
Product Information & Installation Instructions

TUFFSTRAND[®] OSB Sheathing

OSB Structural Panels from RoyOMartin

Installation Instructions: Site-Built and Modular Construction

Important Notice to Buyers and Users of RoyOMartin OSB: These instructions are not intended to cover every installation contingency. If any questions or problems arise concerning the installation of this product or its suitability for the purchaser's particular use, inquiries should be made to RoyOMartin (www.royomartin.com).

The information about the products and application instructions printed herein is current at the time of publication; however, in accordance with RoyOMartin's policy of constant product improvement, the right is reserved to vary these application instructions and product specifications without notice. Please ask for the most recent product information when placing your order.

DESCRIPTION

TuffStrand[®] is an oriented strand board (OSB) structural panel made of wood strands aligned in three layers. Alternate layers are positioned at approximately right angles to one another. The layers are blended with resins and formed into continuous mats and bonded by heat and pressure. The orientation of strands creates a stable panel with greater strength in the long panel dimension than across the width. OSB sheathing panels are manufactured to be free of knots, core voids, grain defects, splits, and other irregularities. The panels are coated with a seal on all four (4) edges for added moisture resistance and dimensional stability. The panels also feature a coarse or rough textured surface that provides safer footing on pitched roofs.

STORAGE & HANDLING

All OSB materials should be stored to avoid excessive moisture pick-up and must be covered and kept free from construction dust and moisture during storage and installation. Inspect the protective bag when received, if provided, for tears and repair with staples and/or tape before storing. Store in a warehouse under cover of a roof or on concrete floors three (3) inches off the ground, remembering to rotate unit inventories frequently. When stored outdoors, cover panels loosely with a protective material. Clear

or similar-type plastic covering is not recommended. If plastic or tarps are used, anchor them on top of the unit, keeping them away from the sides and bottom to ensure good air circulation and ventilation around the panels. Cut the banding on the unit to prevent edge damage. Allow 24 hours for panels to acclimatize to the surrounding environmental conditions prior to installation. Exposure to rain, snow or similar elements compromises product performance and may void the warranty.

TuffStrand[®] structural panels are intended for protected construction applications. If subjected to rain or standing water during normal construction, the panel edges may swell, and mild surface roughening may occur. These reactions are normal when compressed wood products are exposed to water. If edge swelling and surface roughening are encountered, touch-sand panels where necessary after they dry.

Use reasonable care to avoid dropping panels on the edges, as chipping and damages to corners may occur. If you expect to transport the panels with a forklift, put the product on a pallet or supports to minimize panel damage from fork tines.

WORKABILITY

Utilize standard woodworking tools to saw, drill, and rout TuffStrand[®] OSB structural panels.

CERTIFICATION

7/16" or thicker TuffStrand[®] OSB structural panels are certified by APA-The Engineered Wood Association and are manufactured in conformance with APA PRP-108 and U.S. Voluntary Product Standard PS2. The panels conform to the ICC Evaluation Service Legacy Report NER-108 for APA and are approved under the APA Rated Sheathing Standard.

FIRE RATING

TuffStrand[®] OSB 7/16" and thicker have been generically recognized as having a Class C or Class 3 fire rating without need for test or label by: HUD/FHA Manual of Acceptable Practices, Section 405-8 to the Minimum Property Standards. Interpretive Bulletin C-1-76 to the HUD Manufactured Home Construction and Safety Standards.

APPLICATIONS

TuffStrand[®] OSB structural panels are ideally suited for roof sheathing, wall sheathing, and two-layer sub-floors systems in commercial and residential building projects, and some utility applications.

CODE COMPLIANCE

TuffStrand® OSB structural panels meet or exceed APA requirements and are recognized in the Uniform Building Code, the International Building Code, and the International Residential Code, and by the HUD Use of Materials Bulletin Number UM-40c.

