



The HB ONE Board is engineered for exceptional durability and insulation, offering superior protection against the elements while improving energy efficiency. With a 1/2-inch thickness, it provides impressive strength, making it ideal for large-scale commercial and residential projects that demand enhanced insulation and structural support. This board features excellent moisture resistance and weather protection, ensuring reliable performance even in tough conditions. Its large format accelerates installation by reducing seams, making it a practical choice for exterior applications. In stucco projects, the HB ONE Board minimizes material use, shortens cure time, reduces steps to completion, and significantly cuts labor hours.

Designed for both structural and non-structural applications, Hydroblok ONE simplifies the building envelope by combining:

Superior Structural Performance – Engineered for high shear values, making it a direct replacement for OSB in shear walls, bracing, and load-bearing applications.

Integrated Weather Barrier – Unlike traditional OSB that requires a separate WRB layer, Hydroblok ONE is waterproof, vapor-resistant, and air-sealed when properly installed.

Moisture & Mold Resistance – Will not absorb water, swell, or rot—eliminating the risk of mold growth and delamination that plague wood-based sheathing.

Lightweight & Easy to Install – 50% lighter than OSB, reducing labor time and making it easier to handle, cut, and fasten with standard tools.

Energy Efficiency & Airtightness – Sealed with Hydroblok Polyurethane Sealant, Hydroblok ONE creates a continuous vapor and air barrier that enhances insulation performance, reduces drafts, and improves overall energy efficiency.

Whether used in residential, multifamily, or commercial construction, Hydroblok ONE is the ideal solution for builders, architects, and contractors who want a stronger, more durable, and more efficient exterior wall assembly.

This guide provides step-by-step installation instructions for Hydroblok ONE, ensuring that you maximize its performance in your building projects.

Required Materials:

- **Hydroblok ONE Sheathing Boards** – Structural sheathing with an integrated vapor and water barrier. Hydroblok ONE boards are available in 4'x8'x1/2".
- **Fasteners**
 - Structural Applications (Shear walls, bracing, or load-bearing assemblies)
 - Hydroblok 1 5/8" Screws with 1 1/4" Tabbed Washers (for wood or metal studs)
 - Tapcon or equivalent concrete screws with washers (for masonry applications)
 - Non-Structural Applications (Sheathing used as a weather barrier only)
 - Hydroblok Pan Head Screws (for wood or metal studs)

Adhesive (Optional for Enhanced Structural & Air-Sealing Performance)

- Hydroblok Polyurethane Sealant
- Approved construction adhesives

Sealing & Weatherproofing

- Hydroblok Polyurethane Sealant
- Hydroblok 4" Mesh Tape (alkali-resistant)

Additional Materials

- Hydroblok Expanding Polyurethane Foam (for window and door sealing)

Tools Required:

- Impact drill
- Utility knife or circular saw
- Tape measure
- Level or laser level
- Trowel (for sealant smoothing)

INSTALLATION INSTRUCTIONS

1 PREPARATION

Before installation begins, it is critical to ensure the structure is properly prepped for the Hydroblok ONE sheathing system. Proper preparation will improve installation efficiency, enhance structural integrity, and maximize the performance of the integrated vapor and water barrier. Taking the time to confirm framing alignment and surface cleanliness will help prevent installation issues down the road.

Verify that the framing structure is properly aligned and spaced 16 inches on center.
Ensure the installation area is clean, dry, and free from debris to ensure optimal adhesion and fastening.

2 BOARD INSTALLATION

Hydroblok ONE Sheathing is designed for ease of installation while providing superior strength and moisture protection. Proper board layout and fastening ensure the structural integrity of the wall assembly while maintaining the efficiency of the vapor barrier. The following steps outline the correct method for attaching Hydroblok ONE boards.

A. Layout & Orientation

Hydroblok ONE Sheathing can be installed horizontally or vertically, but vertical installation is recommended for maximum shear and reduced seams.

- Install boards vertically on framing members.
- Stagger vertical seams by at least 24 inches for structural integrity.
- Cut boards flush with framing members for window and door openings.

B. Fastening for Structural & Non-Structural Applications

The type of fastener and spacing depends on whether Hydroblok ONE is being used in a structural or non-structural application.

Application	Fastener Type	Screw Length	Spacing Requirement
Structural (Shear Walls, Bracing, Load-Bearing Applications)	Hydroblok Screws with 1 1/4" Tabbed Washers	1 5/8" (1/2" panel) 2" (1" panel) 2 1/2" (2" panel)	12" in field, 6" on perimeter
Non-Structural (Sheathing for Weather Resistance Only)	Hydroblok Pan Head Screws (No Washers)	1 5/8" (1/2" panel) 2" (1" panel) 2 1/2" (2" panel)	16" on center.

