



ZIP System® R-Sheathing FAQ

Installation

WILL THE FOAM COMPRESS WHEN THE PANELS ARE NAILED?

The foam has a Compressive Strength of 20 psi when measured by ASTM D 1621. A slight amount of compression may be seen around the perimeter of the panel if fasteners are over penetrated, however this has little to no impact on the performance of the product. Compression of the foam is more likely to happen with nails that are hand driven with a hammer. Installer should be careful not to use excessive force when hand driving nails.

DO I NEED TO GAP THESE PANELS? HOW DOES THE OVERLAP WORK?

Foam insulation is oversized on one 4-ft and one 8-ft. edge relative to the ZIP Sheathing to accommodate proper gapping of panels. Panels should be installed with foam edges touching. Please coordinate panel field placement and orientation in order to take advantage of this gapping feature. See Technical Tip "ZIP System® R-Sheathing Panel Orientation" for additional information.

CAN R-SHEATHING BE USED IN ROOF APPLICATIONS?

No. R-Sheathing is currently only code-recognized in ESR-3373 to be used in wall applications.

CAN BUILDERS USE R-SHEATHING IN COMBINATION WITH OTHER SHEATHING TYPES?

No. On structures sheathed with ZIP System R-Sheathing, R-Sheathing should cover 100% of the sheathable area.

CAN STAPLES BE USED TO INSTALL R-SHEATHING INSTEAD OF NAILS?

Yes. Staples are recognized as a suitable fastener for installing ZIP System R-Sheathing. Additional fastening information can be found in the R-Sheathing Evaluation Service Report (ESR-3373).

CAN R-SHEATHING BE USED IN CONTINUOUS WOOD STRUCTURAL PANEL SHEATHING PER IRC SECTION R602.10.5?

No. Bracing amounts in 2009 IRC Table R602.10.1 may not be reduced per section R602.10.5 for continuous sheathing.

CAN I INSTALL EXTERIOR FOAM INSULATION ON TOP OF R-SHEATHING?

No. An additional layer of exterior foam on top of ZIP System R-Sheathing is currently not recommended.

WHAT TYPE OF NAIL SHOULD BE USED TO INSTALL R-SHEATHING?

If used as wall bracing or in the construction of shear walls, nails with a minimum diameter of 0.131-inches and long enough to penetrate the studs 1.5-inches should be used. If not used as wall bracing or in a shear wall, the nails only need to penetrate the studs at least 1-inch. Note: 8d common nails have a diameter of 0.131-inches.

ARE THERE LIMITATIONS WITH EXTERIOR FINISH CLADDINGS (ADHERED STONE, STUCCO, VINYL SIDING, BRICK, CEDAR, ETC.)?

Approved exterior claddings are any cladding referenced in the building code or with its own ES report qualifying it as an approved exterior cladding. Adhered stone veneers should not exceed 15 psf.

HOW DO WE HANDLE R-SHEATHING IF IT GETS WET EITHER BEFORE, DURING OR AFTER INSTALLATION?

ZIP R-Sheathing should be protected from moisture before the panels are installed. See ZIP System R-Sheathing Installation Manual for more information on storage and handling. R-Sheathing warranty provides 180-days of exposure once installed.

HOW HIGH CAN THE R-SHEATHING UNIT BE STACKED?

Do not stack more than three units high.

HOW SHOULD R-SHEATHING BE STORED AT THE DISTRIBUTION OR RETAIL CENTER?



Packaged units must be stored indoors or within a covered structure.

HOW SHOULD R-SHEATHING BE STORED AT THE JOB SITE?

For temporary job-site storage, units should be stacked on pallets at least inches above ground level and completely covered with a weatherproof covering such as a tarpaulin. The temporary factory-applied packaging should be slit or removed to prevent accumulation of condensation.

HOW DO WE ADDRESS DECK LEDGERS OR OTHER CANTILEVERED STRUCTURES?

Exterior decks should be constructed as free standing structures per AF&PA DCA6, Prescriptive Residential Wood Deck Construction Guide, or designed by a design professional. Ledger boards may be installed as a means to enhance the sideways stability of the deck but must not be relied on to resist gravity loading.

CAN R-SHEATHING BE ATTACHED TO EXISTING PLYWOOD OR OSB SHEATHING?

Yes, but only if the cavity wall insulation has a vapor permeance greater than 1 and only if the R-Sheathing is not part of the lateral force resisting system.

CAN WE INSTALL R-SHEATHING OVER LIGHT GAUGE METAL STUDS?

No. R-Sheathing is currently recognized to be used in wood-framed construction only.

CAN R-SHEATHING BE USED ON MF AND LC PROJECTS?

Yes. The ZIP System R-Sheathing code-recognition report, ESR-3373, recognizes compliance with the 2009 and 2012 IBC and IECC. R-Sheathing currently has recognition to be used as wall bracing or in shear walls under the 2009 and 2012 IBC. See ESR-3373 or the ZIP System R-Sheathing Installation Manual for proprietary shear values.

Features and Benefits

IS R-SHEATHING A SIP, STRUCTURALLY INSULATED PANEL?

No. R-Sheathing is not a SIP. It is a ZIP System sheathing panel with a polyiso foam adhered to the non-overlay side that can be attached to conventional wood-framed construction.

