

Hyload Hyproof Waterproofing Systems General Application Instructions

These instructions are intended to provide guidance in the proper application of Hyload Hyproof Waterproofing systems. Always consult with Hyload should specific job conditions warrant.

All Hyproof waterproofing membranes are coal tar elastomeric (CTEM) sheets compounded from Elvaloy[®], PVC, and coal tar pitch. Sheets can be bonded together with either hot air welds or Hyload Structural Sealant. The Hyproof system is designed to limit the lateral movement of water in the event of membrane damage without the use of any additional installed components. The membranes are highly resistant to acids, bases, oils, greases, petroleum products, and organic growth such as roots, molds and algae. They are UV stable, impervious to standing water, and will not be effected by contact with asphalt or coal tar.

System Components

Hyproof SA (Self Adhered) is a self adhered, fully adhered, CTEM waterproofing membrane intended for use over primed smooth, dry substrates. The bottom of the sheet is coated with SBS-modified asphalt with a dry selvedge edge for hot air welds. Suitable substrates include, but are not limited to, wood, masonry, and concrete.

Hyproof SA-2 is a self-adhered CTEM membrane. In contrast to our Hyproof SA product, the adhesive is applied over 50% of the bottom of the sheet. This product is used as the second ply in our 20 year warranty systems. It also has a dry selvedge edge for hot air welds.

Hyproof GL is an uncoated, loose laid CTEM waterproofing membrane that is installed onto ribbons of adhesive laid in a grid pattern. It is intended for use over smooth surfaces that could be moist or, in retrofit projects, covered with an older existing waterproofing system. Possible substrates include wet concrete or an old hot-applied asphalt or coal tar waterproofing system. Contact Hyload for further guidance regarding acceptable substrates.

Hyload Cloaks are pre-formed inside and outside corners for installation with the Hyload waterproofing system. They can be bonded to Hyload membranes with either Hyload Structural Sealant or hot air welding.

Hyload Structural Sealant is a moisture cure, moisture insensitive, high performance polyether sealant. It will covalently bond to both Hyload membranes and cloaks, in addition to aggressively bonding to almost all commonly used construction materials.

Hyload Membrane Adhesive is a moisture cure, moisture insensitive polyether adhesive used to adhere loose laid Hyload to substrates. It will bond to almost all possible substrates including uncured concrete, masonry, asphalt, and coal tar.

Hyload Trowel-On Membrane (TOM) is a solvent-free waterproofing mastic that can be applied in beads from a 28 oz. caulking tube, or trowel-applied from 2 or 5 gallon pails. Hyload TOM cures by exposure to ambient moisture. It is suitable for use in both above and below grade applications. Among other uses, Hyload TOM is used to form fillets for inside corner applications of the Hyload waterproofing system. It is also used to affix Hyload Cloaks into place.

Hydrain Drainage Boards provide pre-formed engineered drainage that will minimize water build-up on Hyload waterproofing systems. Hydrain comes in (typically) 4' x 50' foot sections for quick and easy installation.

Hyglass Protection Board is a tough and dense fiberglass and asphalt composite board that offers membrane protection from many of the physical abuses that are common during the construction and waterproofing process. Typically sized at 4' x 5' and approximately ¼" thick, it is quick and easy to install. Other sizes/thicknesses are available.

Substrate Preparation

Hyproof SA – Provide a smooth, clean surface for installation of the waterproofing system. Remove all substances which could inhibit bonding of the membrane and waterproofing system. Remove concrete form release coatings and curing compounds. Contaminants such as dirt, debris, loose materials, moisture, or surface irregularities are to be removed. Grind down projections greater than 0.125 inch. Grind, round off, and smooth all sharp corners and edges. Patch and fill voids and holes greater than 0.50 inch with patching mortar.

New concrete must be dry to the touch before application of Hyproof SA.

Apply Hybond primer at the minimum rate of 1 gallon per 100 square feet. Allow primer to dry completely. Reprime any areas contaminated with dirt or dust. Primed areas must be covered with membrane on the same day as the primer is applied, or they must be reprimed. Mask adjacent areas to control application of primer. Remove all spilled and misapplied primer.

Hyproof GL - Provide a smooth surface for installation of the waterproofing system. Contaminants such as dirt, debris, loose materials, or surface irregularities are to be removed. Grind down projections greater than 0.125 inch. Grind, round off, and smooth all sharp corners and edges. Patch and fill voids and holes greater than 0.50 inch with patching mortar. If covering over a previously existing waterproofing system, substantially remove such that a solid, undisturbed substrate is achieved. Contact Hyload for specific applications.

Membrane Installation

For horizontal, or low-slope applications, apply the Hyproof sheets from the low point to the high point so that the laps shed water. All perimeters and penetrations shall be “picture framed” with sheets that run parallel to the perimeter or penetration opening.

For vertical applications, apply sheets in lengths up to 8 feet. On higher walls install sheets in two or more lifts. Membrane may also be installed horizontally in shingle fashion. Seal or terminate the upper lift by the end of each day.

All side laps are to be a minimum of 3 inches, end laps a minimum of 9 inches. Stagger all end laps by a minimum of 12 inches. Avoid stretching the sheets as they are applied. If stretched, the sheets will recover overnight to their original dimensions.

