

ORIENTED STRAND BOARD

The superior choice for modern sheathing

Consistent quality and reliability, competitively priced and problem-free

Environmentally friendly, technologically advanced

Available in custom thicknesses and sizes

Accommodating sales, service and scheduling



SUPER STRUCTURAL

Oriented Strand Board (osb)
OSB Rimboard
Oriented Strand Lumber (osl)
Durastrand® Flooring
Durastrand® Rimboard
SteadiTred™ Stair Tread Panels
Thermastrand™ Radiant Barrier osb
Pourform® Concrete-Forming Plywood Panels
Transdeck® Trailer Flooring



ENGINEERED

TO DO THE JOB RIGHT ... FROM THE START



AinsworthEngineered oriented strand board (OSB) incorporates advanced technology throughout the manufacturing process. It begins with sound log-yard management practices to maximize recovery and conditioning (pictured below) to ensure the best quality strands possible. This is followed by stranding, drying, screening, blending, forming, pressing and finishing. All process parameters are monitored and controlled by state-of-the-art process-control equipment to ensure specific product and customer specifications are met.



Profits go up and everyone's more satisfied when construction materials are problem-free. Which is why *AinsworthEngineered*® OSB is selected by contractors and builders as the premier choice throughout the markets we serve. Premier in quality and consistency, and competitive in price.

We manufacture OSB products to the same high standards that built our reputation as a reliable supplier of top-quality lumber and specialty plywood. In our state-of-the-art OSB facilities, product ingredients—such as fiber and adhesives—are carefully selected and calibrated to provide properties that meet precise specifications. Process technologies and equipment are continually monitored to assure consistent quality, whether it's for commodity sheathing or specialty products. Size, thickness and other end-use properties can all be engineered.

AinsworthEngineered OSB sheathing and flooring products are certified to meet or exceed the APA—The Engineered Wood Association's requirements for building construction. We offer a wide range of products, each engineered to match specific building applications.

Certification from the International Standards Organization 9001 Quality Assurance program is under way—one more indication of our commitment to producing the best engineered wood products for the construction industry.

Look for the
Turquoise™ edge, the
AinsworthEngineered
seal of quality.

NATURALLY

INCLINED TO DELIVER TOP PERFORMANCE

AinsworthEngineered OSB makes efficient use of previously under-utilized small-diameter aspen logs. An abundant species, aspen helps lower society's dependence on mature and old-growth forests.

OSB technology also consumes the entire log, enabling waste-free utilization of fiber and far greater environmental efficiency compared to plywood and non-engineered building materials. In Canada, Ainsworth has long term timber supply agreements that provide up to 85% of its fiber requirements. In Minnesota, Ainsworth purchases (or purchases from suppliers) timber sold by the U.S. Federal Agencies, Minnesota Department of Natural Resources, State County's, and private land timber holders.



Throughout its operations, Ainsworth is committed to maintaining the integrity of the environment, practicing sustainable forest management and complying with all provincial regulations and codes. The company's forest management practices are certified by the internationally recognized ISO 14001 Environmental Management System.

A REPUTATION

FOR SATISFYING OUR CUSTOMERS' NEEDS

For over half a century, Ainsworth has been respected as a successful enterprise built by ingenious, resourceful people who take pride in their work.

Known for its innovation, quality and service, the company today supplies markets worldwide with specialty and commodity OSB and Oriented Strand Lumber (OSL) as well as specialty plywood for concrete forming and other industrial applications.

As pioneers and market leaders, we continually upgrade our mill processes, keeping current with innovative leading-edge technologies. At the same time, our in-house training programs ensure that our workforce is highly knowledgeable and quality-conscious.

SPECIFICATIONS

Certification and code compliance

MANUFACTURING STANDARDS

AinsworthEngineered OSB is manufactured to meet the requirements of ps-2: Performance Standard for Wood-Based Structural Panels and CAN/CSA-O325: Construction Sheathing.

In the USA, ps-2 is recognized by the International Code Council (ICC) and other model building codes. Recognition is also contained in the U.S. Department of Housing and Urban Development (HUD/FHA) Use of Materials Bulletin UM-40.

