

Glulam Product Overview

ALASKA YELLOW CEDAR | DOUGLAS-FIR | SOUTHERN YELLOW PINE | HEM-FIR





Western Forest Products

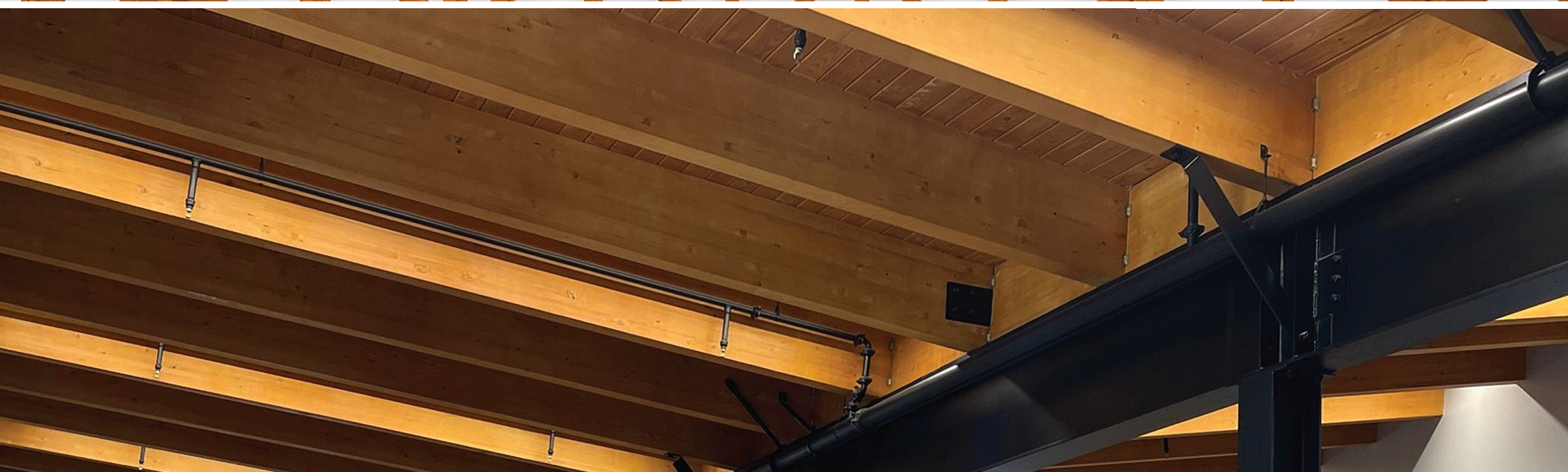
Experience & Products You Can Trust

**The practical,
cost-effective, and
renewable choice.**

Western Forest Products brings more than 65 years of experience producing high-quality glued laminated products. Our two manufacturing plants in the Pacific Northwest – Washougal and Vancouver, Washington – produce glulam for industrial, commercial and residential projects around the world.

Our production capabilities provide customers with great flexibility and versatility. Products include straight beams and columns for commercial projects, curved and arched glulam for custom applications, stock beams, high-strength GL3000 beams for engineered floor systems, fabricated beams and glulam trusses, high-quality export beams, turned round columns, and many other custom products. Our glulam experts are one call away for your next project.

As one of the oldest continuous glulam manufacturers in the U.S., we are proud of our long-standing reputation for good service and high quality. As a member of APA – Engineered Wood Systems (APA-EWS), all beams are produced to the highest quality requirements of the American National Standards Institute (ANSI) Standard A190.1. We are also JAS and CSA certified. Our facility is chain of custody certified to both the Forest Stewardship Council® (FSC®) and the Programme for the Endorsement of Forest Certifications (PEFC) schemes. This gives us the option to sell our product as FSC and PEFC certified. In addition, our products are approved for usage in local jurisdictions including the cities of Los Angeles, Seattle, and others.



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Alaska Yellow Cedar Glulam

Grown in mid- and high-elevation forests in coastal British Columbia, Alaska yellow cedar is a resilient and slow-growing tree that produces some of the most beautiful and durable wood on the planet.



Alaska Yellow Cedar glulam, unmatched durability and performance for structural and architectural applications

Alaska Yellow Cedar (AYC) has earned a reputation as one of the most durable and stable softwoods available in North America. When manufactured into glulam, AYC offers a rare combination of long term outdoor performance, exceptional dimensional stability, and a clean, elegant appearance that sets it apart in both structural and architectural design

Superior Stability and workability

AYC's fine, even grain and slow growth contribute to exceptional dimensional stability. Glulam manufactured from Alaska Yellow Cedar resists checking, movement, and warping, making it ideal for precision applications where consistent performance over time is critical. Its smooth machining characteristics also support tight tolerances and high quality finishes.

