
ECO-FRIENDLY FIRE RATED WATERPROOFING

HULK SYSTEMS

APPLICATION GUIDE - 2022 EDITION



Low VOC's
Non-Toxic
Low Waste
Water-Borne



Class "A" Fire Rated
Flame Spread Rating - 10
Smoke Density Rating - 5
Non-Flammable / No Solvents



For Concrete & Masonry
For ICF & Foam
For Wood & OSB
For Magnesium Board

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DO NOT apply in freezing conditions if layer of frost is present on application surface.

DO NOT thin liquid materials unless instructed in technical documents, this application guide or other product specification documents.

ENSURE any debris, dust, oil, or any other irregularity that could affect adhesion has been removed.

ENSURE any forms or curing agents have been removed and that concrete has cured. Minimum concrete curing period for liquid is 24-72 hours.

ENSURE there is a minimum of 24 hours between removal of forms and application of waterproofing system.

ENSURE all seams, holes and cracks are treated in accordance with the systems below.

ENSURE any curing agents used by the concrete contractor are compatible with HULK Systems products.

RECOMMENDED by the manufacturer to always do an adhesion test before proceeding with application.

ALWAYS apply the products to the correct thickness outlined in this application guide, technical and other product specification documents.

ALWAYS mix HULK: WP prior to use.

IMPORTANT DISCLAIMER: It is understood that any deviation or failure to follow the above limitations and manufacturers recommendations will be the sole responsibility of either the client or applicator, and HULK Systems Inc. will not be held liable for any failures that may result from improper application.

PRODUCT APPLICATIONS

CORRECTLY IDENTIFYING AND INSTALLING MATERIALS FOR YOUR APPLICATIONS

The specific technical documents for any product below can be found online at www.hulksystem.com.

Please ensure you've read and understand the proper use, limitations and safety precautions associated with each product via its technical data sheet, safety data sheet or specification document(s) before proceeding.

Products used in various Hulk Systems (PRODUCT KEY)

- 1 **HULK WP**[®] (LIQUID WATERPROOFING MEMBRANE)
- 2 **HULK SRT**[®] (STRUCTURALLY REINFORCING TEXTILE)
- 3 **HULK MBS**[®] (MAGNESIUM BOARD SEALER)
- 4 **HULK MASTIC**[®] (MASTIC)
- 5 **WS: PMM**[®] (POLYMER MODIFIED MORTAR)

APPLICATION INSTRUCTIONS BY PRODUCT

1

HULK WP® (LIQUID WATERPROOFING MEMBRANE) by HULK SYSTEMS INC.

Cold applied, sprayable polymer membrane with both elastomeric and water-resistant attributes. Extremely durable and maintains performance in a wide spectrum of temperatures. Key component for use on all applications and systems.



APPLICATION

Hulk WP® is ideally tailored for vertical waterproofing applications below grade, and above grade as a liquid applied vapor barrier if required. Typical installation for vertical applications on concrete is 70 mil WFT. For magnesium or foam surfaces recommended combined thickness is 85 mil WFT with HULK SRT® immersed throughout. Always contact your local HULK SYSTEMS INC. representative to discuss specific project requirements. To promote proper permeability and performance, when applying vertically, Hulk WP® needs to be applied in 40 mils coats to be able to build up to your required thickness, with a minimum recommended dry time of 2 hours between coats.

MIXING

- A. Ensure material has been stored between 40° - 70° F (4° - 21° C) and has not been allowed to freeze.
- B. Mix thoroughly for a minimum of 1 minute using a mechanical mixer at slow speed to ensure a homogeneous material. If air bubbles occur due to excessive mixing speeds, allow product to settle for a minimum of 10 minutes before use.

VERTICAL APPLICATION

- A. Apply waterproofing membrane system in accordance with manufacturer's instructions.
- B. Treatment of Through Wall Joints & Penetrations
 1. Thoroughly pack all through-wall openings and penetrations like exposed shoring piles, tie-holes, and other anchors with detailing mastic.
- C. Treatment of Existing Cracks and All Non-Structural Joints
 1. Identify and install detailing mastic in all cracks and all non-structural joints prior to first coat.

