



EZSHEATH™

STRUCTURAL INSULATED SHEATHING

AIR AND WEATHER BARRIER ASSEMBLY WITH TAPED JOINTS INSTALLATION GUIDE (RESIDENTIAL)

General

Optimum performance of EZSHEATH™ Structural Insulated Sheathing (SIS) Panels is dependent on 1) selection of the correct product for the assembly or application into/ on which it is to be placed and 2) following these installation instructions. General rules that apply to both selection and installation include: The framed assembly surface onto which the insulation is to be applied must be even. EZSHEATH™ are rigid products and not intended for uneven surfaces. Any deformation of the application surface can result in a weakening of the attachment points and/or cracking of the panels. There should be no voids or gaps in the panel itself, around any objects that penetrate the panel, or at the interface of the panel and framing members. EZSHEATH™ may be used as structural sheathing. Structural sheathing or proper bracing must meet structural requirements as determined by the structural engineer.

EZSHEATH™ should not be cut with a chainsaw when creating smooth edges for the air and weather barrier system. See Cutting in Tips and Tricks for other recommendations.



Site Preparation and Inspection

Read all installation instructions and data sheets prior to installation. Application of the air and water barrier system should occur only after the roof and back of the wall are made water-tight to prevent water becoming trapped behind the air and water barrier assembly. Prior to installation, ensure that the substrate and EZSHEATH™ SIS Panels are clean, dry, sound, and free of any ice, dirt, oils, release agents, or debris that would prevent adhesion.

Ensure framing is properly constructed and level. Ensure studs are at least minimal width to receive fasteners. If not part of the installer's responsibility, bring any deficiencies to the attention of the General Contractor in writing for remedy, and do not proceed until corrected. Prior to installation, verify compatibility of adjacent products, such as below-grade waterproofing. Complete any inspections of framing and structural components prior to panel install as structural components installed on the exterior of the wall assembly will not be visible after panels are installed. The EZSHEATH™ SIS Panel Air Barrier System is only approved for 16-inch on-center framing.

Remove any debris or protrusions that might interfere with panel installation. Panels may be installed on the exterior wall before or after wall erection. (Air barrier detailing must occur after the wall is erected and secure.) Any cross-bracing, hold-downs, or other connectors intended to resist uplift, shear, or diaphragm loading should be installed prior to installing panels.

Note: These instructions apply to installation of EZSHEATH™ SIS Panels when used as an air barrier assembly with taped joints. If EZSHEATH™ SIS Panels are only needed as an insulation and/or sheathing, please see EZSHEATH™ SIS Panels continuous insulation wall installation instructions.

Attachment of SIS Panels

Best practice includes installation of the EZSHEATH™ SIS Panel Air and Weather Barrier Assembly from bottom to top to ensure shingle fashion installation. Regardless of starting point, EZSHEATH™ SIS Panels should be installed in a vertical orientation, with print facing outward, continuously moving from one location to ensure continuity, adhesion, and accurate fit without damaging the system. **See Figure 1.**

Locate butt joints square to framing members. Center joints over framing. Provide additional framing as necessary. Butt joints should be no larger than 1/8 inch wide. **See Figure 2.**

Stagger vertical joints a minimum of one stud space from adjacent joints. Board edges shall be butted together tightly and fit around openings and penetrations. **See Figure 3.**

Fasteners should be 8d common ring or smooth shank nails penetrating the SIS Panel and a minimum of 1-3/8 inches into wood stud for 1/2" and 1" panels using a minimum 0.113" diameter fastener and minimum 1-1/4 inches into wood stud for 2" panels using a minimum 0.131" diameter fastener. **See Figure 4.**

When pneumatic nail guns are used, pressure should be set to 80 psi (± 10) to avoid dimples. Regardless of nailing method, fastener should be tight and flush with the panel surface and should not create indentations into the SIS panel outer surface or protrude the surface.

Indentations at the nail head should be no greater than an 3/64 of an inch or 1 mm. Hammer any underdriven fasteners flush to panel surface. Fasteners should be spaced in accordance to TER 2404-110. It is recommended to offset nails at panel perimeter joints. **See Figure 5.**

All fasteners should be installed in the panel and adjacent panels before beginning air barrier detailing. Install no more than one layer of SIS Panels to achieve desired structural and thermal performance. Install maximum size panels to minimize joints.

FIGURE 1



FIGURE 3



FIGURE 2



FIGURE 4



Air and Weather Barrier Detailing

Before installing tape, ensure SIS Panel surface is clean, dry, sound, and free of any ice, dirt, oils, release agents, or debris that would prevent adhesion. **See Figure 6.** Remove any debris from collated fasteners that would damage tape and ensure any underdriven fasteners are driven flush. **See Figure 7.**

It is recommended that when EZSHEATH™ SIS Panels are considered the air and weather barrier (AWB), all flashings should be installed at the same time to ensure air and weather barrier continuity and following the roof and back of wall being made water-tight to prevent trapping water inside the building. Owens Corning® EasySealR®, JointSealR®, and FlashSealR® are the only acceptable tapes. Do not install system if ice or frost exists on surface, or if rain, snow, wind, or other adverse weather would prevent or threaten correct installation.