SIZE and THICKNESS

Thickness		Width	Length	Pieces
3/8	9.5mm	48"	96"	88
3/8	9.5mm	48"	108"	90
3/8	9.5mm	48"	120"	92
7/16	11mm	48"	96"	80
7/16	11mm	48"	97 1/8'	77
7/16	11mm	48"	108"	80
7/16	11mm	48"	109 1/8"	80
7/16	11mm	48"	120"	81
7/16	11mm	48"	121 1/8"	82
7/16	11mm	48"	145 1/8"	58
15/32"	12mm	48"	96"	74
15/32"	12mm	48"	108"	74
15/32"	12mm	48"	120"	76
1/2"	12.5mm	48"	All	70
19/32"	15mm	48"	All	63
23/32"	18mm	48"	All	50

SPAN RATINGS

3/8" (9.5mm)	24/0
7/16" (11mm)	24/16
15/32" (12mm)	32/16
1/2" (12.5mm)	32/16
19/32" (15mm)	40/20
23/32" (18mm)	48/24

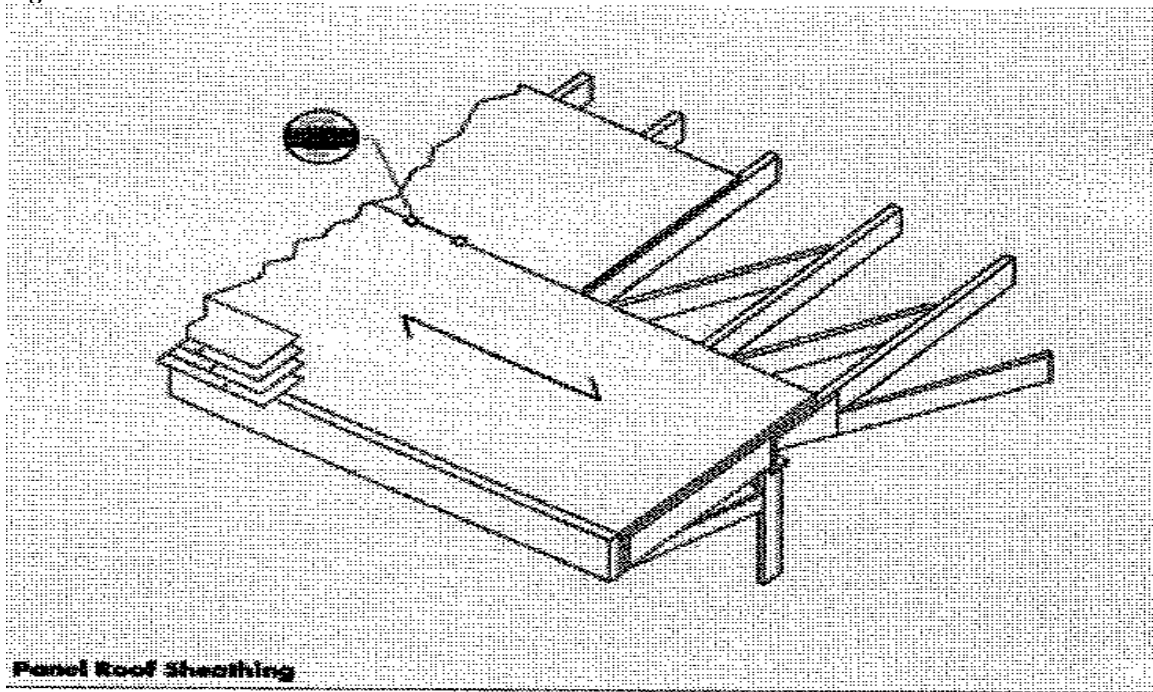
INSTALLATION

Roof Sheathing Installation

- Install with the long dimension or strength axis perpendicular to framing member, and with the panel continuous over two or more spans.
- Edge support shall be provided where indicated on drawings by use of panel clips. Metal spacer clips typically used as guides for spacing on roof-sheathing panels are not recommended for use with Eclipse™ Radiant Barrier OSB panels. If local building codes require spacer clips, synthetic or non-metallic spacer clips are recommended.
- Panel end joints shall occur over framing member. Provide 1/8" minimum gap along the 8' edge and 1/8" minimum gap along the 4' end (See figure 1-A).
- Stagger end joints in succeeding panel rows a minimum of one support spacing.
- Nail 6" o.c. along supported panel edges and 12" o.c. at intermediate supports. Use 8d common nails for panels up to 1". For panels exceeding 1", use 8d ring-shank or 10d common nails. Other code-approved fasteners may be used.
- Panels must be protected upon installation by an approved weatherproof material. An "approved weatherproof material" is material or a combination of materials such as asphalt-impregnated felt and asphalt shingles or similar materials currently accepted by model code authorities and existing standards for the intended application.
- TuffStrand® OSB may be extremely slippery when wet, covered with frost, ice or snow or when covered with sawdust. Installers should always place the skid-resistant side up, wear rubber soled or skid-resistant shoes, and exercise extreme caution when installing roof sheathing. www.apawood.org

