

GENERAL

- ✓ ARBEC OSB sheathing panels are designed for use in roof, wall and subfloor systems in commercial and residential projects, maintenance, remodeling or new construction.
- ✓ ARBEC OSB sheathing panels are of a consistent composition and manufactured to be free of knots, grain defects, core voids, splits and other irregularities. The wood strands are mixed with resins, arranged in layers for design strength and stability and bonded under heat and pressure. The panels are sealed on all four edges for added moisture resistance and dimensional stability.
- ✓ The panels should be fastened with conventional nailing techniques. Consult your local building authorities regarding acceptability of fastenings techniques.
- ✓ The panels may be sawn cleanly, and may be routed or drilled with standard woodworking tools.
- ✓ ARBEC forest products Sheathing panels are sized to 3' 11⁷/₈" x 7' 11⁷/₈" dimensions (reduced 1¹/₈" from 4' x 8' to allow for proper spacing during installation).
- ✓ Panels are available in performance categories ranging from 3³/₈ to 7⁷/₈.
- ✓ Panels are stiff and strong and have a low coefficient of lineal expansion. For further technical and engineering information and Material Safety Data Sheets, contact your ARBEC sales representative.

STORAGE AND HANDLING

- ✓ Store panels in clean, dry areas off the ground. If possible, store indoors. If stored outside, cover with plastic sheets or tarps. Keep cover open and away from the sides and bottom of panels to allow for air circulation.
- ✓ Additional protective measures may be necessary during extended adverse weather conditions.
- ✓ Our OSB panels contain no Urea Formaldehyde resin (UF) and are thereby exempt from US regulations on Formaldehyde *CARB* and *HUD*.

ENVIRONMENTAL IMPACT

ARBEC forest products are manufactured in accordance with the company's policy on protection of the environment which includes:

- ✓ Use of environmental control technology and energy efficient equipment to conserve resources.
- ✓ Use of wood by-products to produce energy, thereby conserving non-renewable resources.
- ✓ Use of third-party certified wood from well managed forests to produce ARBEC's products.

ADVANTAGES

- ✓ ARBEC OSB sheathing wall panels provide racking strength to meet or exceed corner bracing requirements.
- ✓ Light and easy to install, with pre-marked nailing lines to make installation faster and simpler. This means cost savings to the builder and the homeowner by reducing installations time and saving labor cost.
- ✓ Skid resistant surface provides better traction on the job site to help improve worker's safety.
- ✓ Use of raw material more efficiently to produce these engineered wood products resulting in more consistent performance and strength than non-strand-based sheathing products.
- ✓ Excellent fastener holding, resists splitting even when nailed close to panel edge.

STANDARDS AND CERTIFICATIONS

ARBEC OSB Structural Sheathing complies with the following industry standards and certifications:

- ✓ ARBEC OSB Structural panels are quality verified by **PFS TECO**, and are manufactured in conformance with *U.S. Voluntary Product Standard PS 2*, which is recognized in the Uniform Building Code, the International Building Code and the International Residential Code, and by *HUD Use of Materials Bulletin No. 40c*.
- ✓ Performance category replaces the fractional nominal thickness used in *PS 2*. The Performance Category is consistent with the panel thickness used in the U.S. model building codes.
- ✓ ARBEC OSB panels are also manufactured in conformance with **CSA-0325**, which is recognized in the National Building Code of Canada.

Table 1: Relationship Between Span Rating and Thickness for OSB^(a)

	Span Rating	Nominal Thickness ^(b) (in.)						
		3/8	7/16	15/32	1/2	19/32	23/32	7/8
Sheathing Span*	24/0	0.375	0.437	0.469	0.500			
	24/16		0.437	0.469	0.500			
	32/16			0.469	0.500	0.594		
	40/20					0.594	0.719	
	48/24						0.719	0.875
Floor Span*	16 oc					0.594		
	20 oc					0.594		
	24 oc						0.719	0.875
	32 oc							0.875

(a) The values in this table correspond with those published in the 2005 edition of the AF&PA American Wood Council's Commentary National Design Specification (NDS) for Wood Construction ASD/LRFD Table C9.2.3, which is available from the AF&PA American Wood Council.

