be considered in conjunction with the General Requirements in Part 2 of this manual. Suitability of product use and building envelope design is the responsibility of the architect, building designer, contractor and/or building owner.

5.02.1 IKO AquaBarrier FP — Product Description

- A.** IKO AquaBarrier FP is a self-adhering, cold-applied SBS modified composite sheet membrane designed to provide long-lasting and dependable primary waterproofing and below-grade foundation protection from the damaging effects of water, or to be used as an effective air and vapour barrier in a variety of above-grade applications.
- B.** IKO AquaBarrier FP is manufactured by integrally bonding SBS-modified asphalt to a high-density cross-laminated woven polyethylene film. A silicone-treated release liner protects the adhesive back surface prior to installation.
- C.** IKO AquaBarrier FP offers superior performance for below-grade and other critical areas where waterproofing is required. It also may be used in balconies, parking decks, tunnels and foundation walls. IKO AquaBarrier FP can be applied to all common building substrates, including concrete, gypsum, CMU and OSB. The membrane may also be used in conjunction with insulated concrete form (ICF) wall construction; however, since these forms typically incorporate expanded polystyrene insulation, water-based primers and adhesives must be used rather than solvent-based primers and adhesives.
- D.** IKO AquaBarrier FP is sold in rolls, sixty-six point seven feet (66.7') (20.3 m) long, thirty-six inches (36") (914 mm) wide.
- E.** The product has a nominal thickness of sixty (60) mils (1.5 mm).
- F.** Lines are imprinted on the upper surface at three inches (3") (75 mm) from each edge to aid in product overlapping and alignment during installation.

5.02.2 IKO AquaBarrier FP — Uses and Installation

- A.** Due to the modified bitumen coating on the backside of IKO AquaBarrier FP, it is readily compatible with, and may be applied to, common foundation substrates, such as poured concrete or concrete masonry units (block walls).
- B.** Substrates must be primed with either IKO S.A.M. or IKO S.A.M. LVC Adhesive prior to application of the IKO AquaBarrier FP membrane.
- C.** Orientation of the membrane (vertical or horizontal) may depend on ease of accessibility.
- D.** Install to the substrate in manageable lengths, approximately six and one-half feet (6 1/2') (2.5 m). Allow the precut sections of membrane time to lay flat and relax prior to installation.
- E.** Ambient temperatures during installation must be no colder than -10°C (14°F).
- F.** Install reinforcing gusset strips at all inside and outside corners, and at the junction of the foundation and the concrete footing. The reinforcing gusset strips shall be a minimum width of six inches (6") (150 mm) and installed centred over the transition so that the laps are equal on both adjacent sides.
- G.** Remove the release liner from half of the gusset strips and install onto the primed substrate. Press the membrane firmly to ensure adequate adhesion. Push the membrane into the inside corner before removing the balance of the release liner.
- H.** Install reinforcement strips of membrane onto the horizontal plane at the footing. Peel the release liner and extend the reinforcement strip such that a minimum of one inch (1") (25 mm) extends up the lower vertical face of the foundation wall.
- I.** Cut and position the field membrane on the vertical plane. The top edge should terminate at grade level, and the bottom edge should terminate at footing and foundation wall junction, overlapping the reinforcement strip.
- J.** Remove a portion of the release liner, approximately eight inches (8") (200 mm) from the back of the membrane prior to installation. Position membrane for installation beginning at the top of the foundation wall. Apply sufficient hand pressure or use a roller to ensure adhesion to the substrate.
- K.** Remove the release liner, pulling from behind and parallel to the membrane. Continue to apply sufficient pressure to ensure adequate adhesion to the substrate.

- L. Install successive courses of membrane, ensuring that all end laps are a minimum of six inches (6") (150 mm), and all side laps are aligned at three inches (3") (75 mm).
- M. Seal top edge and bottom edge of the field and reinforcement membranes to the substrate with modified bitumen mastic at the end of each workday.
- N. Do not leave the membrane exposed to sunlight/UV for more than thirty (180) days.
- O. Prior to installation of the drainage layer or membrane protection board, inspect the membrane for punctures or tears. Any areas of breached membrane integrity must be repaired. The repair patch must extend at least six inches (6") (150 mm) beyond the damaged area on all sides.
- P. Install the protection board and/or drainage layer as per the construction documents.