- D. Apply membrane by sprayer or roller, at a minimum coverage rate of 66 ft.²/U.S. gal (1.62 m²/L), providing a thickness of 40 wet mils.

ROLLER APPLICATION RECOMMENDATIONS:

Using a heavy nap roller will allow for better coverage and an overall thicker coat. 1.25" - 1.5" nap size or greater is recommended to achieve the proper mil thickness with less coats.

SPRAY APPLICATION RECOMMENDATIONS:

For airless sprayer applications, Hulk Systems® recommends applicators use a tip orifice size of no less than 0.021" with a 10" - 12" fan spread. Example: 521 tip or greater. A minimum requirement of the pump or equipment would be a maximum working pressure of no less than 3300 psi, as well as an equipment specification that allows for materials to be sprayed with a viscosity of 20,000 PS @ 6RPM. Hulk Systems® recommends both Graco and Titan airless equipment. For recommendations on specific brands, models, or larger commercial pumps, please contact Hulk Systems®.

- E. **OPTIONAL STEP:** For Most Concrete Surfaces | **MANDATORY STEP:** For Blindsided Applications, High Water Table Applications, ICF, Wood and Magnesium Board Surfaces if no extruded protection board or drainage screen is specified.
 - 1. Fully embed the reinforcing fabric, Hulk SRT® into this first coat.
- F. On applications where textile has been embedded into coating, immediately apply the second coat of membrane by sprayer or roller, at a minimum coverage rate of 75 ft.²/U.S. gal (1.84 m²/L), providing a thickness of 30 wet mils.

PROTECTION

- A. Vertical Applications - If HULK WP® has been installed without HULK SRT® throughout, it is recommended to use protection board to protect membrane from impact during back filling.

COLD WEATHER APPLICATION OF HULK WP

- A. Always ensure your equipment is suitable for cold weather applications. Be aware that product freezing inside lines, pumps, guns, hoses, etc. can and likely will cause damages. Take all precautions necessary including contacting your equipment provider / brand rep to find out how best to winterize your equipment before cold weather use.
- B. Do not apply membrane if rainfall or heavy snowfall is forecast or imminent within 12 hours.
- C. Do not apply waterproofing membrane to any surfaces containing frost.
- D. Cold weather applications are performed at the risk of the installer and client. HULK Systems Inc. will not be held liable for any failures or equipment damages that may result from either the product(s), improper application, or improperly used or failed

equipment in temperatures below freeze point due the nature of water-borne materials.

2

HULK SRT® (STRUCTURALLY REINFORCING TEXTILE) by HULK SYSTEMS INC.

Reinforcement Material for High Build Applications, for Rigid Foams / ICF block and use for Panelized Substrates: E-Glass, fiber glass reinforcing synthetic textile.

APPLICATION

Hulk SRT® is a 45° / -45° Double Bias fiber glass chopped mat, designed to enhance both the strength and environmental resistance of the various systems. When immersed into the HULK WP® membrane, the textile creates a highly impact resistant shell over the substrate, protecting it from damages, abrasion, and abuse. The textile is highly resistant to both water and fire, adding additional protection to any structure.

- A. When handling Hulk SRT® it's best that installers use long sleeve shirts and gloves to prevent skin irritation. Protective eye wear is also recommended.
- B. First cut your outside corner pieces as shown in Figure 1, then position into membrane as shown in Figure 2. Coat overtop of corner piece with membrane. For proper coating thickness refer to Hulk WP® application instructions in this document. To cut the textile, use a sharp utility knife or shears. If using a knife, cut from the center outward.