Joints

Install all joint sealing tapes at the time of the rest of the EZSHEATH™ air and weather barrier tapes to ensure air and weather barrier continuity. Caulk and sill gaskets along windows

are not required at space beneath this tape system; however, if used, verify compatibility and curing time prior to installation. Owens Corning® EasySealR®, JointSealR®, and FlashSealR® are the only acceptable tapes for joints in the EZSHEATH™ SIS Panel Air and Weather Barrier Assembly. Remove any release film for workable length of material and center tape over joint. Tape shall overlap joints a minimum of 1-3/4 inches on both sides of joint. **See Figure 8.**

Install the tape in a "shingle" fashion to facilitate drainage. Lap tape intersections a minimum 2 inches. Lap tape changes in plane a minimum 2 inches. Continue from bottom to top, ensuring shingle-lapped joints until all joints are sealed. Fasteners at joints should be fully covered by tape. Fasteners in field do not need to be taped.

Roll all tape joints to remove any trapped air or fish mouths and activate adhesive with a J-Roller or Cabinet Roller.

FIGURE 5



FIGURE 7



FIGURE 6



FIGURE 8



Transitions

Outside/Inside Corners (See Figure 9.)

Corners must be flashed with Owens Corning EasySealR®, HomeSealR® or other tapes cannot be used. Ensure sheathing corners meet flush with adjacent sheathing. Install corner flashing by attaching flashing tape a minimum 3 inches into both faces of sheathing. Lap tape intersections a minimum 2 inches. Lap tape changes in plane a minimum 2". Continue from bottom to top, ensuring shingle-lapped joints until all corners are sealed. Fasteners should be fully covered by tape. Roll all tape joints to remove any trapped air or fish mouths and activate adhesive with a J-Roller or Cabinet Roller.

Penetration Flashing

General: Fill any annular space larger than 3/8 of an inch with backer rod. Caulk is not required at space beneath this tape system; however, if it is used, verify compatibility and curing time prior to installation. Ensure no solvent based products are used in addition.

Best practices include cutting openings with hole saws, oscillating tools, jigsaws, or other tools that leave controlled, even edges. See Tips and Tricks at the end of this document.

Pipes

Pipe Penetrations may be flashed with FlashSealR®, JointSealR®, or EasySealR® only. Ensure sheathing is butted tightly to pipe around entire circumference. **See Figure 10.**

Tape a minimum 2 inches of pipe protruding from exterior face and 2 inches along exterior face of insulation by cutting radiating "fingers" from penetration. **See Figure 10.**

Cover the junction of the taped pipe and the "fingers" with tape a minimum of 2 inches from pipe circumference. If more than one piece of tape is used to cover these taped junctions, install tape in a "shingle" fashion, overlapping tape a minimum of 1-1/2 inches. **See Figure 11.** Roll all tape joints to remove any trapped air or fish mouths and activate adhesive with a J-Roller or Cabinet Roller.