(b) The predominant thickness for each span rating is highlighted in **bold**.

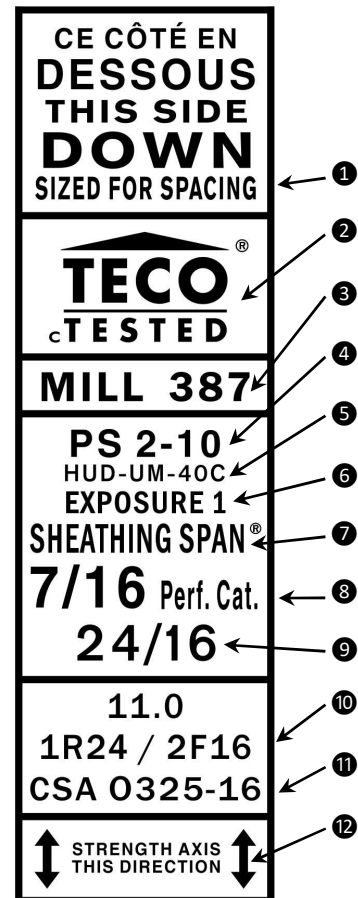
Table 2: PFS TECO Rated OSB Sheathing Roof Panels

Performance Category*	Span Rating	Allowable Live Load For Roofs(psf)**
3/8	24/0	30
7/16	24/16	40
15/32	32/16	70
1/2	32/16	70
19/32	40/20	130
23/32	48/24	175

*Performance Category replaces the nominal panel thickness

**Live load for 24" OC span conditions, 10 psf dead load assumed

Figure 1: ARBEC gradestamp on PFS TECO certified panels



- 1 Panel sized to allow 1/8-inch space between panels during installation to permit expansion and prevent buckling
- 2 Certification mark of a qualified inspection and testing agency
- 3 Mill Number
- 4 Performance Standard for wood-based structural-use panels
- 5 HUD Recognition
- 6 Bond Classification indicates panels that are bonded with an exterior adhesive and are suitable for uses not permanently exposed to the weather
- 7 Panel Grade indicates structural-use panels designed and manufactured for sheathing (SHEATHING SPAN®) or subfloor (FLOOR SPAN®) application
- 8 Performance Category
- 9 Span Rating indicates the allowance for *Roof* and *Floor* support spacing, respectively
- 10 Span rating and end-use designation, Canadian standard: **1** = No edge support is required / **R** = Roof / **24** = Maximum roof span (inches) **2** = Edge support is required / **F** = Floor / **16** = Maximum floor span (inches) **W** = Wall / **24** = Maximum wall support spacing (inches)
- 11 Canadian standard
- 12 The strength axis is parallel to the flake orientation of the panel face and back surfaces, which is aligned with the long panel dimension

EXPOSURE CLASSIFICATIONS

- ✓ ARBEC OSB SHEATHING PANELS ARE NOT FOR UNPROTECTED EXTERIOR USE. They must be covered with siding panels or other type of exterior wall cladding or roofing material. Normal exposure to weather during ordinary construction delays will not damage the panels. ADDITIONAL PROTECTIVE MEASURES ARE RECOMMENDED FOR EXTENDED ADVERSE WEATHER CONDITIONS. EXCEPTION: Panels identified as Exposure 1 may be used for roof sheathing where exposed on the underside such as on eaves.
- ✓ Slight surface flaking or thickness swell caused by moisture exposure will not affect the panels' structural performance.

FIRE PERFORMANCE

- ✓ The surface burning characteristics of unfinished ARBEC OSB panels have a Class C or Class 3 rating.

INSTALLATION-GENERAL

- ✓ Comply with local safety regulations when installing roof, wall, or subfloor sheathing and/or your local building code or design professional's instruction.
- ✓ Comply with the following instructions and with **PFS TECO's OSB Design and Application Guide** or the current equivalent. To obtain more installation instruction information, visit www.pfsteco.com.