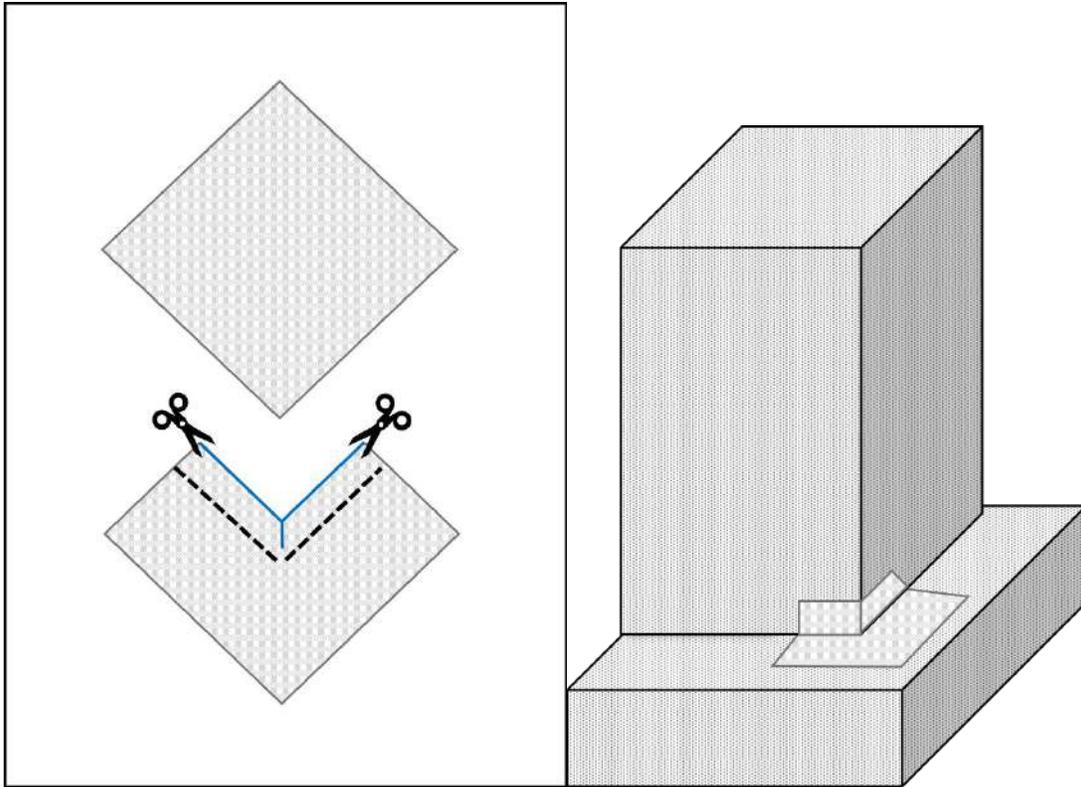


Figure 1: Outside corner cut pattern

Figure 2: Outside corner proper placement on footing

- C. A portable worktable exceeding 50 inches in length or other clean flat surface improves the ease of cutting the main textile lengths. Unroll the textile to the desired length. To cut the textile, use a sharp utility knife or shears. If using a knife, cut from the center outward. A weighted straight edge helps to improve cuts and keeps the material from stretching.
- D. DO NOT sit the textile in dirt, mud or other contaminate before it is applied, as this will negatively affect both the adhesion to the substrate and performance characteristics of the system.
- E. Always allow a minimum 4" (inch) overlap between textile pieces.
- F. To eliminate any wrinkles, first trowel downward at the center of your piece, then work from the center outwards. The manufacturer recommends 8" (inch) or longer trowels or putty knives. DO NOT use toothed trowels as they will get caught on the fabric causing possible tears or stretching.

3

HULK MBS® (MAGNESIUM BOARD SEALER) by HULK SYSTEMS INC.
Solvent based Magnesium Board Sealer. For use with all magnesium board surfaces.

APPLICATION

For all magnesium board surfaces. **Never apply HULK: MBS® to any foam substrate or surface.** Sealing magnesium surfaces is required to stabilize the boards, remove trapped air/vapor, from the substrate and promote a better bond with the substrate. HULK: MBS® can also be applied to concrete substrates if deemed necessary and will be ready to coat over between 10-30 minutes depending on the atmospheric conditions. If a sealer or primer is not deemed necessary, then delete this section. The mock-up will determine whether a primer is necessary for the installation.