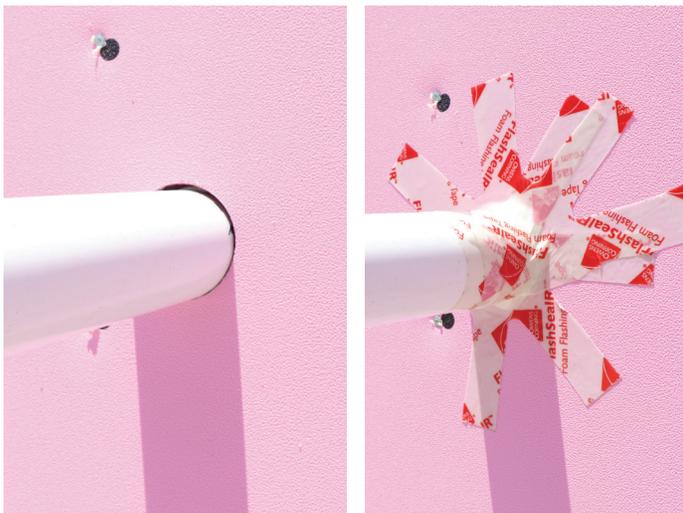
FIGURE 9



FIGURE 11



FIGURE 10



Ducts and Junction Boxes

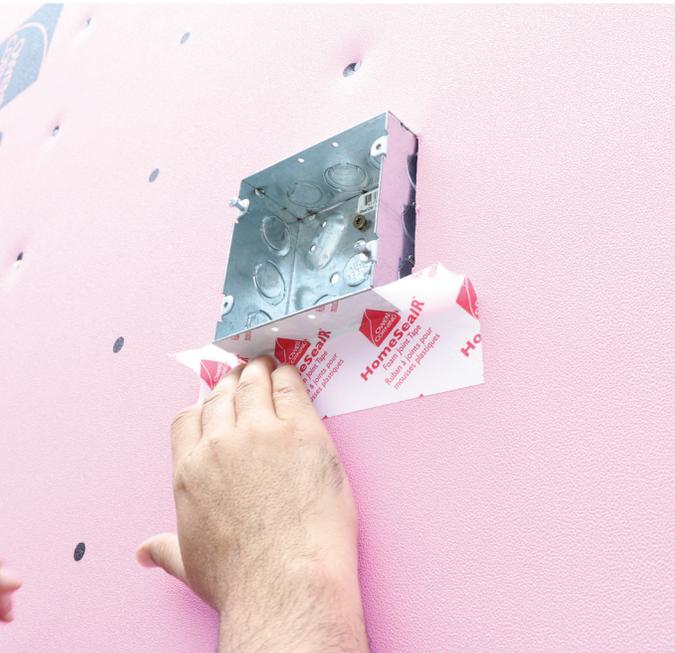
Ducts and Junction Boxes may be flashed with FlashSealR®, JointSealR®, or EasySealR® only. Ensure sheathing is butted tightly to duct or box around entire perimeter of penetration. **See Figure 12.**

Install flashing tape in a "shingle fashion" from bottom to top to shed water and properly lap seams. Beginning on lowest surface, tape minimum 2 inches onto face of sheathing and penetration surface to create change in plane. **See Figure 13.**

FIGURE 12



FIGURE 13



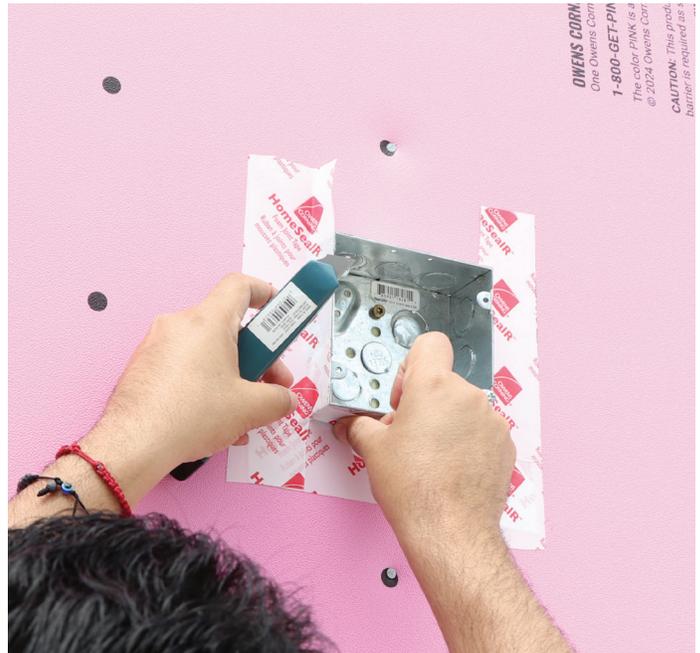
Create transition to change in plane at corner by smoothly slicing tape parallel to bottom of penetration and tape edge beginning slightly outside corner of penetration (tape will stretch to cover corner.) Turn up surface of penetration and across face of sheathing. **See Figure 14.**

Repeat process on adjacent sides of penetration to create a minimum 2-inch "shingled" laps over first flashing tape. **See Figure 15.**

FIGURE 14



FIGURE 15



OWENS CORN
One Owens Cor
1-800-GET-PI
The color PINK is a
© 2024 Owens Cor
CAUTION: This prod
Required as a

Complete tape flashing at top of penetration by attaching tape as previously described and turning tape onto face of sheathing and face of penetration to create a minimum 2-inch "shingle" lap. **See Figure 16.** Roll all tape joints with a J-Roller or Cabinet Roller to remove any trapped air or fish mouths.

Windows

Ensure sheathing is tightly butted and flush to window or opening. All window and door openings must be flashed with Owens Corning® EasySealR®, HomeSealR® or other tapes cannot be used.

