Paradiene 30 FR SA and Parafor 30 SA Roof System

Installer Guide

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With you every step of the way

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I. System Overview

Siplast's 2-ply self-adhesive membrane system consists of a random fiberglass mat reinforced coated SBS-modified bitumen base ply with a unique factory-coated acrylic top surface, followed by the application of a self-adhesive random fiberglass mat or fiberglass scrim/polyester composite SBS-modified bitumen finish ply. Siplast's 2-ply self-adhesive membrane systems may be utilized over approved roof substrates.

II. Safety Considerations

A. As with any construction project, safety is a key element. All applicable safety standards and good roofing practices must be followed. Please review Siplast's specifications, details, and related product safety data sheets, as well as these instructions before starting an application.

B. Only properly trained and professionally equipped Siplast Select Contractors experienced in the installation of the roofing applications listed herein should install these systems. Never allow contact between the heated surface of a torch, hot air welder, or other tool and the applicator's hair, skin, or clothing. Always wear protective gear, including but not limited to: hardhats, eye protection, heavy-duty gloves, and snug-fitting clothing that fully covers workers' arms and legs.

C. Solvent-containing accessories may be combustible and should always be kept from heat, flame, or any source of ignition. Empty containers must be disposed of in posted toxic substance landfills in accordance with local, state, and federal regulations.

D. Thoroughly train all personnel in first-aid procedures, and obey all applicable government safety standards and fire codes. Use extreme caution when working around equipment, such as gas lines or HVAC units, which have electrical or gas connections.

III. Storage and Handling

Store materials out of direct exposure to the elements. Store roll goods on a clean, flat, and dry surface. All material stored on the roof should be stored on pallets. Rolls of roofing must be stored on ends. Store materials on the roof in a manner so as to preclude overloading of the roof deck and building structure. Store materials such as solvents, adhesives, and asphalt cutback products away from open flames, sparks, or excessive heat. Cover all material using a breathable cover such as a canvas. Polyethylene or other non-breathable plastic coverings are not acceptable. Handle all materials in such a manner as to preclude damage and contamination with moisture or foreign matter. Handle rolled goods to prevent damage to edges and ends.

IV. Temperature Limitations

It is recommended to install Pro Base SA when the outside temperature is rising. During cold weather conditions, PA-1125 or PA-917 Asphalt Primer should be considered to facilitate proper bonding of the self-adhesive membrane to approved roof system components.

It is recommended to install Paradiene 30 FR SA/Parafor 30 SA when the outside temperature is rising. During cold weather conditions, rolls should be stored in a climate-controlled environment at 70ºF (21ºC) immediately prior to application.

To facilitate application at ambient temperatures below 70ºF (21ºC), all materials such as adhesives, primers, and roll goods should be stored in a warm place such as a heated trailer or other climate-controlled storage areas prior to use.

Application in cool weather can be completed more effectively by cutting warmed rolls into halves or thirds and stacking the sheets with the unsurfaced-side upward. Cut sheets should be allowed to lay flat for a minimum of 30 minutes (time will vary based on the ambient temperature and solar load) to allow them to sufficiently “relax” prior to application. Application should be suspended in situations where adhesives or primers cannot be applied at temperatures allowing for even distribution.

V. Installation Materials, Tools, and Equipment

Application

- Non-shed roller (for primer application)
- Automatic hot air welding machine
- Weighted steel roller
- Notched trowel
- Neoprene roller

Miscellaneous

- Chalk line
- Box or razor knife
- Plastic garbage bag
- Conventional thermometer (ambient temperature)
- Tape measure

VI. Materials

APPROVED BASE PLIES			
BASE PLY	**GRAPHIC**	**APPLICATION**	**APPROVED SUBSTRATES***
Pro Base SA		Self-adhesive	Parabase Plus P Paratherm HD (high density polyisocyanurate), DensDeck (priming required), DensDeck Prime, DensDeck StormX Prime, Securock Gypsum Fiber (priming required), Securock Cement Board (priming required), DEXcell FA, DEXcell Cement Board (priming required) Note: Reference the Siplast Insulation Usage Guide regarding proper application of insulation and cover panels.
Pro Base TS SA		Self-adhesive	Parabase Plus P Paratherm HD (high density polyisocyanurate), Asphaltic cover panel, DensDeck (priming required), DensDeck Prime, DensDeck StormX Prime, Securock Gypsum Fiber (priming required), Securock Cement Board (priming required), DEXcell FA, DEXcell Cement Board (priming required) Primed structural concrete Note: Reference the Siplast Insulation Usage Guide regarding proper application of insulation and cover panels.
*** Contact Siplast Technical & Design Support for additional information regarding substrates not listed here.**			