CAN/CSA-O325 is recognized in the National Building Code of Canada (NBCC).

GRADES

AinsworthEngineered OSB is manufactured in three grades:

APA Rated Sheathing

Specially designed for wall and roof sheathing and subflooring. Also good for a broad range of other construction and industrial applications.

APA Structural I Rated Sheathing

This product meets additional APA performance standard structural tests. The product is specifically engineered to perform in applications that require superior cross-panel strength, racking strength or shear resistance in such places as panelized roofs, diaphragms and shear walls. (Refer to individual building codes for technical details.)

APA Rated Sturd-I-Floor

Specially designed as combination subfloor-underlayment. Provides a smooth surface for application of carpet and pad, and possesses high concentrated and impact load resistance. Is available in square edge or T&G.

GRADE MARKING

Panels bear the stamp of the recognized inspection and testing agency APA—The Engineered Wood Association, certifying conformance with ps-2 and CAN/CSA-O325. The panels are “performance rated,” which means the panels meet the performance requirements necessary for the end-use applications. The panel grade, performance rating and additional information are contained in the grade stamp.

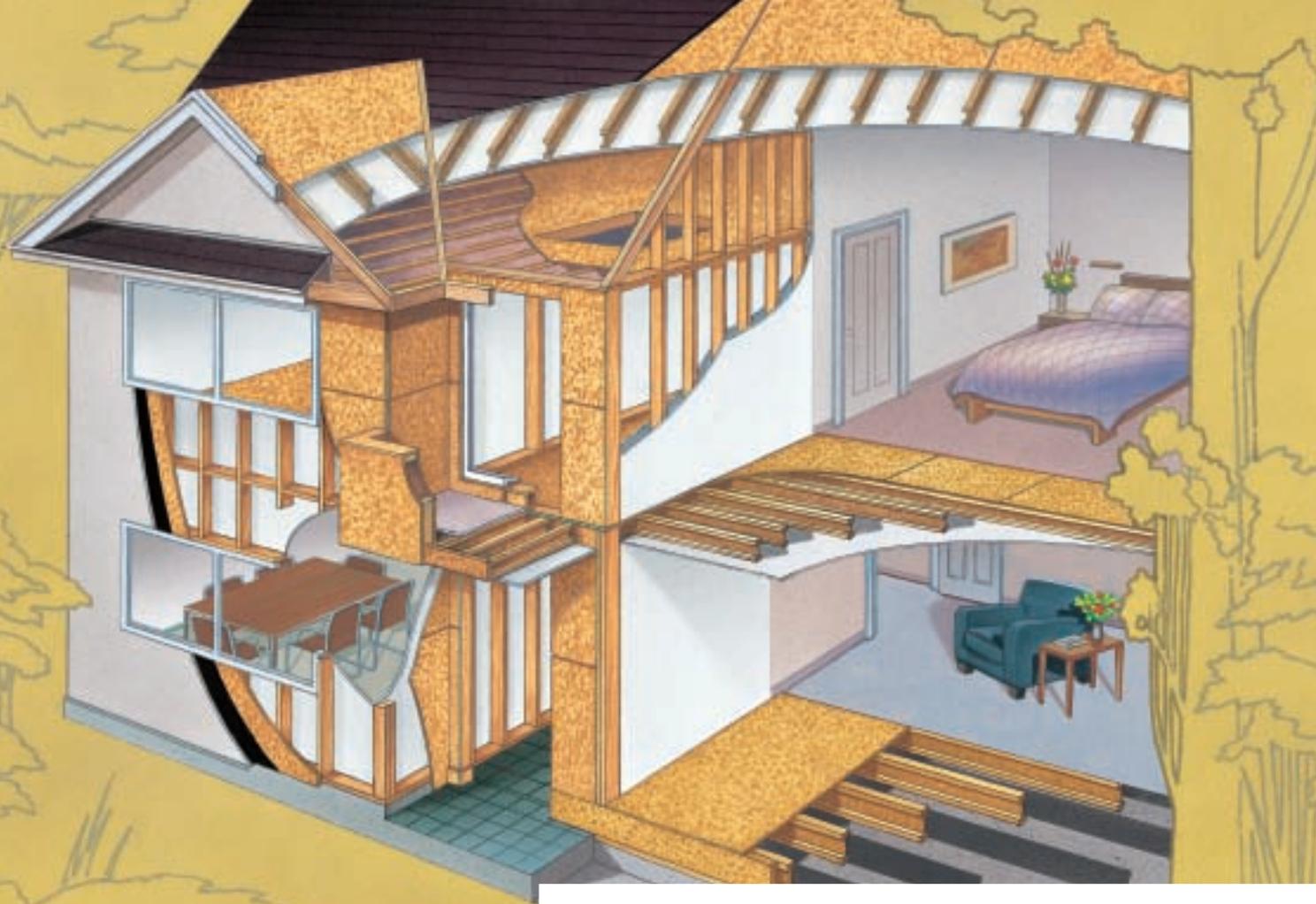


- 1 APA panel grade
- 2 Span rating (roof/floor), u.s. standard (the roof span is also used as an indication for wall application)
- 3 Exposure durability classification
- 4 Mill identification number
- 5 u.s. performance standards
- 6 Span rating and end-use designation, Canadian standard
 - 1 = No 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)
- 7 Panel thickness
- 8 Canadian standard

PHYSICAL AND MECHANICAL PROPERTIES

	APA PERFORMANCE RATED CSA-O325