- A. Consult technical documents, including Technical Data Sheet (TDS) and Safety Data Sheet (SDS) for HULK MBS® prior to use and ensure all safety, health, environmental, and personal protection equipment requirements are understood. Technical Documents are readily available upon request or online at www.hulkssystem.com.
- B. Ensure all required PPE is being used by the applicator onsite including but not limited to skin protection, gloves, eye protection, NIOSH approved respirator, and proper mechanical ventilation when indoors. Fumes (off-gasses) should be directed outdoors and away from any points of possible ignition. ONLY USE in well ventilated areas.
- C. DO NOT apply sealer in temperatures exceeding 86° F (30° C) as it is both flammable and combustible at high temperatures. Ideal application temperature is between 50° - 75° F (10° - 24° C)
- D. DO NOT use HULK MBS® around sources of flame, spark, or ignition.
- E. No mixing is necessary. Apply HULK MBS® with a short nap, lint free roller or a solvent resistant low-pressure sprayer at an approximate thickness 7 mils WFT (wet film thickness) and coverage rate of 250 ft.² (23.2 m²) per gallon (6.1 m²/L) providing a uniform coverage over the substrate. Recommended tip size for spray applications is a 0.017" - 0.021" orifice with a 10 inch or greater fan size to prevent fingering. Example: 517 tip size or greater.
- F. DO NOT attempt to back-roll.
- G. Allow HULK MBS® to become tack-free prior to the application of the fluid applied waterproofing membrane, which should take no longer than 30 - 120 minutes dependent on environmental conditions.
- H. The maximum re-coat window should not exceed 72 hours before applying either additional coats of HULK MBS® or HULK WP®

4

HULK MASTIC® by HULK SYSTEMS INC.

Detailing Rubberized Repair Mastic: For coves, ties, joints, cracks, holes and penetrations. HULK MASTIC® is available both in sausage tubes as well as 5-gallon pails.

APPLICATION

When applying HULK MASTIC®, ensure entire void, crack or seam is filled, and that an even, sufficient build is achieved. The product will be a higher viscosity in colder temperatures. For best results regarding ease of application, use the product between 70°F - 98°F (21°C - 37°C). Never attempt pumping the product unless it has been able to warm up to the ambient temperature exceeding 70°F (21°C).

- A. No stirring or thinning is required.
- B. Use a trowel, putty knife, course brush or roller to apply material. Material can also be pumped through a caulking gun.
- C. Apply HULK MASTIC®, overtop any cracks or joints
- D. Apply HULK MASTIC®, to fill any voids surrounding any penetrations or anchors.
- E. Apply mastic overtop grout on any pile caps to ensure full seal at both the top cap and the base flashing.
- F. Apply the mastic in any voids present at tie and anchor penetrations, ensure full coverage of the penetration is achieved.

SYSTEM APPLICATIONS

IDENTIFYING PROPER METHODS FOR VARIOUS SURFACE AND STRUCTURE TYPES

It's important to identify the type of waterproofing required as per your project.

ALWAYS APPLY WATERPROOFING TO THE POSITIVE HYDRO-STATIC PRESSURE AFFECTED SIDE OF THE STRUCTURE WHERE THE MOISTURE LOAD WILL BE PRESENT.