- Structural applications require tabbed washers to increase shear performance and hold the panel securely in place.
- Non-structural applications only require pan head screws since the sheathing does not contribute to racking resistance.
- Do not overdrive screws; washers should sit flush with the surface.

C. Adhesive Application (Optional for Maximum Performance)

For additional shear strength (up to 688 plf) and air sealing, Hydroblok ONE can be installed with adhesive in addition to mechanical fasteners.

- Apply a 1/2-inch bead of HydroBlok polyurethane sealant or approved polyurethane foam or adhesive to the face of framing members before setting boards in place.
- Secure the board immediately while the adhesive is wet and fasten with screws and washers.

Approved Adhesives

- **Loctite® PL Premium® Polyurethane Construction Adhesive**
- **AdvanTek™ Polyurethane Foam Adhesive**
- **LIQUID NAILS® Heavy Duty Construction Adhesive (LN-903)**

3 SEALING FOR WEATHER & AIR TIGHTNESS

One of the key benefits of **Hydroblok ONE** is its ability to function as both a structural sheathing and a weather-resistant barrier. To achieve this, all seams, fastener penetrations, and cut edges must be properly sealed. This ensures the wall assembly remains airtight and watertight, preventing moisture infiltration and energy loss.

A. Sealing Board Joints

Properly sealed seams eliminate air leaks and moisture penetration, preserving the integrity of the building envelope. Apply a ½-inch bead of Hydroblok Polyurethane Sealant along all exposed foam edges.

- Press adjacent boards together tightly to ensure full compression of sealant.
- Tool the sealant flat using a putty knife to create a smooth, continuous seal.

B. Sealing Fastener Heads

Every penetration through the board must be sealed to prevent water intrusion and maintain a complete vapor barrier.

1. Apply a small dab of Hydroblok Polyurethane Sealant over each fastener head.
2. Smooth with a putty knife to create a flush finish.

C. Sealing Around Windows, Doors, & Penetrations

Window and door openings are vulnerable points for air and water infiltration. Proper sealing at these locations is essential.

FLANGED WINDOWS (NAILING FIN WINDOWS)

1 Cut the Opening

- Cut **Hydroblok ONE Sheathing** flush with the rough opening.
- Ensure there is a 3/16-inch (0.188") expansion gap between the window flange and the sheathing.

2 Apply Flexible Flashing at the Sill

- Install a self-adhered flexible flashing tape (minimum 9 inches wide) along the sill.
- Extend the flashing at least 6 inches up each side of the rough opening.
- Roll it firmly into place to ensure full adhesion.

3 Apply Hydroblok Polyurethane Sealant

- Run a continuous 1/2-inch bead of sealant along the backside of the window nailing flange (top and sides, but NOT along the sill).
- The sill must remain unsealed to allow for proper drainage.

4**Install the Window**

- Position the window into the rough opening and press firmly to embed it into the sealant.
- Secure the window per manufacturer instructions using appropriate fasteners.

5**Final Seal & Integration with Sheathing**

- Apply a continuous bead of Hydroblok Sealant along the outer perimeter where the flashing meets Hydroblok ONE.
- Tool the sealant to ensure a smooth, watertight connection.

APPROVED FLASHING TAPES:

- DuPont™ FlexWrap® NF
- 3M™ All Weather Flashing Tape 8067
- SIGA Fentrim® F 230
- Blueskin® Butyl Flash

NON-FLANGED WINDOWS (BLOCK OR RETROFIT WINDOWS)**1****Cut the Opening**

- Cut Hydroblok ONE sheathing leaving a 3/16-inch (0.188") around all sides of the window.

2**Install The Window**

- Position the window and press it into place firmly, ensuring even spacing.
- Secure using appropriate fasteners (screws or anchors) per the manufacturer's instructions.

3**Install Backer Rod (if needed)**

- If the gap exceeds 1/4 inch, install a closed-cell backer rod to control sealant depth and allow for expansion/contraction.

4**Apply Hydroblok Polyurethane Sealant**

- Run a continuous 1/2-inch bead of sealant around the entire perimeter of the window.
- Ensure the sealant fully bridges the gap between the window frame and sheathing.

5**Tool & Finish the Sealant Joint**

- Use a putty knife or sealant tool to smooth the sealant joint, ensuring full adhesion to both the window and sheathing.
- The final seal should have a concave profile to allow for slight movement and prevent cracking.

6**Apply Flashing for Additional Protection (Optional)**

- If additional protection is required, self-adhered flashing tape can be applied around the perimeter, extending onto the sheathing by at least 1 inch.

ADDITIONAL NOTES FOR DOOR OPENINGS

- **For Pre-Hung Doors (With Flange)** -> Follow the same steps as flanged windows (flash the sill, seal the perimeter, and integrate the head flashing).
- **For Non-Flanged Doors** -> Follow the same steps as non-flanged windows, ensuring a full perimeter seal with backer rod as needed.
- Always use sill pans or a sloped sill flashing to direct water away from the threshold.