Thickness Tolerance Maximum Allowable	± 1/32"
Length and Width Tolerances Maximum Allowable	+0 to -1/8"
Linear Expansion — Oven Dry to Saturated (%) Parallel/Perpendicular	0.5/0.5
Linear Expansion — 50–90% RH (%) Parallel/Perpendicular	0.3/0.35
Lateral Nail Resistance (dry test only) Subfloor / Wall and Roof (lbs)	210/210





The consistent quality of *Ainsworth Engineered* OSB is available in different grades for wall and roof sheathing and flooring.

Roof sheathing

INSTALLATION

Select the appropriate *Ainsworth Engineered* OSB panel thickness or span rating for the application.

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.

Leave $\frac{1}{8}$ " gap at all panel ends and edges to allow movement due to climatic changes, preventing roof panel ridging.

Install roof sheathing with the textured side up and use extreme caution when working on sloping roofs.

Stand over trusses or rafters when nailing.

Nail spacing should be no more than 6" on center along panel edges and 12" on center along intermediate supports.

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.

ROOF LOADS AND SPAN RATINGS

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

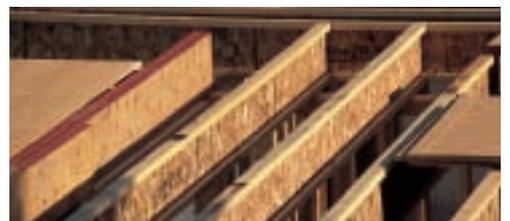
PANEL THICKNESS	ROOF SPAN RATING (MAXIMUM SUPPORT SPACING CENTER-TO-CENTER)		SPACING OF SUPPORTS CENTER-CENTER		
	WITH EDGE SUPPORT	WITHOUT EDGE SUPPORT	16"	24"	32"
			ALLOWABLE ROOF LIVE LOAD (PSF)		
$\frac{3}{8}$ "	24"	20"	100	30	–
$\frac{7}{16}$ "	24"	24"	100	40	–
$\frac{15}{32}$ " , $\frac{1}{2}$ "	32"	28"	180	70	30
$\frac{19}{32}$ " , $\frac{5}{8}$ "	40"	32"	305	130	60

10 psf dead load is assumed.

Applies to panels 24" or wider applied over two or more spans.

Other thicknesses, support spacing or load conditions: see APA Design/Construction Guide, Residential and Commercial.

Edge-support: T&G edges, panel edge clips, lumber blocking or other.