Product	Straight Glulam	Curved & Arched Glulam	Straight Columns	Turned Round Columns
Grade	20F-V12 20F-V13 22F-V/AC1 22F-V/AC2		Combo 69, 70, or 71	
Length	Up to 85'		Up to 85'	Up to 50'
Width/Diameter	Up to 24"		Up to 24" <small>custom sizes may be available</small>	Up to 24"
Depth	Up to 55" <small>custom sizes may be available</small>		Up to 24" <small>custom sizes may be available</small>	Up to 24"

Clean, Refined Appearance for Exposed Applications

With a pale yellow color that ages into a distinguished silver gray patina outdoors, Alaska Yellow Cedar offers a naturally elegant look. Its uniform texture and subtle grain make it a favored choice for exposed glulam elements in civic buildings, cultural spaces, and premium residential projects. AYC can be left unfinished or coated, depending on the desired aesthetic.

Naturally Durable, Built for Harsh Environments

Alaska Yellow Cedar heartwood is renowned for its inherent decay resistance and ability to withstand moisture, insects, and marine exposure without chemical treatment. These natural properties make AYC glulam an outstanding choice for exterior structures, coastal and high humidity environments, and any application where longevity is essential. From pedestrian bridges to exposed beams in wet or freeze thaw climates, AYC has a proven track record of weathering the elements with minimal degradation.

Manufacturing Information

Western Forest Products is certified by APA to make glued structural laminated yellow cedar timbers under the following standards:

- ANSI A190.1 American National Standard for Structural Glued Laminated Timber.
- CSA Standard O122 Structural Glued Laminated Timber.
- CSA Standard O177 Qualification Code for Manufacturers of Structural Glued Laminated Timber.
- Japanese Agricultural Standard for Structural Glulam.

Protection and Delivery:

- Individual packaging, bundle packaging, load packaging.
- Special edge protection and crate packaging available.
- On-site export container loading.

Adhesive:

- Western uses a waterproof glue designed for exterior use, urea free and compliant with ANSI 405 standards. PRF is standard and clear melamine adhesive is available.

Alaska Yellow Cedar glulam combines natural durability, stability, and refined aesthetics, delivering long lasting performance in some of the most demanding and design sensitive applications.



ALASKA YELLOW CEDAR GLULAM STRENGTH TABLE

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Photo Credits: Peter Maier / StructureCraft





Combination Symbols	Species Outer/ Core	Bal/ Unbal	Bending About X-X Axis (Loaded Perpendicular to Wide Faces of Laminations)									Bending About Y-Y Axis (Loaded Parallel to Wide Faces of Laminations)						Axially Loaded		Fasteners	
			Extreme Fiber in Bending		Compression Perpendicular to Grain		Shear Parallel to Grain	Modulus of Elasticity	Extreme Fiber in Bending	Compression Perpendicular to Grain	Shear Parallel to Grain	Modulus of Elasticity	Tension Parallel to Grain	Compression Parallel to Grain	Specific Gravity for Fastener Design						
			Bottom of Beam Stressed in Tension (Positive Bending)	Top of Beam Stressed in Tension (Negative Bending)	Tension Face	Compression Face									Top or Bottom Face	Side Face					
			$F_{bx,+}$ (psi)	$F_{bx,-}$ (psi)	$F_{c,x}$ (psi)	F_{vx} (psi)	$E_{x,true}$ (10 ⁹ psi)	$E_{x,app}$ (10 ⁹ psi)	$E_{x,min}$ (10 ⁹ psi)	F_{by} (psi)	$F_{c,y}$ (psi)	F_{vy} (psi)	$E_{y,true}$ (10 ⁹ psi)	$E_{y,app}$ (10 ⁹ psi)	$E_{y,min}$ (10 ⁹ psi)	F_t (psi)	F_c (psi)	G			
20F-V12	AC/AC	U	2000	1400	560	560	265	1.6	1.5	0.79	1250	470	230	1.5	1.4	0.74	925	1500	0.46	0.46	
20F-V13	AC/AC	B	2000	2000	560	560	265	1.6	1.5	0.79	1250	470	230	1.5	1.4	0.74	950	1550	0.46	0.46	
22F-V/AC1	AC/AC	U	2200	1400	560	550	265	1.6	1.5	0.79	1250	470	230	1.5	1.4	0.74	975	1500	0.46	0.46	
22F-V/AC2	AC/AC	B	2200	2200	560	550	265	1.7	1.6	0.85	1450	470	230	1.5	1.4	0.74	1050	1600	0.46	0.46	