Before completing the installation, conduct a thorough inspection to ensure all components are properly installed, sealed, and secured. This checklist will help verify that Hydroblok ONE sheathing meets structural, weatherproofing, and performance standards.

Board Installation

- All board are installed vertically for maximum shear strength (unless otherwise specified).
- Board seams are staggered at least 24 inches for structural integrity.
- Boards are flush with framing members, with no excessive gaps.

Fastener & Adhesive Check

- Correct fastener type and spacing have been used for structural or non-structural applications
- Screws and washers are flush with the board surface—not overdriven or under-tightened
- Construction adhesive (if used) was applied in the correct bead size and pattern for maximum bonding.

Seam & Edge Sealing

- All board joints are fully sealed with a continuous bead of Hydroblok Polyurethane Sealant.
- Sealant is tooled smooth to create a uniform, watertight seal along seams.
- All fastener heads are covered with a dab of Hydroblok Polyurethane Sealant to prevent moisture intrusion.

Window & Door Sealing

- Flanged windows:
 - Window installed with sill flashing extending at least 6 inches up jambs.
 - Top and side flanges sealed with Hydroblok Sealant (sill flange left unsealed for drainage).
 - Head flashing installed shingle-style over side flashing.
- Non-flanged windows:
 - Proper 1/4-inch gap around window frame for expansion
 - Backer rod installed for gaps larger than 1/4 inch.
 - Full perimeter seal with Hydroblok Sealant, smoothed and tooled.
- Doors:
 - Sill flashing installed and sloped away from the threshold.
 - Side and head flashing applied with proper lap integration.
 - Sealant applied around entire perimeter, with backer rod where necessary.

Vapor & Air Barrier Integrity

- All penetrations (pipes, electrical boxes, vents) are sealed with Hydroblok Sealant or expanding foam.
- No gaps, cracks, or unsealed areas are visible around edges or seams.
- Sealant cured per manufacturer recommendations before exposure to weather.

COMMON QUESTIONS & ANSWERS

Can Hydroblok ONE be installed in place of OSB and WRB?

Yes, Hydroblok ONE replaces both OSB and traditional house wrap systems while providing an integrated vapor and water barrier.

Does Hydroblok ONE need additional weatherproofing?

No, all seams and fastener heads should be sealed with Hydroblok Polyurethane Sealant to achieve a complete vapor and water barrier.

What is the R-value of Hydroblok ONE?

1/2" Hydroblok ONE = R 1.8

Can I install Hydroblok ONE over existing sheathing?

Yes, as long as the substrate is structurally sound and clean. Additional fasteners or adhesives may be required.

Can Hydroblok ONE be left exposed before finishing?

Hydroblok ONE is UV-resistant, but prolonged direct exposure of more than 30 days without a finish applied is not recommended.

How does Hydroblok ONE compare to Zip System® sheathing?

Unlike Zip System, Hydroblok ONE is fully waterproof and does not absorb moisture. Additionally, it eliminates the risk of mold and rot while providing better long-term vapor control.

Can Hydroblok ONE be used in high-wind or seismic zones?

Yes, Hydroblok ONE meets structural shear wall requirements when installed with approved fasteners and spacing. Always follow local building codes for wind and seismic bracing.

What type of fasteners should be used with Hydroblok ONE?

- Structural applications (shear walls, load-bearing) -> Use Hydroblok Screws with 1 1/4" Tabbed Washers.
- Non-structural applications (weather barrier only) -> Use Hydroblok Pan Head Screws.

Can Hydroblok ONE be used in a rainscreen system?

Yes, Hydroblok ONE can be installed behind rainscreen cladding systems, as long as proper ventilation and drainage gaps are incorporated.

Is Hydroblok ONE fire-rated?

Hydroblok ONE itself has a Class A Fire Spread Rating per ASTM E84 requirements but must be used within approved fire-rated wall assemblies to meet local building codes.

How should Hydroblok ONE be sealed around windows and doors?

Use Hydroblok Polyurethane Sealant and approved flashing tapes to create a watertight, airtight seal. Reference the Hydroblok ONE Sheathing Installation Guide for full details.

Can Hydroblok ONE be used for both residential and commercial projects?

Yes, Hydroblok ONE is suitable for single-family homes, multifamily buildings, and commercial structures, providing long-term durability, energy efficiency, and superior moisture protection.

Does Hydroblok ONE support exterior cladding materials like siding, stucco, or EIFS?

Yes, Hydroblok ONE is compatible with multiple exterior finishes, including siding, EIFS, and stucco, as long as appropriate fastening and finishing procedures are followed.