MINIMUM FASTENING SCHEDULE—ROOFS
(closer nail spacing may be required in high wind zones)

PANEL THICKNESS ^(c)	NAIL SIZE	NAILING ^{(a)(b)}	
		MAXIMUM SPACING CENTER-TO-CENTER	
		SUPPORTED PANEL EDGES ^(d)	INTERMEDIATE SUPPORTS
5/16"–1"	8d	6"	12" ^(e)
1 1/8"	8d or 10d	6"	12" ^(e)

- (a) Use common smooth or deformed shank nails with panels to 1" thick. For 1 1/8" panels, use 8d ring- or screw-shank or 10d common smooth-shank nails.
- (b) Other code-approved fasteners may be used.
- (c) For stapling asphalt shingles to 5/16" and thicker panels, use staples with a 15/16" minimum crown width and a 1" leg length. Space according to shingle manufacturer's recommendations.
- (d) Fasteners shall be located a minimum 3/8" from panel edges.
- (e) For spans 48" or greater, space nails 6" oc at all supports.

Flooring

AinsworthEngineered flooring is available in two grades.

APA Performance Rated Sheathing is approved for use as sub-flooring and is available unsanded with square edge or T&G profile. Also available are APA Rated Sturd-I-Floor panels. Sturd-I-Floor panels are available square edge or T&G. The T&G profile machined into *AinsworthEngineered* flooring products is expressly designed to fit snugly and provide maximum strength and stiffness. The flooring also provides a durable, dimensionally stable base for adding a separate underlay material.

AinsworthEngineered 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.

INSTALLATION

Install in accordance with APA application guidelines for maximum performance.

Use additional layer of manufacturer-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 3/8" from panel edges.

Leave 1/8" gap at all panel edges to allow for normal expansion.



FLOOR LOADS AND SPAN RATINGS

Recommended Uniform Floor Live Loads for APA Rated Sturd-I-Floor and APA Performance Rated Sheathing with Long Dimension Perpendicular to Supports

PANEL THICKNESS	SPAN RATING (MAXIMUM JOIST SPACING CENTER-TO-CENTER)	JOIST SPACING							
		12"	16"	20"	24"	32"	40"	48"	
		ALLOWABLE LIVE LOADS (PSF)							
19/32", 5/8"	20"	270	150	100	–	–	–	–	
23/32", 3/4"	24"	430	240	160	100	–	–	–	
7/8"	32"	–	430	295	185	100	–	–	
1 1/8"	48"	–	–	460	290	160	100	55	

10 psf dead load assumed. Live load deflection limit is span/360. Applies to panels 24" or wider applied over two or more spans. All panels must be T&G or be supported with blocking. Other thicknesses, joist spacing or load conditions: see APA Design/Construction Guide, Residential and Commercial.

Note

Floor stiffness is increased appreciably over conventional construction, particularly when T&G joints are glued and by following the APA's recommendations for installing a glued floor system.

MINIMUM FASTENING SCHEDULE—FLOORS

APA RATED STURD-I-FLOOR		FASTENING: GLUE-NAILED ^b		FASTENING: NAILED-ONLY	
		MAXIMUM SPACING ^d		MAXIMUM SPACING ^d	
SPAN RATING (MAXIMUM JOIST SPACING)	PANEL THICKNESS ^a	SUPPORTED PANEL EDGES ^c	INTERMEDIATE SUPPORTS	SUPPORTED PANEL EDGES ^c	INTERMEDIATE SUPPORTS
16"	19/32", 5/8"	12"	12"	6"	12"
20"	19/32", 5/8"	12"	12"	6"	12"
24"	23/32", 3/4"	12"	12"	6"	12"
24"	7/8"	6"	12"	6"	12"
32"	7/8"	6"	12"	6"	12"
48"	1 3/32", 1 1/8"	6"	6"	6"	6"

- (a) Panels in a given thickness may be manufactured in more than one Span Rating. Panels with a Span Rating greater than the actual joist spacing may be substituted for panels of the same thickness with a Span Rating matching the actual joist spacing. For example, 19/32" thick Sturd-I-Floor 20 oc may be substituted for 19/32" inch-thick Sturd-I-Floor 16 oc over joists 16" on center.
- (b) Use only adhesives conforming to APA Specification AFG-01 or ASTM D3498, applied in accordance with the adhesive manufacturer's recommendations. If OSB panels with sealed surfaces and edges are to be used, use only solvent-based glues; check with panel manufacturer.
- (c) Supported panel joints shall occur approximately along the centerline of framing with a minimum bearing of 1/2". Fasten panels 3/8" from panel edges.
- (d) Closer nail spacing may be required where floor is engineered as a diaphragm.