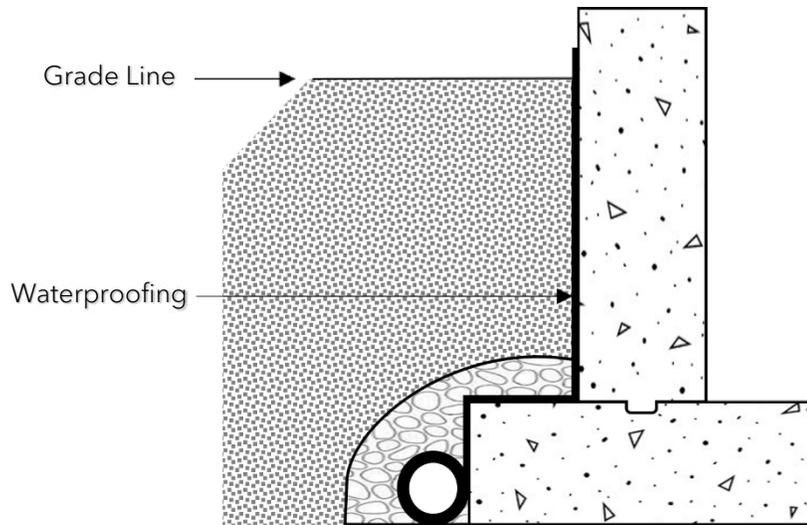


Figure 3: Correct Method of Waterproofing

DO NOT WATERPROOF THE NEGATIVE PRSEEUR SIDE OF THE STRUCTURE

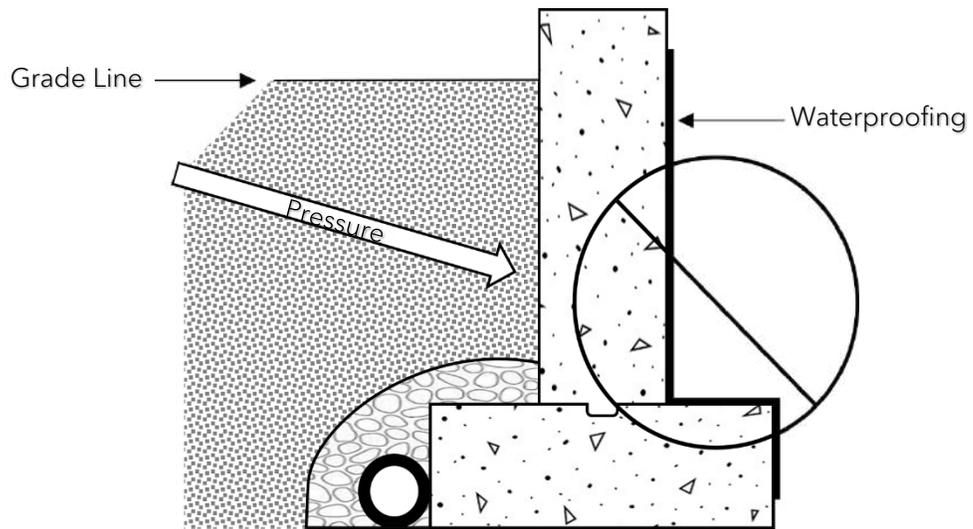


Figure 4: Incorrect Method of Waterproofing

STANDARD CONCRETE SYSTEM

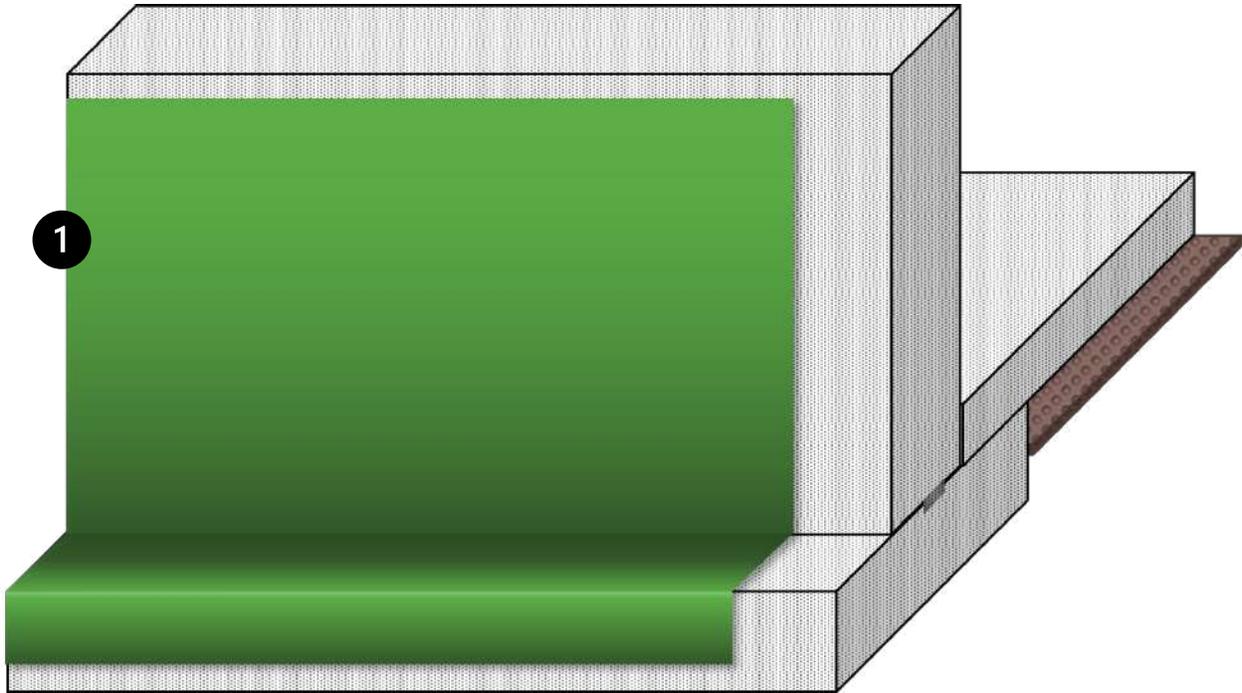


Figure 5: Standard Concrete Application

In Figure 9 above, we are looking at a standard concrete foundation application. Standard implies that this foundation has proper drainage, and the surrounding areas are sloped appropriately away, keeping the water table relatively low.