WALL INSTALLATION

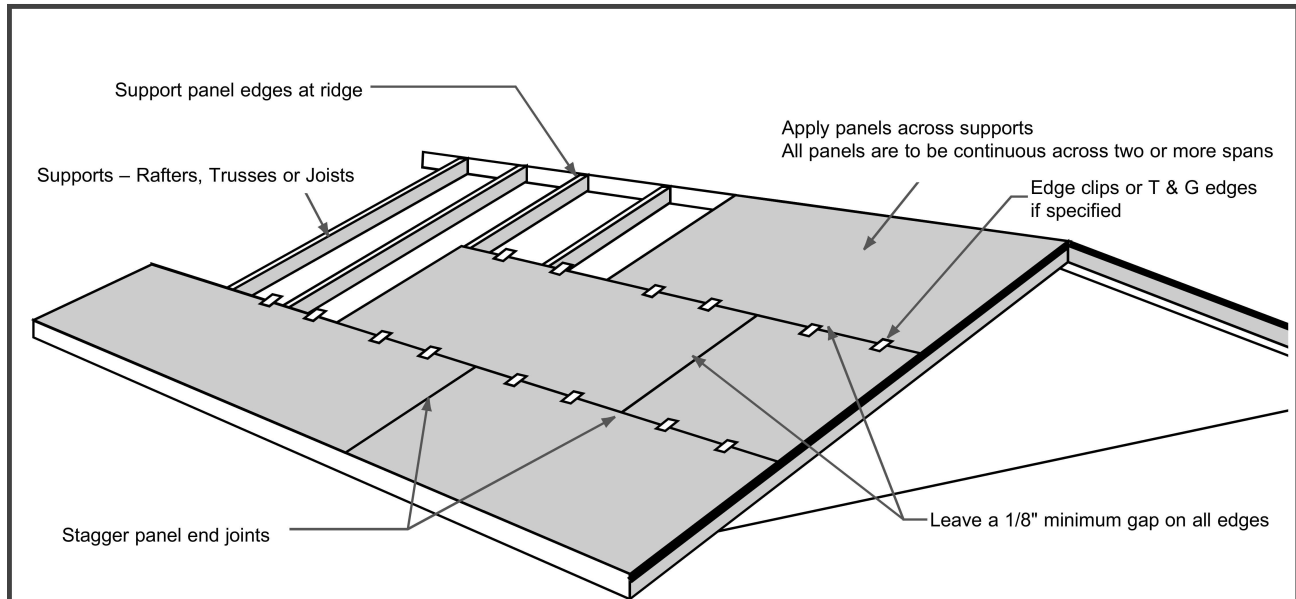
- ✓ ARBEC OSB sheathing wall panels may be installed vertically or horizontally. In horizontal installations, stagger joints a minimum of one stud space.
- ✓ Provide $\frac{1}{8}$ " minimum space between panel ends and edges. Use a spacer tool (i.e. 10d box nail) to assure accurate and consistent spacing.
- ✓ Fasten directly to framing members. Nail spacing should be no more than 6" on center along panel edges and 12" on center along intermediate supports. Fasten panels $\frac{3}{8}$ " from panel edges. Use 8d common nails or other code-approved fasteners.

ROOF INSTALLATION

- ✓ Install roof sheathing with the textured side up and use extreme caution when working on sloping roofs.
- ✓ Leave $\frac{1}{8}$ " gap at all panel ends and edges to allow movement due to climatic changes, preventing roof panel ridging. Use a spacer tool (i.e. 10d box nail) to assure accurate and consistent spacing.
- ✓ Provide additional panel stiffness by installing panel edge clips mid-span on all un-supported edges.
- ✓ Nail spacing should be no more than 6" on center along panel edges and 12" on center along intermediate supports. Fasten panels $\frac{3}{8}$ " from panel edges. Use 8d common nails or other code-approved fasteners.
- ✓ Cover roof sheathing as soon as possible with roofing felt or shingle underlayment for protection against excessive moisture prior to roofing. If any edge swelling occurs prior to roof underlayment installation, all raised joints should be sanded flat.
- ✓ Allow sheathing to adjust to humidity and moisture conditions before shingle installation.
- ✓ Remove wrinkles and flatten surface of shingle underlayment before installing shingles. High performance shingle underlayment is recommended for better results.
- ✓ Heavier weight and/or textured shingles are recommended to better mask imperfections in roofing assembly.
- ✓ Apply the strength axis perpendicular to the supports.
- ✓ All panels should be continuous over two or more spans; all end joints must be staggered and lie over supports.
- ✓ Fasteners shall be located a minimum $\frac{3}{8}$ " from panel edges.
- ✓ Stand over trusses or rafters when nailing. All fasteners must penetrate a minimum of 1" into structural supports and be with nail head flush with panel surface.
- ✓ Ensure adequate ventilation as specified in the appropriate building code.