Douglas-fir Glulam

Found along the southern mainland coast of British Columbia and across Vancouver Island, coastal Douglas-fir is known to reach impressively large heights and produce **one of the strongest softwoods available.**



Product	Straight Glulam 	Curved & Arched Glulam 	Straight Columns 	Turned Round Columns 
Grade	24F-V4 24F-V8 26F-V1 26F-V2		Combo 1, 2, 3, or 5	
Length	Up to 85'		Up to 85'	Up to 50'
Width/Diameter	Up to 24"		Up to 24" <small>custom sizes may be available</small>	Up to 24"
Depth	Up to 55" <small>custom sizes may be available</small>		Up to 24" <small>custom sizes may be available</small>	Up to 24"

A Resilient Material for Varied Environments

Thanks to its natural dimensional stability and low tendency to warp or twist, Douglas fir glulam maintains its shape and performance in a wide range of climates. Whether used in interior spaces or in protected exterior conditions, it delivers long term reliability with minimal movement, helping ensure the longevity of the entire structural system.

Engineered for Efficient Fabrication and Installation

Douglas fir bonds exceptionally well during manufacturing, resulting in strong, uniform laminations with high quality and consistency. This makes Douglas fir glulam particularly well suited for precision fabrication, curved members, and custom shaped components. Its strength to weight profile also supports efficient transportation and installation on busy project sites.

Manufacturing Information

Western Forest Products is certified by APA to make glued structural laminated Douglas-fir timbers under the following standards:

- ANSI A190.1 American National Standard for Structural Glued Laminated Timber.
- CSA Standard O122 Structural Glued Laminated Timber.
- CSA Standard O177 Qualification Code for Manufacturers of Structural Glued Laminated Timber.
- Japanese Agricultural Standard for Structural Glulam.

Protection and Delivery:

- Individual packaging, bundle packaging, load packaging.
- Special edge protection and crate packaging available.
- On-site export container loading.

Adhesive:

- Western uses a waterproof glue designed for exterior use, urea free and compliant with ANSI 405 standards. PRF is standard and clear melamine adhesive is available.

Douglas fir glulam, dependable strength and consistent performance for modern structural design.

Douglas fir has long been recognized as one of the premier softwood species used in engineered wood products. With its high strength, stiffness, and excellent bonding characteristics, Douglas fir glulam provides reliable performance across a wide range of structural applications, from long span beams to intricate architectural systems.

Consistent Structural Reliability

Douglas fir offers some of the highest bending strength and modulus of elasticity among commonly used softwoods, giving glulam made from this species a strong foundation for demanding load bearing designs. Engineers value its predictable performance, making Douglas fir glulam a top choice for commercial, industrial, and residential projects requiring proven structural integrity.

Douglas fir glulam delivers a trusted combination of strength, stability, and visual appeal, ideal for projects where structural performance and design quality must work together.



DOUGLAS-FIR GLULAM STRENGTH TABLE

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Combination Symbols	Species Outer/ Core	Bal/ Unbal	Bending About X-X Axis (Loaded Perpendicular to Wide Faces of Laminations)									Bending About Y-Y Axis (Loaded Parallel to Wide Faces of Laminations)						Axially Loaded		Fasteners	
			Extreme Fiber in Bending		Compression Perpendicular to Grain		Shear Parallel to Grain	Modulus of Elasticity			Extreme Fiber in Bending	Compression Perpendicular to Grain	Shear Parallel to Grain	Modulus of Elasticity			Tension Parallel to Grain	Compression Parallel to Grain	Specific Gravity for Fastener Design		
			Bottom of Beam Stressed in Tension (Positive Bending)	Top of Beam Stressed in Tension (Negative Bending)	Tension Face	Compression Face													Top or Bottom Face	Side Face	
			F_{bx+} (psi)	F_{bx-} (psi)	F_{cx} (psi)	F_{vx} (psi)	$E_{x true}$ (10 ⁶ psi)	$E_{x app}$ (10 ⁶ psi)	$E_{x min}$ (10 ⁶ psi)	F_{by} (psi)	F_{cy} (psi)	F_{vy} (psi)	$E_{y true}$ (10 ⁶ psi)	$E_{y app}$ (10 ⁶ psi)	$E_{y min}$ (10 ⁶ psi)	F_t (psi)	F_c (psi)	G			
24F-V4	DF/DF	U	2400	1850	650	650	265	1.9	1.8	0.95	1450	560	230	1.7	1.6	0.85	1100	1650	0.50	0.50	
24F-V8	DF/DF	B	2400	2400	650	650	265	1.9	1.8	0.95	1550	560	230	1.7	1.6	0.85	1100	1650	0.50	0.50	
26F-V1	DF/DF	U	2600	1950	650	650	265	2.1	2.0	1.06	1850	560	230	1.9	1.8	0.95	1350	1850	0.50	0.50	
26F-V2	DF/DF	B	2600	2600	650	650	265	2.1	2.0	1.06	1850	560	230	1.9	1.8	0.95	1350	1850	0.50	0.50	



