

TeraPROOF™ SBS Pre-Applied Installer's Guide

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With you every step of the way

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I. Siplast TeraPROOF Pre-Applied System Overview

Siplast TeraPROOF Pre-Applied System

Siplast TeraPROOF products provide high-performance solutions for below-grade waterproofing applications, helping to create a robust vertical and horizontal waterproofing solution for commercial buildings. TeraPROOF Pre-Applied SBS membranes are comprised of elastomeric styrene-butadiene-styrene (SBS) polymer-modified bitumen with polyester reinforcement. The TeraPROOF Pre-Applied system is for horizontal and vertical waterproofing applications and is designed for use in below-grade waterproofing systems prior to the placement of concrete. The application of the TeraPROOF Pre-Applied SBS system includes the use of liquid membranes, adhered membranes, flashing membranes, protection materials, drainage systems, and additional accessories to complete the installation.

II. Products

Membranes

- Siplast TeraPROOF Pre-Applied V-SBS Membrane
- Siplast TeraPROOF Pre-Applied H-SBS Membrane

Protection and Drainage Course

- Siplast TeraPROOF Protection CS1000
- Siplast Paradrain Drainage Mat

Accessories (as needed)

- Siplast TeraPROOF STP Liquid Membrane
- Pro Prep Cleaner
- Siplast Parapro Flashing System
- Pro Fleece
- Siplast primers or a compatible approved primer
- Termination bar with sealant lip
- Fasteners with appropriate washer, attachment type, structural capacity, and head configuration

III. Personal Protection

For professional use only. Refer to the applicable TeraPROOF products Commercial Product Data Sheets (CPDS), Safety Data Sheets (SDS), project specifications, and application instructions. Use personal protective equipment as required. Always read the full label and product safety data sheet for precautionary instructions before use. Use appropriate safety equipment and job-site controls during application and handling.

IV. Storage and Handling

Store TeraPROOF products on end between 40°F to 90°F (5°C to 32°C) on a clean, flat surface in dry conditions out of direct exposure to the elements. Do not double-stack Pallets. Handle materials so that they remain dry prior to and during installation. Use appropriate safety equipment and job-site controls during application and handling. Do not store in a leaning or horizontal position as deformation may occur. Dispose of unused TeraPROOF products in accordance with

local, state and federal regulations. Consult local, provincial, territory or state authorities to know disposal methods. Rolls may be stored outside but must be conditioned to room temperature before installing if storage location is below 40°F (10°C).

V. Installation Tools

For TeraPROOF SBS Pre-Applied products the following tools are recommended depending on the specific application:

- Heat welder (torch or hot air), tape measure, utility knife, shears, and hard rollers of various widths.

For liquid materials such as primers, liquid flashing, and sealants, the following tools are recommended depending on the specific application:

- Wet mil gauge, rollers, brushes, trowels, and sealant finishing tools.

VI. Substrate Preparation

Prior to the installation of Siplast TeraPROOF SBS Pre-Applied products, the following are required:

- Any surfaces to receive TeraPROOF Pre-Applied SBS membrane such as treated earth, compacted grade, wood lagging, sheet piling, and concrete must be flat with no protruding objects that could penetrate or damage the waterproofing membrane and must not contain any gaps larger than ½ inch (12 mm).
- Approved concrete, plywood, insulation, or other facing can be used to create a flat surface across sheet piling and lagging gaps to provide support for the TeraPROOF Pre-Applied SBS membranes.
- Siplast Paradrain Drainage Mat may also be used to span gaps up to 2 inches in lagging substrate prior to the installation of the TeraPROOF Pre-Applied SBS membranes.
- Where Siplast materials are adhered, the substrate must be clean and dry and free from gross irregularities, loose material, unsound material, sharp protrusions, any foreign material (such as dirt, ice, snow, water, grease, bitumen/coal tar, oil, release agents, lacquers, paint coverings), or any other condition that would be detrimental to the adhesion of the material. It is recommended that a mock-up or field adhesion test on the actual materials being used on the job be conducted to verify adhesion. Primers can also be used to improve adhesion to the substrate.

VII. General Applications

The following requirements apply to all Siplast TeraPROOF SBS Pre-Applied product installations:

General Applications

- Coordinate installation of TeraPROOF products with the adjoining and subsequent trades to ensure compatibility and continuity with the roofing, waterproofing, and above-grade facade systems.
- Prior to installation, unroll TeraPROOF SBS Pre-Applied membrane and allow it to relax.
- Loose lay the membrane to the desired position. The membrane side laps are to be overlapped and heat welded a minimum of 4 inches. The membrane end laps are to be overlapped and heat welded a minimum of 6 inches. Offset adjacent end laps a minimum of 3 feet.
- Cut the TeraPROOF SBS Pre-Applied products to fit tightly around any penetrations.
- Use a heat welding device to seal the laps with approximately ⅛ inch bleed out. For additional heat welding and torching requirements, refer to Siplast “*Torch Application Guidelines and Tips*” Bulletin # TS-702, dated March 11, 2021 or newer. Contact Siplast Design Services at 1-800-922-8800 for questions regarding hot-air welding.