**If OSB is exposed to moisture allow all the panels to dry before installing roofing materials. Do not install roofing materials over wet substrate.*

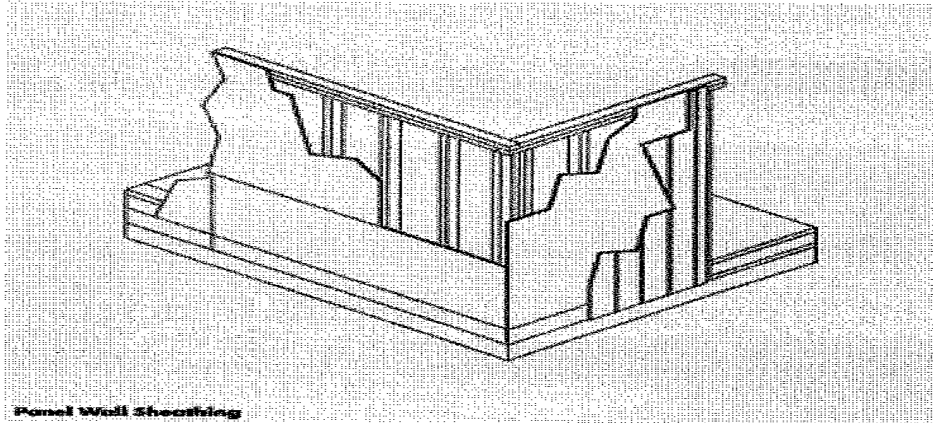
Figure 1-A



Wall Sheathing Installation

- OSB sheathing wall panels may be installed vertically or horizontally. In horizontal installations, stagger joints a minimum of one stud space.
- TuffStrand® OSB wall sheathing may be applied directly to studs without the need for corner bracing to resist racking loads.
- Provide a minimum 1/8" gap between panel edges. Provide a minimum 3/4" expansion joint where panels run continuous for 80' or more.
- Unless otherwise stated, for panels up to 1/2" thick, fasten with 6d common nails located 6" o.c. along supported panel edges, and 12" o.c. over intermediate supports. For panels 1" and thicker, fasten with 8d common or ring shank nails spaced 6" o.c. along supported panel edges and ends and 12" o.c. over intermediate supports. Other code approved fasteners may be used.
- Sheathing must be covered with a weather-resistant cladding, such as any commercially available exterior grade siding. www.apawood.org

**Note: TuffStrand® OSB structural panels are not recommended for residential siding or applications requiring surface primers or paint*



UTILITY

TuffStrand® OSB structural panels may be used for interior paneling and a wide range of non-code compliance applications. Use a fastener whose length will penetrate the framing member by at least 1". Space fasteners 6" o.c. at the perimeter and 12" o.c. at intermediate locations. Provide 1/8" minimum gap along the supported panel edges and ends.

Cutouts

Cutouts for plumbing and electrical components shall be oversized by at least 1/4" to avoid a force fit. DO NOT PUNCH HOLES IN TuffStrand® OSB.

Fastening

Fasten panels to within 3/8" of panel edges using the fastener size and spacing recommended in the application tables.

APA PANEL ROOF SHEATHING

Recommended minimum Fastening Schedule (Increased nail schedules may be required in high wind zones and where roof is engineered as a diaphragm.)

Panel Thickness (in.)	Size	Nailing ⁽²⁾⁽³⁾	
		Maximum Spacing (in.)	
		Supported Panel Edges ⁽⁴⁾	Intermediate
5/16-1	8d	6	12 ⁽¹⁾
1-1/8	8d or 10d	6	12 ⁽¹⁾

⁽¹⁾ For spans 48 inches or greater, space nails 6 inches at all supports

⁽²⁾ Use common smooth or deformed shank nails with panels to 1 inch thick. For 1-1/8 inch panels, use 8d ring or screw shank or 10d common smooth shank nails.