Southern Yellow Pine Glulam

Southern Yellow Pine (SYP) has been a cornerstone of structural construction across the U.S., valued for its **high density, impressive mechanical properties, and reliable performance in demanding environments.**



Product	Straight Glulam	Curved & Arched Glulam	Straight Columns	Turned Round Columns
Grade	24F-V4 24F-V8 26F-V1 26F-V2		Combo 1, 2, 3, or 5	
Length	Up to 85'		Up to 85'	Up to 50'
Width/Diameter	Up to 24"		Up to 24" <small>custom sizes may be available</small>	Up to 24"
Depth	Up to 55" <small>custom sizes may be available</small>		Up to 24" <small>custom sizes may be available</small>	Up to 24"

Built for Load Bearing Performance

Southern Yellow Pine is one of the strongest softwood species commonly used in engineered wood. Its high density and stiffness allow SYP glulam to carry significant loads while maintaining predictable deflection and long term stability. For designers seeking structural efficiency in both standard and custom applications, SYP offers a dependable solution backed by decades of field use.

Ideal for Treated Applications and Exposed Environments

What truly sets Southern Yellow Pine apart is its exceptional treatability. The wood's cellular structure readily accepts preservatives, making SYP glulam highly suitable for outdoor, high moisture, and ground contact applications when properly treated. This makes it an excellent choice for bridges, decks, utility structures, and other environments where durability is essential.

Manufacturing Information

Western Forest Products is certified by APA to make glued structural laminated Douglas-fir timbers under the following standards:

- ANSI A190.1 American National Standard for Structural Glued Laminated Timber.
- CSA Standard O122 Structural Glued Laminated Timber.
- CSA Standard O177 Qualification Code for Manufacturers of Structural Glued Laminated Timber.
- Japanese Agricultural Standard for Structural Glulam.

Protection and Delivery:

- Individual packaging, bundle packaging, load packaging.
- Special edge protection and crate packaging available.
- On-site export container loading.

Adhesive:

- Western uses a waterproof glue designed for exterior use, urea free and compliant with ANSI 405 standards. PRF is standard and clear melamine adhesive is available.

Southern Yellow Pine glulam, engineered strength rooted in the Southeast's most dependable timber resource.

With a naturally warm, golden tone and pronounced grain pattern, Southern Yellow Pine provides a distinctive appearance that can enhance interior and exterior designs. SYP glulam performs equally well as a hidden structural element or an exposed architectural feature.

Warmth Meets Versatility

With a naturally warm, golden tone and pronounced grain pattern, Southern Yellow Pine provides a distinctive appearance that can enhance interior and exterior designs. SYP glulam performs equally well as a hidden structural element or an exposed architectural feature.

Southern Yellow Pine glulam delivers the strength, durability, and versatility needed for modern construction, supported by a long tradition of performance in some of the most demanding applications.