- A. Ensure that your foundation is prepared accordingly as per the above instructions pertaining to preparation.
- B. Follow the steps for installing HULK WP® installed at 70 mil WFT above.
- C. (OPTIONAL) HULK SRT® can be applied for added protection and drainage.

STANDARD ICF (Insulated Concrete Block) SYSTEM

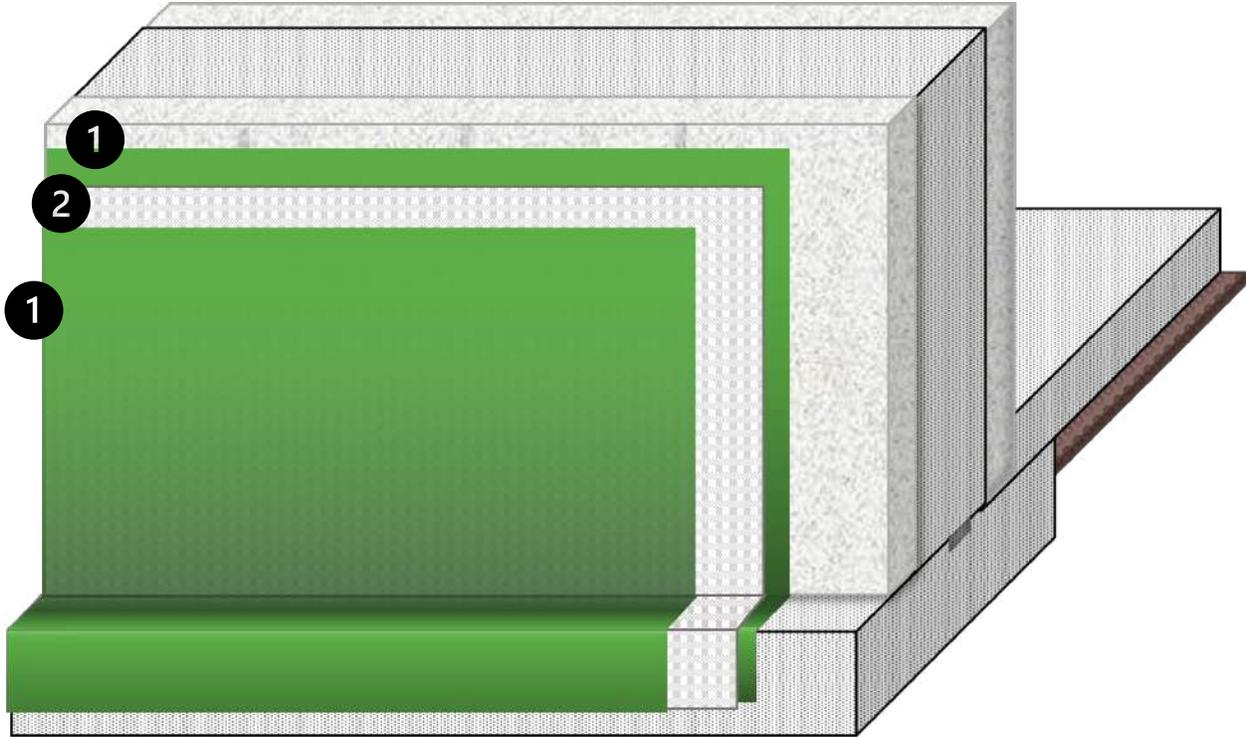


Figure 6: Standard ICF Foundation Application

In Figure 10 above, we are looking at a standard ICF foundation application. Standard implies that this foundation has proper drainage, and the surrounding areas are sloped appropriately away, keeping the water table relatively low.