Flangeless/Punched

Best practice includes beginning installation with an extra reinforcing tape joint at the transition of both jambs and sill — this is not required but highly recommended. Install sill flashing by attaching flashing tape a minimum 3 inches into horizontal surface of sill and 3 inches on vertical face of sill. **See Figure 17.**

FIGURE 16



FIGURE 17



Create transition to change in plane at jamb by smoothly slicing tape parallel to sill and tape edge beginning slightly outside corner of window (tape will stretch to cover corner.) **See Figure 18.**

Repeat process with both jambs extending flashing a minimum 3 inches up the side of the jambs. Flash jambs by attaching tape a minimum 3 inches into the vertical surface of the jamb and a minimum 3 inches across the face of the sheathing. **See Figure 19.**

FIGURE 18



FIGURE 19



Transition tape from jamb to sill in a shingle fashion by smoothly slicing tape parallel to tape edge and jamb beginning slightly outside corner of window (tape will stretch to cover corner). Repeat transition at head. **See Figure 20.**

Repeat flashing at other jamb as described. Complete head transition by attaching flashing a minimum 3 inches on the interior horizontal opening of header and a minimum 3 inches on the exterior face of header surface. Create transition from head to jamb in a shingle fashion by smoothly slicing tape parallel to header and tape edge beginning slightly outside corner of window (tape will stretch to cover corner) and extending tape a minimum 3 inches across jamb flashing and a minimum 3 inches down jamb flashing. Repeat flashing at other jamb as described. Any subsequent through wall flashing at header should flash a minimum 3 inches onto the sheathing face and the drip cap at header. Roll all tape joints with a J-Roller or Cabinet Roller to remove any trapped air or fish mouths.

Flanged

Best practice includes beginning installation with an extra reinforcing tape joint at the transition of both jambs and sill – this is not required but highly recommended. Install sill pan by attaching flashing tape a minimum 3 inches into horizontal

surface of sill and 3 inches on vertical face of sill. Create transition to change in plane at jamb by smoothly slicing tape parallel to sill and tape edge beginning slightly outside corner of window (tape will stretch to cover corner.) Repeat process with both jambs, extending flashing a minimum 6 inches up the side of the jambs. Once window has been installed per manufacturer's written instructions, flash jambs of window, extending tape a minimum 3 inches on either side of transition of flange to wall and minimum 3 inches over sill flashing at bottom of window, creating a shingled lap joint. Complete installation by lapping header flashing a minimum 3 inches across jamb flashings and a minimum 3 inches on either side of flanges and window head surface to create a shingle fashion. Any subsequent through wall flashing at header should flash a minimum 3 inches onto the sheathing face and the drip cap at header. Roll all tape joints with a J-Roller or Cabinet Roller to remove any trapped air or fish mouths.

Doors

Doors should be flashed as flangeless windows described above with through wall flashing or other material tied into threshold at jambs in a shingle fashion. Roll all tape joints with a J-Roller or Cabinet Roller to remove any trapped air or fish mouths.

FIGURE 20



Protection and Repair

Cover penetrations such as missed studs with FlashSealR®, JointSealR®, or EasySealR® a minimum of 1-3/4 inches on all sides of penetration. **See Figure 21.**

Protection

Install exterior cladding as soon as possible, best within 90 days. Protect sheathing from damage due to weather and physical abuse until protected by permanent construction. Cover dark surfaces as soon as possible to avoid damage due to potential solar heat build-up on the dark surface. Do not permit extruded polystyrene insulation board to come into contact with surfaces or temperatures in excess of 165°F. Refer to Owens Corning Technical Bulletin: Heat Buildup Due to Solar Exposure.

Tips and Tricks

Cutting Panels

Unlike non-composite XPS, EZSHEATH™ SIS Panels are not designed to score and snap and must be sawed. When cutting long panels, fine-tooth blades of 60 teeth or greater help to increase precise, smooth cuts whether on a circular saw or table saw. **See Figure 22.**

EZSHEATH™ should not be cut with a chainsaw or reciprocating saw when creating smooth edges for the air and weather barrier system.

FIGURE 21



FIGURE 22



Cutting Pipe Penetrations

When cutting pipe penetrations, hole saws with increased number or teeth can help in creating more precise openings with smooth annular space. Some saws may create less damage when drilled in reverse with slower pressure. It is recommended to practice cutting until satisfactory on-site prior to cutting actual installed sheathing. **See Figure 23.**

Spade and paddle style drill bits are not recommended when cutting EZSHEATH™.

Cutting Junction Box/ Ductwork/Windows/Other Penetrations

When cutting openings, various hand-held power saws or drills may help in creating precise butting cuts, including oscillating saws, jigsaws, routers, and small circular saws. Finer toothed blades or routers help to create smoother edges. **See Figure 24.**

Windows and other openings flush with foam and framing may be cut after foam is attached with an oscillating tool.

TOOLS TO USE	TOOLS NOT TO USE
Circular saw with 60 tooth blade	Chainsaw
Router with adequate cutting length panel pilot bit or standard pilot bit (pre-drill to start)	Reciprocating saw/Sawzall/scroll saw
Fine tooth hole saw	Spade/paddle style drill bits
Fine drill bits	
Oscillating tool	

FIGURE 23



FIGURE 24