PARADIENE/ PARAFOR SERIES FINISH PLY/CAP SHEET OPTIONS			
FINISH PLY	**GRAPHIC**	**APPLICATION**	**Properties**
Paradiene 30 FR SA		Self-adhesive	Paradiene 30 FR SA is the modified bitumen finish ply of the Siplast Paradiene 30 FR SA System. Designed for use in homogeneous multi-layer modified bitumen roof membrane systems, Paradiene 30 FR SA consists of a lightweight random fiberglass mat impregnated and coated with high quality styrene-butadiene-styrene (SBS) modified bitumen and surfaced with ceramic granules. The back surface of the sheet is coated with a self-adhesive SBS bitumen layer and is lined with a high-strength polyolefin release film.
Parafor 30 SA		Self-adhesive	Parafor 30 SA is used as the modified bitumen finish ply and flashing sheet. Designed for use in homogeneous multi-layer modified bitumen roof membrane systems, Parafor 30 SA consists of a fiberglass scrim/polyester mat impregnated and coated with high quality styrene-butadiene-styrene (SBS) modified bitumen and is surfaced with ceramic granules. The back surface of the sheet is coated with a self-adhesive SBS bitumen layer and is lined with a high strength polyolefin release film.
*** Contact Siplast Technical & Design Support for additional information regarding substrates not listed here.**			

VII. Preparation

Before installation of any materials, the Siplast Select Contractor should make a thorough inspection of the deck/substrate to verify that it will meet design requirements and is suitable for application of the specified Paradiene/Parafor Self-Adhesive Roof System. Defects in the deck, design deficiencies, or other conditions that would affect the performance of the roofing materials should be brought to the attention of the appropriate party, which may include the general contractor, deck contractor, architect, engineer, and/or owner. Sweep or vacuum all surfaces, removing all loose aggregate and foreign substances prior to the application of the roof system. At locations where flashing and stripping membranes are to be applied, prime metal, concrete, and masonry surfaces with a uniform coating of the specified Siplast asphalt primer.

VIII. Application

A. Install insulation panels according to the manufacturer's recommendations and FM Global or CSA requirements, if applicable. The edges of insulation panels should be in moderate contact without forcing and cut to fit neatly against adjoining surfaces. The insulation layer should present a smooth surface to accept the roof membrane. Some insulation products may require priming.

B. Prior to the application of the Pro Base series base ply, roll out the sheets to be applied and allow them to relax for a minimum of 30 minutes (required time will vary based on the ambient temperature).

C. Beginning at the low point of the roof, unroll the base ply, and set the roll into place utilizing minimum 3 inch side and end laps. Fold one end of the roll back onto itself by 24 inches. Peel the release film off of the back of the 24 inch end section of the sheet and lay into place, pressing the 24 inch end section of the sheet firmly into place over the substrate. Pull the release film free from the underside of the remainder of the sheet while pressing the material into place with a follow tool as the film is being removed, leaving the end laps unadhered. Prior to adhering the end laps, cut a dog ear angle at each end lap on overlapping selvage edges. Finish removing the release film and adhere the end lap down. Using a neoprene roller, apply top pressure to top seal T-laps immediately following sheet application. Probe T-laps to ensure full adhesion. Stagger end laps a minimum of 3 feet. Roll all laps with a weighted steel roller and check laps to ensure full lap adhesion has been achieved. End and side laps require hot-air welding if the finish ply is not installed the same day.

D. Fully adhere the flashing reinforcing sheet, utilizing minimum 3 inch side laps onto the base ply surface and up the primed wall or curb to the desired flashing height. Consult and follow Siplast standard specifications and details as outlined on our website (www.siplast.com).

E. The Siplast-published exposure limit for Pro Base products is a maximum of 14 days prior to application of the finish ply layer of roofing. In situations with prolonged exposure beyond the specified limit, a Siplast representative must inspect the surface of the Pro Base prior to the application of the finish ply. Prolonged exposure beyond 14 days may necessitate remedial work or addition of another layer of Pro Base over the affected areas.

F. Prior to the application of the Paradiene 30 FR SA or Parafor 30 SA finish ply, roll out the sheets to be applied and allow them to relax for a minimum of 30 minutes (required time will vary based on the ambient temperature).

G. Beginning at the low point of the roof, unroll the self-adhesive finish ply, and set the roll into

place utilizing minimum 3 inch side and end laps. Fold one end of the roll back onto itself by 24 inches. Peel the release film off of the back of the 24 inch end section of the sheet and lay into place, pressing the 24 inch end section of the sheet firmly into place over the base ply. Pull the release film free from the underside of the remainder of the sheet while pressing the material into place with a follow tool as the film is being removed, leaving the end laps unadhered. Prior to adhering the end laps, cut a dog ear angle at each end lap on overlapping selvage edges.

H. After the first sheet is adhered, adhere the adjacent sheets, in the same manner, ensuring minimum 3-inch side laps and minimum 3-inch end laps. Offset adjacent end laps a minimum of 3 feet. Cut a dog ear angle at the end laps of overlapping selvage edges.

