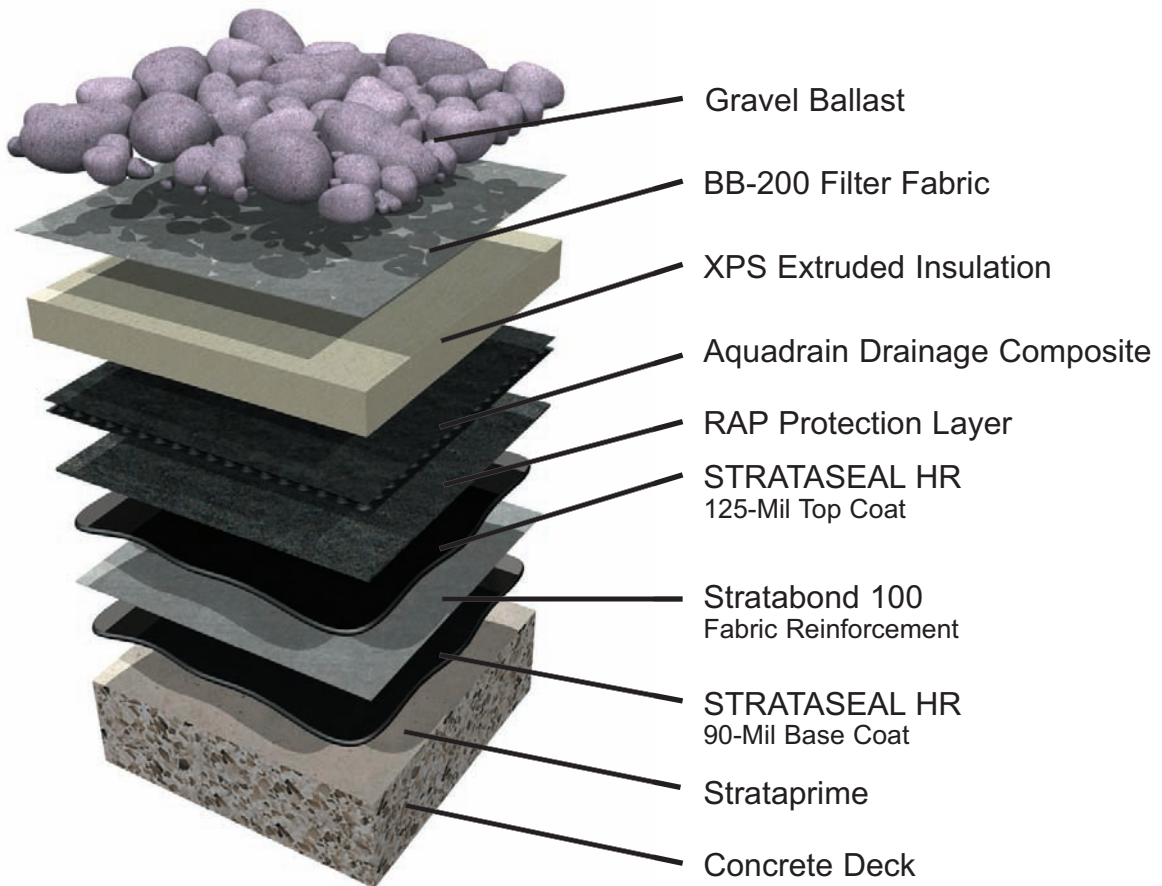


STRATASEAL™ HR

PROTECTED MEMBRANE ROOF ASSEMBLY GUIDE



**FULLY ADHERED 215-MIL (5.5mm) THICK, REINFORCED
RUBBERIZED ASPHALT ROOFING SYSTEM**

**SUPERIOR PERFORMANCE
ROOFING AND WATERPROOFING TECHNOLOGY**

CETCO®
BUILDING MATERIALS GROUP

PROTECTED MEMBRANE ROOF ASSEMBLY

DESCRIPTION

STRATASEAL HR is an ideal waterproofing membrane for protected membrane roof construction for both new and retrofit applications. The membrane is placed as a monolithic, reinforced rubberized asphalt composite fully adhered to the structural roof deck. It bonds tenaciously with excellent elastomeric properties contouring to the substrate surface without creases or fishmouths.