CARE AND HANDLING

Wall sheathing

AinsworthEngineered OSB wall sheathing is offered in a wide range of custom sizes, as oversized panels and in various thicknesses to meet building code wall sheathing requirements for bending and racking strength.

INSTALLATION

Select the appropriate *AinsworthEngineered* OSB panel thickness or span rating for the application.

Fasten directly to framing members.

Wall sheathing may be installed horizontally or vertically.

Leave 1/8" gap at all panel ends and edges.

Nail spacing should be more than 6" on center along panel edges and 12" on center along intermediate supports.

Fasteners shall be located a minimum 3/8" from panel edges.

APA PANEL WALL SHEATHING

(APA rated sheathing panels continuous over two or more spans)

PANEL SPAN RATING	MAXIMUM STUD SPACING	NAIL SIZE ^{b,c}	MAXIMUM NAIL SPACING ^e	
			SUPPORTED PANEL EDGES ^d	INTERMEDIATE SUPPORTS
12/0, 16/0, 20/0 OR Wall-16 OC	16"	6d for panels 1/2" thick or less; 8d for thicker panels	6"	12"
24/0, 24/16, 32/16 OR Wall-24 OC	24"			

- (a) See APA Construction Guide for requirements for nailable panel sheathing when exterior covering is to be nailed to sheathing.
- (b) Common, smooth, annular, spiral-thread, or galvanized box.
- (c) Other code-approved fasteners may be used.
- (d) Fasteners shall be located 3/8" from panel edges.
- (e) More closely spaced nailing may be required where wall is engineered as a shear wall.

All *AinsworthEngineered* OSB is carefully packaged to stay free from moisture and contaminants during storage and shipping, to arrive in the same optimal condition as it left the plant. Once it arrives at its destination, the following procedures are recommended:

Keep panels in units until installation.

Store indoors or under cover whenever possible.

If stored outdoors, set bundles on a flat base above ground and cover with plastic wrap or tarp, ensuring adequate air circulation.

Avoid extended exposure to moisture.

Acclimatize panels for a period of 24 hours (time may vary with climatic conditions at the job site).

Cut steel banding during storage to avoid edge damage.

Avoid dropping panels on edges or corners.

Protect bundles from forklift damage.

Loading options

- Boxcars
- Center beam cars
- Flat cars
- Containers
- All sizes of trucks including vans





In addition to flooring and sheathing, **AinsworthEngineered** OSB is custom-manufactured and preferred as webstock for the manufacture of I-joists used in engineered floor systems.

For over half a century, Ainsworth has been respected as a successful enterprise built by ingenious, resourceful people who take pride in their work. Known for its innovation, quality and service, the company today supplies markets worldwide with specialty and commodity OSB and OSL as well as specialty plywood for concrete forming and other industrial applications.

“One of the premier manufacturers of OSB, Ainsworth manufactures a top-quality product line. They’re dependable on shipping times, fairly priced and handle requests quickly. Their consistent performance as a supplier helps bring in repeat business to us, as our customers want Ainsworth products. Ainsworth is a winner.”

MIKE BEYMER, PANEL PRODUCTS MANAGER, AMERICAN INTERNATIONAL FOREST PRODUCTS, PORTLAND, OREGON

“Over the last few years, Boise Cascade Corporation has received exceptional service from Ainsworth, enabling us to respond quickly to a very dynamic market. This high level of trust and cooperation makes for superior performance.”

TAYLOR RICHEYSON, TIMBER AND WOOD PRODUCTS DIVISION, BOISE CASCADE CORPORATION, WESTERN OREGON REGION

“Mayfair Lumber Sales has had a long and successful relationship with Ainsworth. High-quality products, competitive pricing and superior service are terms that are synonymous with the Ainsworth name.”

KERRY BRETT, VICE PRESIDENT, MAYFAIR LUMBER SALES LTD., EDMONTON, ALBERTA

Ainsworth®

Engineered Performance for the World of Wood®

For more information on **AinsworthEngineered®** oriented strand board or to find the distributor nearest you, please contact:

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