I. Set the overlapping ply of end laps in a bed of PA-828 or SFT Flashing Cement and roll into place. Apply granules to excessive adhesive outside of the lap. It is acceptable to heat weld the end laps with a hot air welder. In this case, consider holding back the adhesive 1" from the edge of the lap. Alternatively, it is acceptable to fully hot-air weld the end laps.

J. Fully hot-air weld all side laps with a minimum 1/8 inch to maximum 1/4 inch continuous bleed out to ensure that all laps are watertight. Immediately following, use a weighted roller at the step down. Roll all laps and T-Joints with a weighted roller and check laps after cooling to ensure full lap adhesion has been achieved. (The use of a self-propelled high-speed flameless automatic hot air welding machine for welding modified bitumen membranes is recommended to ensure a unified and even application of heat to the side laps. The unit should be equipped with a 100mm (4") welding nozzle.

K. Parafor 30 SA membrane flashing: Chalk a line at the required distance onto the finish ply field membrane in accordance with Siplast guidelines and project specifications, whichever is more stringent. Apply PA-828 or SFT Flashing Cement with a notched trowel to the finish ply field membrane extending from the chalk line up to the top of the cant where the granule surface finish ply terminates. Start the application of the sheet at the chalk line and work into the transition ensuring full contact with the adhesive (If the detail does not contain a cant, work the adhesive into the 90-degree transition). Apply the remainder of the sheet to the substrate utilizing even pressure to bond the self-adhesive backing to the substrate. Using a neoprene roller apply pressure to ensure full adhesion. Weld side laps using a handheld hot air welder and neoprene roller. Membrane that is terminated vertically should be mechanically fastened the day of application at 9 inches on center maximum using the appropriate fasteners and plates/termination bar for the flashing substrate.

L. Treat all flashing conditions at penetrations, roof edges, drains, curbs, and walls in accordance with Siplast standard specifications and details. Consult and follow approved details as outlined on our website (www.siplast.com).

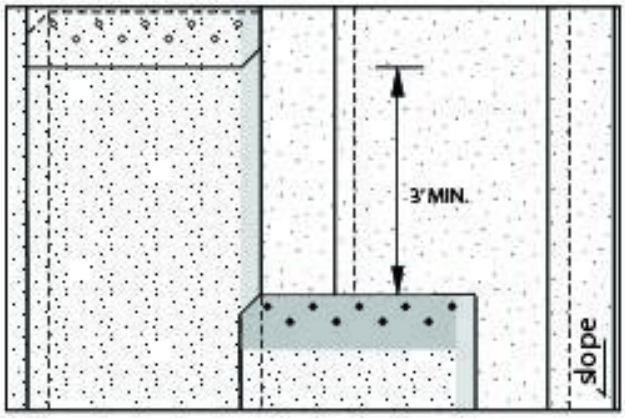
M. When the slope is greater than 2 1/2 inches, sheets are applied parallel to the slope in maximum sheet lengths of 24 feet with finish ply head laps fastened in accordance with the recommendations on the following page of this guide. For applications in excess of 3 1/2 inches contact the Siplast Technical Department for additional requirements.

Backnailing Information for Steep Slope Applications

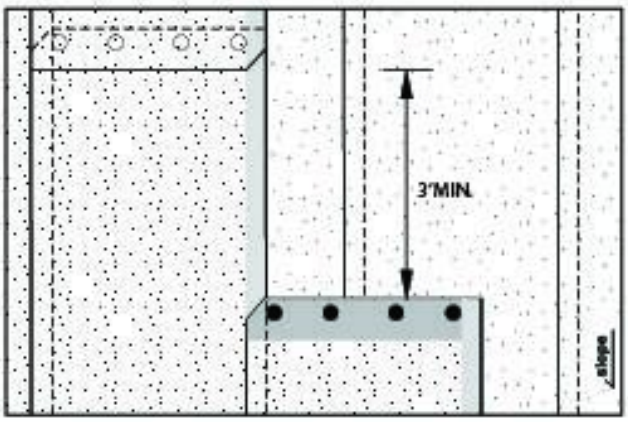
When securing the finish ply where the membrane system is applied over uninsulated nailable decks or for securing into interval nailers used with insulated roof systems, nailing should be done with nails having attached caps with minimum 1-inch diameter.

Roofing screws with 2-inch metal plates are acceptable for securing the finish ply where the membrane system is applied over either insulated or uninsulated roof systems.

The illustrations on this page show the correct fastening of the finish ply where the roof membrane system is applied parallel to the roof slope.



Fasten the finish ply with nails having attached caps of a minimum of 1-inch diameter. Each head lap should be fastened using nine nails in a double row, evenly spaced configuration. Stagger the rows of nails. All fasteners should be covered by a succeeding ply extending a minimum of 3 inches beyond the lowermost edge of the fastener caps.



Fasten the finish ply with roofing screws and 2-inch metal plates. Each head lap should be fastened using four fasteners evenly spaced from side lap to side lap. All fasteners should be covered by a succeeding ply extending a minimum of 3 inches beyond the lowermost edge of the fastener caps.

Notes

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