NOTE: Check with your local building department before deciding on an installation method.

Figure 2: Roof OSB panel installation



Warning: Roof sheathing may be extremely slippery when wet, covered with frost, snow, ice or sawdust. Installers of roof sheathing should wear rubber-soled footwear and exercise caution, especially on roof slopes exceeding 4 in 12. Based on recent studies, soles of thermoplastic rubber provide the best traction of the sole materials tested. Place screened surface of panel face up.

Note: Panels that get wet should be allowed to surface dry before applying shingles. Protect uncoated edges from direct rain exposure.

Support spacing	Edges Supported ¹		Edges Unsupported	
	Span Rating (roof/floor)	Nominal Thickness (in.)	Span Rating (roof/floor)	Nominal Thickness (in.)
Sheathing Grade				
24	24/16	7/16, 15/32, 1/2	24/16	7/16, 15/32, 1/2
32	32/16	15/32, 1/2	40/20	19/32
40	40/20	19/32		
48	48/24	23/32		
Single Floor Grade				
24 or less	16 oc	19/32	16 oc	19/32
32	20 oc	19/32	20 oc	19/32
40	24 oc	23/32		
48	24 oc	23/32		

Notes:

¹ Lumber blocking, panel edge clips (one midway between each support, except two equally spaced between supports when span is 48"), tongue and groove panel edges, or other approved type of edges support.

² Panels to be minimum 24" wide and continuous over at least two supports.

³ Panel thicknesses and span ratings apply for pitched or flat roofs; where flat roofs are used as walking decks, the requirement for floors shall apply.

SUBFLOOR INSTALLATION

ARBEC *Sheathing* products are approved for use as sub-flooring and are available with square edges. Also available are **PFS TECO** Rated **Floor Span**® panels with a T&G profile designed to provide maximum strength and stiffness. The flooring also provides a durable, dimensionally stable base for adding a separate underlay material.

ARBEC *flooring* products are easy to install with conventional nails, screws and nail-gun techniques. Edge swell is prevented by minimizing exposure of OSB flooring material to moisture during construction.

- ✓ Install in accordance with PFS TECO application guidelines for maximum performance.
- ✓ Use additional layer of code-approved underlayment when the floor finish is resilient flooring or ceramic tile.
- ✓ Panels must be continuous over two or more spans with the long dimension perpendicular to supports.
- ✓ Fasteners shall be located a minimum $\frac{3}{8}$ " from panel edges.
- ✓ Leave $\frac{1}{8}$ " gap at all panel edges to allow for normal expansion.