- Inspect the membrane before covering it with subsequent construction materials and repair any punctures, damaged areas, or inadequately lapped seams. Tears and holes must be repaired using a patch of TeraPROOF STP Liquid Membrane with Pro Fleece or heat welded with TeraPROOF Pre-Applied H-SBS Membrane
 - Repairs made using TeraPROOF Pre-Applied H-SBS Membrane sized to extend 6 inches (150 mm) in all directions from the perimeter of the affected area. The repair piece must be heat welded in place and a ¾ inch bead of TeraPROOF STP Liquid Membrane toolled along the perimeter of the patch.
 - Repairs made using TeraPROOF STP Liquid Membrane and Pro Fleece should be applied to extend at least 1 in (25 mm) in all directions from the perimeter of the affected area. Each layer of TeraPROOF STP Liquid Membrane application should be applied at a minimum thickness of 60 wet mils.
- Install TeraPROOF products in a manner to shed water in a shingle fashion and in a sequence that maintains a continuous downward water drainage plane away from the structure.
- Tool all sealants, mastics, and liquid flashing materials to ensure it is worked into the surface.
- Apply continuous concrete water stops at all concrete joints in the wall, floor, or structure per the manufacturer's instructions.
- Protect installed membranes to avoid damage by other trades and construction materials during subsequent operations.
- Proper application is the responsibility of the installation professional. Surface preparation, substrate adhesion, proper installation, and other variables outside of the manufacturer's control are the sole responsibility of the user. Any field visits by Siplast representatives are solely for the administration of Siplast's guarantee program.

Vertical Applications

- Install the Siplast Paradrain Drainage Mat with the fabric side facing the subgrade with a minimum of three fasteners with seam plates per roll along the top and overlap the side fabric flange of each roll as applicable.
- Install fasteners through the TeraPROOF Pre-Applied V-SBS Membrane and the drainage mat and into the lagging 3 inches down from the top edge of the roll with a minimum of three #12 fasteners, with 2 inch seam plates per sheet width and at a maximum 24 in on center frequency.
- Continue with subsequent rolls in the same manner while overlapping side and end laps of the previous roll.
- Heat weld all side and end laps with ½ inch minimum bleed out.

Horizontal Applications

- Loose lay the TeraPROOF Protection CS1000 flat onto the level and compacted base of #57 stone or other prepared surface. Ensure the TeraPROOF Protection CS1000 is without wrinkles with the smooth, white side up in a perpendicular direction to the subsequent TeraPROOF Pre-Applied H-SBS Membrane. Install subsequent courses of TeraPROOF Protection CS1000 by butting end laps and edge laps to the adjacent roll of TeraPROOF Protection CS1000.
- Unroll the TeraPROOF Pre-Applied H-SBS Membrane and loose lay it flat with the mineral aggregate side up, onto the horizontal surface of the TeraPROOF Protection CS1000 without wrinkles.
- Plan the installation of TeraPROOF Pre-Applied H-SBS Membrane to be applied perpendicular to the TeraPROOF Protection CS1000 previously installed. If the TeraPROOF Pre-Applied H-SBS Membrane is installed parallel to the TeraPROOF Protection CS1000, ensure the side lap areas of the TeraPROOF Pre-Applied H-SBS Membrane are offset at least 12 inches from the protection course joints below.
- Install the next roll of TeraPROOF Pre-Applied H-SBS Membrane overlapping and heat welding up to the pre-marked 4-inch line marked on the adjacent sheet with approximately ½ inch bleed out while rolling the seam with a minimum 40 lb. roller.

Corner Applications

- When changing planes at all corners, continue overlapping the TeraPROOF SBS Pre-Applied membrane at least 6 inches beyond the corner in both directions. Ensure the second layer TeraPROOF SBS Pre-Applied membrane is heat welded for the entire overlap area to the layer below.
- Inside Corners: Vertical to Horizontal Corners
 - Reinforce corners between horizontal and vertical TeraPROOF SBS Pre-Applied waterproofing areas with additional strips of TeraPROOF Pre-Applied H-SBS membrane. Prior to applying the reinforcing strip, apply a ¾ inch cant bead of Siplast PS-715 Elastomeric Sealant. Apply the TeraPROOF Pre-Applied H-SBS membrane to the corner area, overlapping 12 inches minimum in each direction and heat welding the entire reinforcing strip in place.
- Outside Corners: Vertical to Horizontal Corners
 - Reinforce corners between horizontal and vertical TeraPROOF SBS Pre-Applied waterproofing areas with additional strips of TeraPROOF Pre-Applied H-SBS membrane. Apply the TeraPROOF Pre-Applied H-SBS membrane to the corner area, overlapping 12 inches minimum in each direction and heat welding the entire reinforcing strip in place.

VIII. Specific Application Details

For specific application information refer to the TeraPROOF detail and sequence sheets. Product and installation requirements may vary by application and project conditions.

Detail Sequences Drawing List

Below is a list of detail sequence sheets relevant to the TeraPROOF product installations:

07.10	Pre-Applied SBS - Application Overview
07.1R	Pre-Applied SBS - Membrane Repairs
07.11	Pre-Applied SBS - Lap and Heat Welding Diagrams
07.12	Pre-Applied SBS - Corner Reinforcement Fabrication Diagram
07.13	Pre-Applied SBS - Floor and Wall Penetration Flashing
07.14	Pre-Applied SBS - Structural Penetration Flashing
07.15	Pre-Applied SBS - Pile Cap or Grade Beam Transitions
07.16	Pre-Applied SBS - Grade Beam Trench Application
07.17	Pre-Applied SBS - Elevator Pit Application
07.18	Pre-Applied SBS - Tie-Back Cover
07.19	Pre-Applied SBS - Transition to Horizontal Waterproofing