⁽³⁾ Other code approved fasteners may be used.

⁽⁴⁾ Supported panel joints shall occur approximately along the centerline of framing with a minimum bearing of 1/2 inch. Fasteners shall be located 3/8 inch from panel edges.

Recommended Uniform Roof Live Loads for APA Rated Sheathing with Strength Axis Perpendicular to Supports

Panel Span Rating	Minimum Panel Thickness (in.)	Maximum Span (in.)		Allowable Live Loads (psf) ⁽⁴⁾							
		With Edge Support ⁽¹⁾	Without Edge Support	Spacing of Supports Center-to-Center (in.)							
				12	16	20	24	32	40	48	
APA Rated Sheathing ⁽³⁾											
24/0	3/8	24	20 ⁽²⁾	190	100	60	30				
24/16	7/16	24	24	190	100	65	40				
32/16	15/32, 1/2	32	28	325	180	120	70	30			
40/20	19/32, 5/8	40	32	-	305	205	130	60	30		
48/24	23/32, 3/4	48	36	-	-	280	175	95	45	35	

⁽¹⁾ Panel edge clips (one midway between each support, except two equally spaced between supports 48 inches on center or greater), lumber blocking, or other. See additional spans for low slope roofs in the APA Engineered Wood Construction Guide.

⁽²⁾ 20 inches for 3/8-inch and 7/16-inch panels. 24 inches for 15/32-inch and 1/2-inch panels.

⁽³⁾ Includes APA Rated Sheathing/Ceiling Deck

⁽⁴⁾ 10 psf dead load assumed

APA PANEL WALL SHEATHING⁽¹⁾

(For APA Rated Sheathing panels continuous over two or more spans.)

Panel Span Rating	Maximum Stud Spacing (in.)	Nail Size ⁽²⁾⁽³⁾	Maximum Nail Spacing (in.) ⁽⁵⁾	
			Supported Panel Edges ⁽⁴⁾	Intermediate Supports
12/0, 16/0, 20/0 or Wall-16" o.c.	16	6d for panels 1/2" thick or less; 8d for thicker panels	6	12
24/0, 24/16, 32/16 or Wall-24" o.c.	24			

⁽¹⁾ See requirement for nailable panel sheathing when exterior covering is to be nailed to sheathing the APA Engineered Wood Construction Guide.

⁽²⁾ Use common, smooth, annular, spiral-thread, or galvanized box nails.

⁽³⁾ Other code-approved fasteners may be used.

⁽⁴⁾ Fasteners shall be located 3/8 inch from panel edges.

⁽⁵⁾ Increased nail schedules may be required where wall is engineered as a shear wall.

Note: Please visit APA - The Engineered Wood Association (www.apawood.org) for additional instructions and recommendations on more aggressive nailing patterns to minimize buckling of wood structural panels. RoyOMartin's products are strength designed to work best with nailing patterns 6" on center on all panel edges and 12" in the intermediate portion of the panel. If local code nailing pattern require a tighter nailing pattern, please refer to APA's suggested nailing instruction. Nail to 12" or 24" on center at ends, edges and intermediate supports, allow panels to acclimate to normal local conditions and just before the finish wall covering is applied, then nail to local code's tighter nailing pattern. Failure to follow these guidelines will most commonly result in severe buckling and is not a result of manufacturing or product performance. In the case where these instructions can not be followed, RoyOMartin recommends its 7/16" panel with a 24/16 span rating.

Always nail panel edges 3/8" from panel edges, failure to nail to this requirement will result in a highlighted edge raising and in the case of more than normal wetting, severe edge swell and is not a result of manufacturing or product performance.

RoyOMartin's OSB is a wood-based product and caution should be used in storage of these products, as wetting will cause wood to swell. RoyOMartin's OSB is shipped, when provided, to these areas individually bagged; we suggest RoyOMartin panels be kept covered until point of installation.

Failure to follow responsible installation and handling instructions in not a manufacturing issue. If proper installation and/or handling procedures are not followed, it is not the responsibility of the manufacturer.

California Prop 65 Warning:

Drilling, sawing, sanding or machining wood products generates wood dust, a substance known to the State of California to cause cancer. Avoid inhaling wood dust or otherwise determine what safeguards or personal protection equipment may be necessary to prevent inhaling wood dust.