5.03.1 IKO AquaBarrier TG — Product Description

- A. IKO AquaBarrier TG is an SBS-modified sheet membrane designed to act as an air and vapour barrier in a variety of above-grade wall systems, and as a waterproofing membrane in below-grade installations.
- B. IKO AquaBarrier TG is manufactured by integrally bonding SBS-modified asphalt to an inorganic reinforcing mat of high-strength nonwoven glass fibers. The product is surfaced with a microperforated film on both sides. The film on the back side of the membrane disappears during heat-welded installation.
- C. IKO AquaBarrier TG is sold in rolls, thirty-two point eight feet (32.8') (10 m) long, in roll widths either nineteen point seven inches (19.7") (500 mm) or thirty-nine point four inches (39.4") (1000 mm).
- D. The product has a nominal thickness of one hundred (100) mils (2.5 mm).
- E. Lines are imprinted on the upper surface at three inches (3") (75 mm) to aid in product overlapping and alignment during installation.

5.03.2 IKO AquaBarrier TG — Uses and Installation

- A.** Due to the modified bitumen coating on the backside of IKO AquaBarrier TG, it is readily compatible with, and may be applied to, common foundation substrates, such as poured concrete or concrete masonry units (block walls).
- B.** Substrates must be primed with either IKO Mod-Bit Primer or IKO Spray Primer prior to application of the IKO AquaBarrier TG membrane.
- C.** Ambient temperatures during installation must be no colder than -10°C (14°F).
- D.** Orientation of the membrane (vertical or horizontal) may depend on ease of accessibility.
- E.** Install to the substrate in manageable lengths, approximately six and one-half feet (6 1/2') (2.5 m). Allow the precut sections of membrane time to lay flat and relax prior to installation.
- F.** Install reinforcing gusset strips at all inside and outside corners, and at the junction of the foundation and the concrete footing. The reinforcing gusset strips shall be a minimum width of six inches (6") (150 mm) and installed centred over the transition so that the laps are equal on both adjacent sides.
- G.** Using a propane torch, soften the underside of the membrane by burning off the backing film. To ensure adequate adhesion, the bitumen should be in a semi-molten state, and the membrane should be pressed into place immediately after torching.
- H.** Install reinforcement strips of membrane onto the horizontal plane at the footing. Install the reinforcement strip such that a minimum of one inch (1") (25 mm) extends up the lower vertical face of the foundation wall.
- I.** Cut and position the field membrane on the vertical plane. The top edge should terminate at grade level, and the bottom edge should terminate at footing and foundation wall junction, overlapping the reinforcement strip.
- J.** Position membrane for installation beginning at the top of the foundation wall. Apply roller to ensure adhesion to the substrate.

- K.** Install successive courses of membrane, ensuring that all end laps are a minimum of six inches (6") (150 mm), and all side laps are aligned at three inches (3") (75 mm).
- L.** Seal the top edge and bottom edge of the field and reinforcement membranes to the substrate with modified bitumen mastic at the end of each workday.
- M.** Do not leave the membrane exposed to sunlight/UV for more than thirty (30) days.
- N.** Prior to installation of the drainage layer or membrane protection board, inspect the membrane for punctures or tears. Any areas of breached membrane integrity must be repaired. The repair patch must extend at least six inches (6") (150 mm) beyond the damaged area on all sides.
- O.** Install the protection board and/or drainage layer as per the construction documents.