STRATASEAL HR contains 100% solids and no solvents, thus eliminating the risk of solvent drying over a prolonged period. STRATASEAL HR can be applied in cold weather down to 0°F (-18°C) and is highly resistant to acids associated with fertilizers, acid rain, methane and other waste. The end result is a superior performing waterproofing membrane providing a watertight structure. To complete the protected membrane roof assembly, various cover materials are installed over the STRATASEAL HR reinforced membrane system according to project design and specifications.

MEMBRANE INSTALLATION

Installation of the Protected Membrane Roof Assembly begins with the STRATASEAL HR waterproofing membrane. Install the reinforced, hot-applied rubberized asphalt membrane to a 215-mil (5.5mm) thickness as outlined in the STRATASEAL HR "Installation Guidelines" TechData, including primer and all reinforcing, flashing, detailing and protection course requirements. Then perform, as applicable, water testing as outlined in the "Installation Guidelines" TechData. After a successful water test, the subsequent material layers of the assembly can be applied over the waterproofing membrane. STRATASEAL HR can be installed on and perform in applications that are dead-level and may see standing water.

COVER MATERIALS

Various cover materials are installed over STRATASEAL HR membrane according to specific project design and specifications. Typical cover materials for protected membrane roof



STRATASEAL HR reinforced membrane being installed over a concrete deck to a 215-mil (5.5mm) thickness.

assemblies include prefabricated drainage composite, insulation with filter fabric covering, and finally the gravel ballast layer. The contractor shall examine all areas to receive cover materials to ensure that the membrane is free from damage and is properly protected, and all flashing and detailing has been completed.

Drainage Layer: An Aquadrain prefabricated drainage composite course is typically installed just above the protection course to provide a course for collection and channel of water for discharge to dual stage deck drains or deck perimeter. Aquadrain G20 is typically the minimum basis of design for both moderate and heavy traffic load areas. Install Aquadrain per manufacturers guidelines. All drainage shall include inspection boxes to ensure access.

Insulation: In cold weather climate regions it is typical to install an insulation course between the waterproofing membrane and the gravel ballast. Install minimum 40psi extruded polystyrene insulation loose laid over the drainage layer or the separation/protection layer. Firmly butt each adjacent insulation board. If multiple layers of insulation are required, then install the thicker layer on the bottom. Rotate the direction of each insulation layer 90° and stagger seams. All layers of insulation must be unadhered to each other. Cut insulation to fit close to all cants, protrusions and obstructions. Over the top of the insulation install BB-200 filter fabric to provide filter media and temporary means of retaining insulation with spot ballast.

Filter Fabric: Install a course of BB-200 filter fabric directly over the top insulation course to minimize dirt and other debris from reaching the insulation. Overlap all filter fabric edges a minimum of 6" (150mm) and stagger all overlap joints a minimum of 6-feet. Extend the filter fabric beyond any anticipated ballast coverage around all perimeters and secure under any perimeter metal counter flashing. Cut filter fabric around any drainage opening so to not restrict water flow into drain. Cut filter fabric around penetrations in such a manner as to prevent any stone ballast from entering between penetration and insulation.

Ballast: Hardscape should be used at all joints, roof perimeters, walls, penetrations and access points and as required for all flashings, barriers, fire breaks, and walkways/maintenance paths. The Protected Membrane Roof Assembly may utilize one or all of the ballast options including pavers, stone ballast or self-ballasted insulation. Refer to architectural/designer drawings for type and specific details of ballast required for the project.

Stone Ballast: Apply stone ballast at a uniform rate over filter fabric/drainage composite fabric course as required. Stone ballast shall be in accordance with ASTM D1863 and shall be hard, durable, opaque, and free of clay, loam, sand, or other foreign substances. Stone ballast shall be sized in accordance with ASTM D448, size 1/2" to 1-1/2" in diameter and not less than 15-lbs/sq-ft, or as specified for project

Pavers Ballast: Pavers shall be open joint or closed joint mortar set; or open joint set on specified pedestals accurately aligned and to grade as detailed in typical detail drawings or per architect/designer specifications. Cut pavers to fit all penetrations, roof drains and/or other details.