Figure 3: Glued Floor system

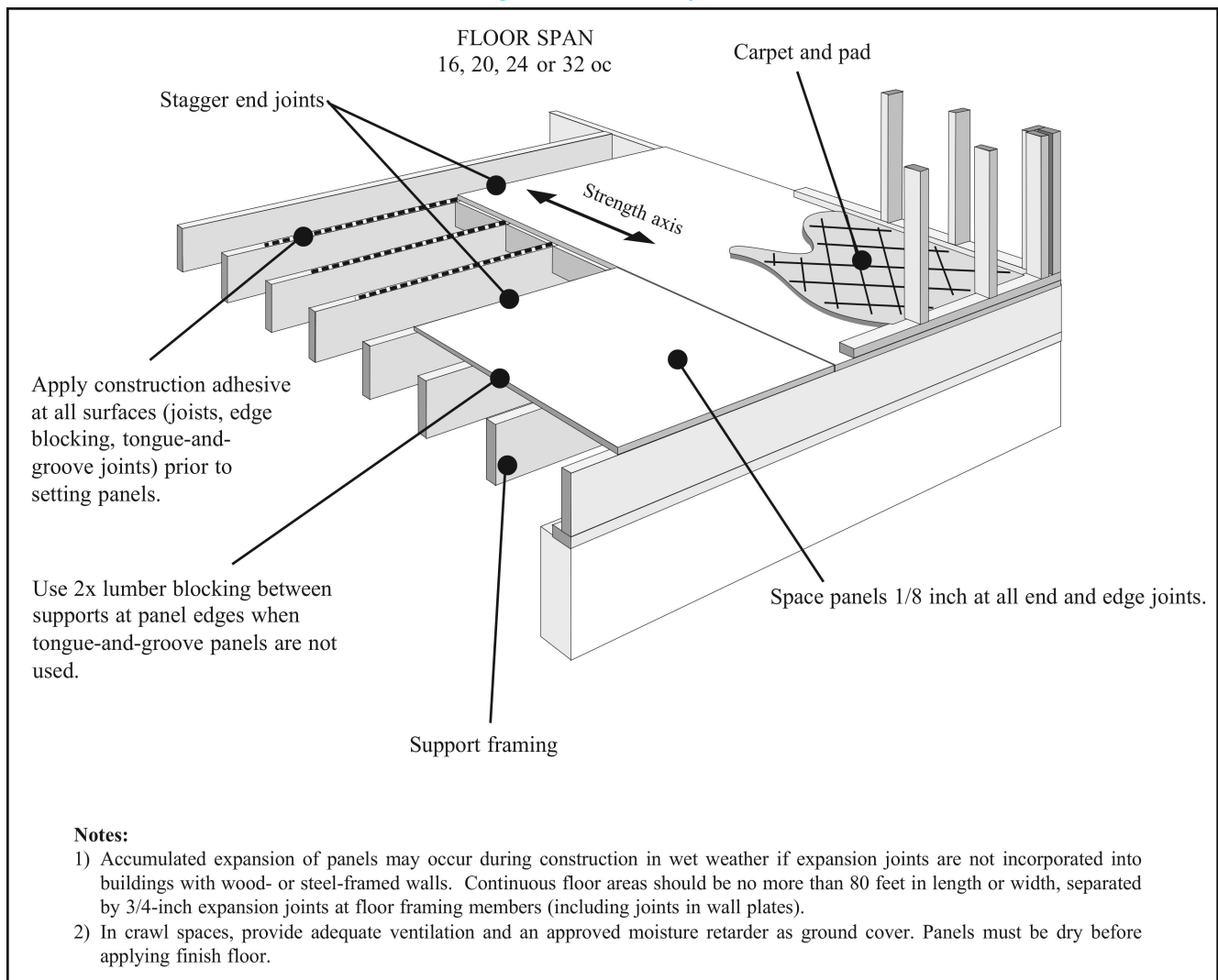


Figure 4: Floor panel installation and maximum recommended support spacing

For combination subfloor/underlayment or subfloor panels, leave a 1/8 inch minimum gap at panel ends and edges

Note:
In crawl spaces, provide adequate ventilation and an approved moisture retarder as ground cover.

Maximum Support Spacing

SHEATHING SPAN Subfloor: Sheathing			FLOOR SPAN Combination Subfloor / Underlayment		
Support Spacing (inches)	Span Rating	Nominal Panel Thickness (inch)	Support Spacing (inches)	Span Rating	Nominal Panel Thickness (inch)
16 ¹	24/16	7/16, 15/32, 1/2	16 ¹	16 oc	19/32
	32/16	15/32, 1/2, 19/32	20	20 oc	19/32
19.2, 20	40/20	19/32, 23/32		20 oc ²	19/32
24	40/20 ²			24 oc	23/32
		48/24	32	32 oc	7/8

1. Is permitted to be 24 inches on center for panels with span ratings of 32/16 or 16 oc where 3/4-inch wood strip flooring is installed perpendicular to the supports.
2. Acceptable where 3/4-inch wood strip flooring is installed perpendicular to supports or where 1-1/2 inches of cellular or lightweight concrete is applied over the panels.

For other types of installations, refer to **PFS TECO's OSB Design and Application Guide**.

AVAILABILITY

Call ARBEC customer service or visit our web site for more information on OSB structural panels and other ARBEC products.

Sales Office: 514-327-3350
Email: information@arbec.ca
www.arbec.ca