5.04.1 IKO ArmourBridge — Product Description

- A.** IKO ArmourBridge Bridge Deck and Waterproofing Membrane is made with a tough nonwoven reinforced polyester mat strengthened with select glass fiber strands. It is then coated with select SBS polymers and premium asphalt to a superior thickness of approximately one hundred seventy-seven (177) mils (4.5 mm).
- B.** IKO ArmourBridge 45 is a preformed SBS modified bitumen membrane with a ceramic-coated granule top surface to protect against abrasion and work traffic. Also used in parking garage surfaces, it's specially formulated to protect decking from the assault of melting snow laden with salt and de-icing solution.
- C.** IKO ArmourBridge 45 satisfies the requirements of ASTM D6153 standard specification for Materials for Bridge Deck Waterproofing Membrane Systems and ASTM D5849 standard test method for evaluating resistance of modified bituminous roofing membranes to cyclic fatigue, (joint displacement). It also conforms to the requirements of CGSB 37.56-M, Class G, Type 2, Grade 2, and ASTM D6164 Type I, Grade G.
- D.** IKO ArmourBridge is manufactured to a width of thirty-nine point six inches (39.6") (1005 mm) and a length of twenty-six point two feet (26.2') (8 m). It has a three and one-half inch (3 1/2") (90 mm) ungranulated selvage edge.

5.04.2 IKO ArmourBridge — Uses and Installation

- A.** Consult local building codes and/or department of transport regulations for requirements pertaining to bridge deck waterproofing. Use and application of this product must be in accordance with all local, provincial and national code requirements.
- B.** IKO ArmourBridge is specifically designed for paving overburden and offers excellent protection for concrete structures against waterborne chemical deterioration. Studies have shown that waterproofing and proper water management on the bridge deck extends the life of the bridge by minimizing associated water damage. It also reduces chemical deterioration through minute fissures and cracks from de-icing and salt chemicals during the winter months.
- C.** The substrate should be smooth and dry, and free from dirt, oil, grease or other contaminants. Large cracks or openings greater than one quarter inch (1/4") (6 mm) must be filled.
- D.** All side laps shall be a minimum of three and one-half inches (3 1/2") (90 mm).
- E.** All end laps shall be a minimum of six inches (6") (150 mm).
- F.** The side and end laps shall be staggered a minimum of twelve inches (12") (300 mm) and twenty-four inches (24") (610 mm), respectively, from each other.
- G.** All end laps shall have a forty-five (45°) degree section removed to form a positive water stop.
- H.** All metal and concrete surfaces that come into contact with the membrane must first be primed with an IKO Mod-Bit Primer or IKO Standard Asphalt Primer.
- I.** Remove all wrapping tape and labels before beginning installation. The sheets must be unrolled, allowed to relax and then rerolled prior to installation.
- J.** Begin installation at the low point of the deck. Unroll and align the sheet prior to attachment. Use chalk lines where necessary to ensure proper alignment. Ensure side laps are oriented so as not to block the flow of water to drains.
- K.** The cap sheet shall be terminated on the horizontal surface at the intersection of any vertical surfaces, or as otherwise specified in the construction drawings.
- L.** The membrane is installed via heat fusion from an open-flame torch. IKO requires that the torch operator be positioned in front of the roll and use a hook or cane-type tool to pull the roll towards the installer instead of walking on the freshly heated membrane.

- M.** Beginning at the rerolled portion of the cap sheet, apply the flame evenly across the back of the roll and along the exposed side lap of the previously installed sheet.
- N.** Apply enough flame to melt the film on the back of the sheet and the lap on the previously installed sheet. Installation is correct when a small bead of bitumen can be seen in front of the roll and at the side lap, producing a nominal quarter inch (1/4") (6 mm) bleed-out of bitumen.
- O.** Reroll the opposite half of the sheet and repeat the above method to complete installation of the full roll.
- P.** On end laps, the end lap granules shall be embedded with a torch and trowel prior to mating with the next sheet. Heat is applied to both the membrane and the trowel so as to embed the granules into the bitumen — they should not be scraped off the cap sheet.
- Q.** On sheet side laps, if the factory-provided three and one-half inch (3 1/2") (90 mm) side lap is not available, then the side lap granules shall be similarly embedded with a torch and trowel to create the required three and one-half inch (3 1/2") (90 mm) overlap.
- R.** Prior to completion of the bridge deck traffic surface, the IKO ArmourBridge shall be protected from damage, which is typically achieved by the installation of a loose-laid layer of IKO Protectoboard.

End of Section