Self-Ballasted Insulation: Install self-ballasted insulation loose over the filter fabric/drainage composite fabric, firmly butting each adjacent sheet. All layers of insulation must be unadhered. Cut self-ballasted insulation to fit close to all cants, protrusions and obstructions. Install self-ballasted insulation according to architectural/designer specifications.

Greenroof: The greenroofs system may utilize a protected roof membrane assembly around the perimeters as walkways and paths or as a decorative design. Refer either the Extensive Greenroof Tech Data or Intensive Greenroof Tech Data for additional information.

PRECAUTIONS & LIMITATIONS

STRATASEAL HR is designed for subsurface waterproofing and roofing applications and should only be used in applications where it is protected from permanent UV exposure and traffic. Protection layer must be installed immediately after membrane. Do not allow construction traffic on unprotected membrane. Repair any membrane damage immediately.

Membrane can be placed on "dead level" decks but it is best practice for horizontal surfaces to be sloped to provide positive drainage to deck edge or interior drains. All surfaces and detailing must be prepared in accordance with manufacturer's recommendations and adjacent areas protected. STRATASEAL HR should not be applied to surfaces with frost or ice, or at ambient air temperatures that are below 0°F (-18°C).

Protection course, drainage systems, insulation or other courses should not penetrate the membrane and must be loosely laid. Mechanical fastening of subsequent layers with termination bars installed to adjacent approved surfaces may be utilized per manufacturer's standard detail drawings. The use of solvent based products over STRATASEAL HR is not recommended. Protective clothing should be worn during application, including a mist respirator and full coverage eyewear. Install Strataseal HR only in well ventilated areas. If working in tented installations protective air respirator is required. Avoid prolonged exposure to product and product vapor. CETCO recommends that STRATASEAL HR should not be installed above applicators chest height. Refer to MSDS for first aid and emergency information.

STRATASEAL HR is not intended as a filler for asphalt concrete repair. Refer to manufacturer's standard detail drawings for joint treatment and crack treatment using appropriate standard detail drawings. STRATASEAL HR is not recommended for use on lightweight insulating or cellular concrete. STRATASEAL HR is not for use on wood plank deck or metal deck with gypsum. Contact CETCO for usage of Strataseal HR on retrofit applications. Refer to standard detail drawings for specific application installations. Any deviation from standard detail drawings must be approved by CETCO prior to installation. Failure to do so may void warranty.

WARRANTY: Prior to material specification and application, contact CETCO for terms and conditions required for issuance of material or HydroShield warranty.

STRATASEAL HR ACCESSORY / ASSEMBLY PRODUCTS

AQUADRAIN 20H - 3-dimensional cone drainage composite for moderate load traffic deck applications.

AQUADRAIN 30H - 3-dimensional cone drainage composite for heavy load traffic deck applications.

AQUADRAIN G20 - HDPE geonet drainage composite for very heavy load traffic deck applications.

BB-200 - 8-ft wide rolls of heavy spun bonded polyester filter fabric for filter and ballast layer over insulation course.

FLASH TG - 160-mils torch weld rubberized asphalt reinforced flashing with granulated surface.

FLASH TS - 150-mils torch weld rubberized asphalt reinforced flashing with a sanded surface.

FLASH SA - 70-mils self-adhering rubberized asphalt reinforced flashing with a sanded surface.

N-FLASH - 60-mils thick uncured, nonstaining neoprene flashing. Also available: Bonding Adhesive, lap splicing cement and lap sealant. N-FLASH is available in widths of 6", 12", 18", 24", 36" and 48"; all 100 feet in length.

RAP 100 - 65-mils reinforced rubberized asphalt protection sheet with both sides sanded.

RAP 200 - 90-mils reinforced rubberized asphalt protection sheet with both sides sanded.

RAP 250FR - 140-mils reinforced rubberized asphalt fire rated cap protection sheet with granulated top surface.

RAP 350FR - 160-mils reinforced rubberized asphalt fire rated cap protection sheet with granulated top surface.

STRATABOND 100 - 1.5oz/sq yd spun bonded polyester high-strength reinforcing fabric in 6", 12" and 48" widths.

STRATAPRIME SB - solvent-based asphalt emulsion primer to condition substrate for membrane and flashings.