- A. Ensure that your foundation is prepared accordingly as per the above instructions pertaining to preparation.
- B. Follow the steps for installing HULK WP® installed at 70 mil WFT above including the installation of HULK SRT® immersed between coats.

STANDARD SIP (Cement or Magnesium Board) SYSTEM

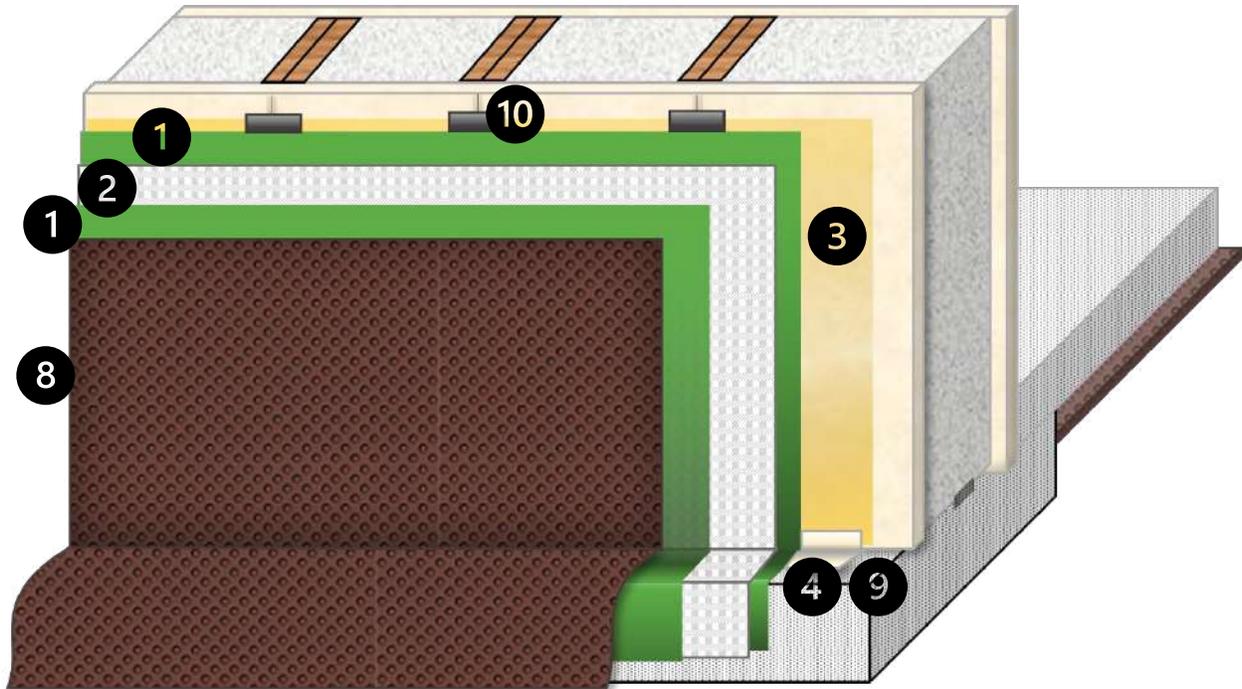


Figure 7: Standard SIP System Assembly

In Figure 12 above, we are looking at a SIP assembled foundation application. Standard implies that this foundation has proper drainage, and the surrounding areas are sloped appropriately away, keeping the water table relatively low.

- A. Ensure that your foundation is prepared accordingly as per the above instructions pertaining to preparation.
- B. Seal all cementitious or magnesium board surface using HULK MBS® following the instructions above.
- C. Tape all joints on board using HULK AJT® as described in the instructions above.
- D. Create a HULK MASTIC® cove at the transition from footing to wood shoring.
- E. Follow the steps for installing HULK WP® installed at 70 mil WFT above including the installation of HULK SRT® immersed between coats.



HULK SYSTEMS



For all up to date technical and support documents as well as video tutorials visit www.hulksystems.com

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