Hyproof SA – Care must be taken to not trap any air pockets under the membrane during application. Roll the entire membrane firmly and completely as soon as possible. For horizontal applications, the roller should be a minimum of 30 inches wide and 70 pounds. The roller should be cushioned with a resilient material such as foam or carpet. For vertical applications, a hand-held roller with rubber or neoprene wheels is to be firmly used. Hot air weld all side laps. Dress all end laps with a ½” bead of Hyload Structural Sealant. Dress all T-joints with ½” beads of Hyload Structural Sealant a minimum of 6” in each direction. In situations where hot air welding of side laps is restricted or otherwise impractical, a finished lap may be achieved by placing a continuous ½” bead of Hyload Structural Sealant positioned ¾” from the edge under the overlying membrane. The lap is set by applying sufficient pressure over the bead such that it just starts to “bleed” out from under the overlying membrane.

Hyproof GL – Apply ½” beads of Hyload Membrane Adhesive in a 12 inch intersecting grid (checkerboard) pattern. Lay the membrane over the Adhesive grid and “broom” into place over the entire area. Care should be taken not to flatten the beads out “paper thin” – a 1/16” to 1/8” bead profile should be maintained. Hot air weld all side and end laps. Dress all T-joints with ½” beads of Hyload Structural Sealant a minimum of 6” in each direction. In situations where hot air welding of side or end laps is restricted or otherwise impractical, a finished lap may be achieved by placing a continuous ½” bead of Hyload Structural Sealant positioned ¾” from the edge under the overlying membrane. The lap is set by applying sufficient pressure over the bead such that it just starts to “bleed” out from under the overlying membrane.

For horizontal or low-slope applications: The flashing sheet shall lap over onto the field membrane by a minimum of 6 inches. The flashing membrane will extend vertically a minimum of 9 inches above the finished wear surface or grade. The top of the flashing sheet shall be secured by a termination bar fastened every 6 inches. The junction of flashing to substrate, termination bar, and fasteners shall be covered and sealed with

Hyload Waterproofing Mastic applied a minimum of 1/8" thick. Cover termination with a counterflashing.

For vertical applications: Terminate the membrane a minimum of 12 inches above grade level secured by a termination bar fastened every 6 inches. Cover termination with a counterflashing. Where a vertical membrane meets a horizontal substrate, extend vertical membrane onto the horizontal by a minimum of 6 inches. Terminate a vertical membrane at the base of a wall only if the bottom elevation of an interior floor slab is a minimum of 12 inches above the footing. Terminate the membrane on the top of the footing if the vertical waterproofing ties into the mud slab waterproofing or if the bottom elevation of the interior floor slab is less than 12 inches above the footing. Extend the membrane a minimum of 12 inches onto the mud slab waterproofing and dress the terminating edge with a bead of Hyload Structural Sealant.

Corners

At intersections of one horizontal and one vertical plane forming a 2-way inside corner, or two vertical planes forming a 2-way inside corner, treat the inside corner by creating a minimum 3/4" fillet, or cant, using Hyload Trowel-On Membrane (TOM). Apply the Hyload membrane snugly into the corner over the TOM.

At intersections of one horizontal and one vertical plane forming an outside corner, or two vertical planes forming an outside corner, grind off any sharp edges such that a minimum 1/8" beveled corner is created. Apply a full sheet of Hyload snugly over the treated corner during installation.

At intersections of one horizontal and two vertical planes forming a 3-way inside or outside corner, set the appropriate pre-formed Hyload Cloak into a 1/8" continuous bed of Hyload TOM that extends a minimum of 6 inches in all directions out from the corner. Extend all vertical and horizontal field sheet of Hyload membrane onto the Cloak by a minimum of 3 inches in each direction. The field membranes are to be secured to the Cloak by either thorough hot air welding or by setting the field membranes into a 1/8" bed of Hyload Structural Sealant that has been applied to the Cloak. Whether hot air welding to the Cloak, or setting the membranes in Structural Sealant onto the Cloak, all edges of the membrane on the cloak are to be dressed with a 1/2" bead of Hyload Structural Sealant.

Penetrations

Apply Hyload sheets to within 1 inch of the base of the penetration. Dress the edge of the Hyload sheet with a 1/2" bead of Hyload Structural Sealant. Apply a minimum 1/8" thick application of Hyload TOM around the penetration a minimum of 6 inches onto the Hyload membrane and up the penetration to just below the height of the completed overlay.

Inspection and Repair

Inspect membrane before covering and make any repairs immediately. Patch tears, punctures, seams, or any other deficiencies with a membrane patch that extends a minimum of 6 inches in every direction beyond the defect. Dress all edges of the patch with a minimum ½” bead of Hyload Structural Sealant.

To verify system integrity, employ the EFVM leak detection method as provided by International Leak Detection.

Alternatively, flood test all horizontal or low-slope applications using the guidelines found in ASTM D 5957. Mark any leaks and repair after the membrane has dried.

NOTE: It is the contractor’s responsibility to consult with a structural engineer in order to verify that the structure will withstand the dead load created by the water during the flood test. On well-sloped applications, the flood test should be performed in overlapping sections to prevent water build-up around drains.

Protect all horizontal and vertical membranes after testing with a protection course or drainage mat that is to be installed immediately after successfully completed test.