STRATAPRIME WB - water-based asphalt emulsion primer to condition substrate for membrane and flashings.

XPS40 - 40psi rigid, extruded insulation board. Board size 2'(0.6m)x 8'(2.4m). Thicknesses: 1", 1.5", and 2".

XPS60 - 60psi rigid, extruded insulation board. Board size 2'(0.6m)x 8'(2.4m). Thicknesses: 1.5" and 2".

STRATASEAL™ HR

SUPERIOR PERFORMANCE

Applied at 215-mils (5.5mm), 2-3 times thicker than most other membranes, Strataseal HR provides superior performance by means of better crack bridging, superb elongation, excellent adhesion to the substrate, premium barrier properties, and low temperature flexibility. The thick reinforced membrane means superior toughness and conforms to deck irregularities. Substrate cracks and transitions are typically reinforced for "triple protection" to withstand typical deck loading demands, making Strataseal HR the perfect choice for waterproofing split-slab deck construction.

EXCELLENT ADHESION

STRATASEAL HR bonds tenaciously to sound concrete, masonry, steel or wood substrate. Since water cannot migrate under it, should damage occur, any leak can be quickly identified and easily repaired.

SINGLE SOURCE WARRANTY

The STRATASEAL HR system is backed by HydroShield - the industry's premier Quality Assurance Program. The program starts with the superior product performance and continues with the services and skills of our experienced technical staff. HydroShield features architectural design support with guideline specifications and site-specific AutoCAD details, material installation by experienced approved applicators, and third-party independent inspection. All the program elements are unified with the financial security of the industry's only "no-dollar" limit warranty - all from a single source.



Using the HydroShield program for your commercial waterproofing needs means more - more control, more quality, more service, and the knowledge that your investment is secure with one phone call. Achieve more with building envelope solutions from CETCO.

SEAMLESS MEMBRANE

Because the membrane is installed heated, it will fuse with earlier installations to form a monolithic, seamless barrier. This seam fusion process makes it ideal for dead level or minimum slope decks. Also multi-step projects and subsequent flashing installation are easily accomplished and reduce concerns of seam failures.

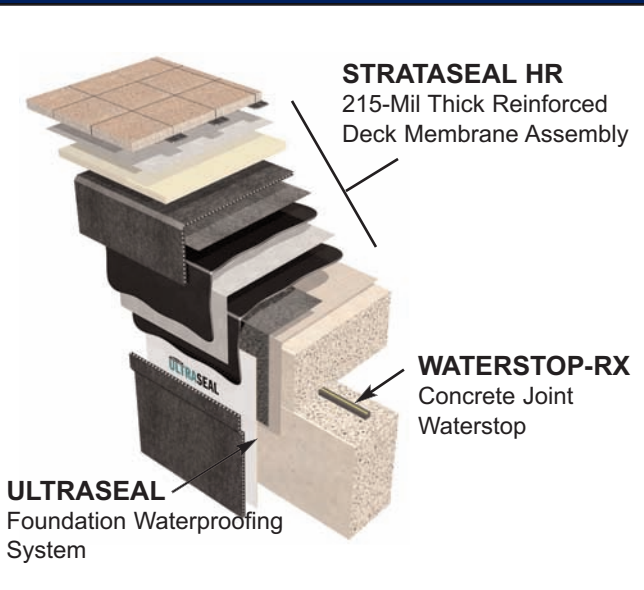
100% SOLIDS, NO SOLVENTS

STRATASEAL HR is composed of 100% solid materials and immediately sets up upon installation. No solvents means no VOC restrictions, no two-part mixing and no on-site curing failures. Also, since it is solvent free, it does not run the risk of failing after prolonged solvent drying or leaching process.

COLD WEATHER APPLICATION

STRATASEAL HR can be applied in temperatures as low as 0°F (-18°C) on clean, dry, frost-free substrates. It will retain its flexibility and adherence characteristics under such low temperatures.

ULTIMATE DECK TO WALL TRANSITION



JUNE 2006 (Supersedes All Previous Versions)

The information contained herein supersedes all previous versions printed prior to June 2006, and is believed to be accurate and reliable. CETCO accepts no responsibility for the results obtained through application of this product. CETCO reserves the right to update information without notice.



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