WHAT IS ASPECT RATIO?

Aspect ratio, as it relates to shear walls, is the height-to-width ratio of the shear wall segment. Example: An 8-ft tall shear wall that has a width of 4-ft, has a 2:1 aspect ratio.

DOES ZIP SYSTEM R-SHEATHING HAVE A REQUIRED ASPECT RATIO?

Yes, ZIP System R-Sheathing is limited to a 2:1 aspect ratio for shear wall designs.

DO ALL NAIL PENETRATIONS NEED TO BE SEALED?

Like conventional ZIP System sheathing, this is only a concern with the 12" o.c. field nailing because all of the fasteners at the panel edges are taped over anyway. Over-driven fasteners only need to be sealed or taped over if a hole is created all the way through the ZIP panel. Examples would be if a pneumatic nail were shot all the way through or if a nail was removed leaving a hole.

HOW DOES ZIP SYSTEM R-SHEATHING ADDRESS WIND UPLIFT?

ZIP System R-Sheathing is not recognized to resist combined uplift and shear. The requirement of any additional hold-down connectors or straps shall be determined by the designer-of-record, local building codes or other authority having jurisdiction. See the ZIP System R-Sheathing Installation Manual for more information.

IS THERE AN ISSUE WITH FLAME SPREAD AND SMOKE DEVELOPED INFORMATION SPECIFIC TO THE FOAM?

No, both the IRC and IBC require that the surface burning characteristics of all foam plastic insulations be tested and exhibit a flamespread index of not more than 75 and a smoke development index of not more than 450. The foam insulation layer on R-Sheathing satisfies this requirement when measured by ASTM E 84 in accordance with the Acceptance Criteria for Foam Plastic Insulation (AC 12).

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CAN R-SHEATHING BE USED IN CONSTRUCTION TYPES OTHER THAN TYPE V?

No. R-sheathing is comprised of a combustible wood structural panel. Therefore, Type V construction is the only construction type where it can be used.

CAN ZIP SYSTEM R-SHEATHING BE USED IN FIRE-RATED ASSEMBLIES?

Yes. ZIP System R-Sheathing is recognized in UL Design No. V302 and V303. It may not be used as a substitute for conventional wood structural panels in fire-rated wall assemblies specifying "wood structural panels."

DOES THE R-VALUE OF THE FOAM DIMINISH OVER TIME?

Polyiso has a Long Term Thermal Resistance (LTTR) of R6 per inch. LTTR is a scientifically supported method to calculate the 15-year, time-weighted average R-value. It is measured by ASTM C 1303. Can this be written as, "It is common for exterior insulations to lose some small amount of R-value overtime. The listed R-value for ZIP System R-sheathing is a 15-year average which means the R-value at time of installation is actually higher than what is published."

WILL THE FOAM SHRINK OVER TIME?

The dimensional stability of the foam is <4% in thickness and <2% in length and width when tested by ASTM D 2126.

CAN ZIP SYSTEM R-SHEATHING BE USED ALONG THE COASTAL AREAS OF THE U.S.?

Yes. However, any structure located in a coastal area that has a basic wind speed of 100 mph or greater and is using R-Sheathing to resist the wind loading, must be designed by a design professional as a shear wall. Prescriptive wall bracing methods can not be used in this situation.

WHAT IS THE PERMEANCE OF R-SHEATHING?

R-sheathing is a multi layered product. The combined system permeance is 0.8-1.1 perms. The permeance of each layer when measured by ASTM E 96 Procedure B (Wet Cup) is as follows: • WRB Overlay 12-16 perms • 7/16" OSB 2-3 perms • Coated Glass Facer 45-50 perms • 1" Polyisocyanurate 1.5-2 perms • Coated Glass Facer 45-50 perms

WHERE IS THE DEW POINT WHEN USING THESE PANELS?

Condensation occurs when the air cools down below its saturation temperature, i.e. the temperature of air which allows a maximum amount of water to be contained in vapor phase without a condensation. This temperature is referred to as dew-point temperature. Hence, condensation occurs whenever the air touches a surface that is colder than its dew point temperature. Within a wall assembly, the most common condensation point is the inboard surface of the exterior sheathing and it occurs in the winter time. ZIP System R-Sheathing adds a layer of insulation that creates a thermal break between indoor and outdoor environment, effectively "warming" the exterior surface of a wall cavity and reducing the risk of condensation within the wall system.

WHAT IS THE DIFFERENCE BETWEEN PRESCRIPTIVE AND PERFORMANCE METHODS OF WIND AND SEISMIC RESISTANCE?

Prescriptive Construction methods are found in the IRC and IBC and have limitations on the number of stories, wind and seismic zones. Performance (engineered) method is found in the IBC only and has no limitation on wind or seismic and can be any shape or size within IBC limits. Performance (engineered) requires a design professional. Prescriptive Construction does not

ARE THE AIR BARRIER AND WRB PROPERTIES DIFFERENT WHEN COMPARED TO REGULAR ZIP SYSTEM?

No. The same WRB and air barrier properties are the same for R-Sheathing as they are for conventional ZIP System sheathing.

Please visit www.zipsystem.com or contact our technical services department at 1-800-933-9220 Ext. 2716 with any questions or comments.