SOUTHERN YELLOW PINE GLULAM STRENGTH TABLE

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Combination Symbols	Species Outer/ Core	Bal/ Unbal	Bending About X-X Axis (Loaded Perpendicular to Wide Faces of Laminations)									Bending About Y-Y Axis (Loaded Parallel to Wide Faces of Laminations)					Axially Loaded		Fasteners	
			Extreme Fiber in Bending		Compression Perpendicular to Grain		Shear Parallel to Grain	Modulus of Elasticity			Extreme Fiber in Bending	Compression Perpendicular to Grain	Shear Parallel to Grain	Modulus of Elasticity			Tension Parallel to Grain	Compression Parallel to Grain	Specific Gravity for Fastener Design	
			Bottom of Beam Stressed in Tension (Positive Bending)	Top of Beam Stressed in Tension (Negative Bending)	Tension Face	Compression Face													Top or Bottom Face	Side Face
			F_{bx+} (psi)	F_{bx-} (psi)	F_{cx} (psi)		F_{vx} (psi)	$E_{x true}$ (10 ⁶ psi)	$E_{x app}$ (10 ⁶ psi)	$E_{x min}$ (10 ⁶ psi)	F_{by} (psi)	F_{cy} (psi)	F_{vy} (psi)	$E_{y true}$ (10 ⁶ psi)	$E_{y app}$ (10 ⁶ psi)	$E_{y min}$ (10 ⁶ psi)	F_t (psi)	F_c (psi)	G	
20F-V3	SP/SP	U	2000	1450	650	650	300	1.6	1.5	0.79	1600	650	260	1.6	1.5	0.79	1000	1400	0.55	0.55
20F-V5	SP/SP	B	2000	2000	740	740	300	1.7	1.6	0.85	1450	650	260	1.5	1.4	0.74	1050	1500	0.55	0.55
24F-V4	SP/SP	U	2400	1650	740	650	210	1.8	1.7	0.9	1350	470	230	1.6	1.5	0.79	975	1350	0.55	0.43
24F-V8	SP/SP	B	2400	2400	740	740	300	1.9	1.8	0.95	1700	650	260	1.7	1.6	0.85	1150	1650	0.55	0.55



Hem-fir Glulam

Hem-fir is a combination of Western Hemlock and true firs. Virtually identical in appearance, this is an extremely versatile species group useful for many structural and appearance applications.



Product	Straight Glulam	Curved & Arched Glulam	Straight Columns	Turned Round Columns
Grade	24F-E15 24F-E11			-
Dimensions available upon request.				

Tailored Solutions

Our manufacturing capabilities can be adapted to your project's needs, and include a range of products such as large, straight beams, and columns for commercial projects, curved and arched glulam for custom applications, turned round columns, and other custom options. Hem-fir glulam stands out as a naturally durable and attractive alternative to building substitutes like concrete or steel.

Resistant to Decay, Earthquakes and Fire

Hem-fir's natural elasticity, strength and lighter weight combined with good seismic design, give mass timber buildings an advantage during an earthquake.

Glulam's fire safety is well established, and it has more than 70 years of in-service use in commercial and residential buildings, combined with extensive testing. In the event of a fire, our glulam products form a naturally protective charring layer while retaining strength.

Manufacturing Information

Western Forest Products is certified by APA to make glued structural laminated hem-fir timbers under the following standard:

- ANSI A190.1 American National Standard for Structural Glued Laminated Timber.

Protection and Delivery:

- Individual packaging, bundle packaging, load packaging.
- Special edge protection and crate packaging available.
- On-site export container loading.

Adhesive:

- WFP uses a waterproof glue designed for exterior use, urea free and compliant with ANSI 405 standards. PRF is standard and clear melamine adhesive is available.

High-quality Hem-fir glue-laminated timber (glulam) for industrial, commercial and residential projects.

Hem-fir is considered a cost-effective option while maintaining high strength values. The combination of hem-fir's light color tone and high structural performance makes it the smart choice for projects where both robust strength and maintaining a budget are essential.

Visually Appealing Alternative

Hem-Fir is often considered by those seeking wood with a very light color. It is as light in color as other whitewood species with good strength characteristics.

Hem-fir provides the versatility for projects that demand a product with an excellent mix of performance and value.



HEM-FIR GLULAM STRENGTH TABLE

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Combination Symbols	Species Outer/ Core	Bal/ Unbal	Bending About X-X Axis (Loaded Perpendicular to Wide Faces of Laminations)									Bending About Y-Y Axis (Loaded Parallel to Wide Faces of Laminations)				Axially Loaded		Fasteners		
			Extreme Fiber in Bending		Compression Perpendicular to Grain		Shear Parallel to Grain	Modulus of Elasticity			Extreme Fiber in Bending	Compression Perpendicular to Grain	Shear Parallel to Grain	Modulus of Elasticity			Tension Parallel to Grain	Compression Parallel to Grain	Specific Gravity for Fastener Design	
			Bottom of Beam Stressed in Tension (Positive Bending)	Top of Beam Stressed in Tension (Negative Bending)	Tension Face	Compression Face													Top or Bottom Face	Side Face
			F_{bx+} (psi)	F_{bx-} (psi)	F_{cx} (psi)	F_{vx} (psi)	$E_{x\ true}$ (10^6 psi)	$E_{x\ app}$ (10^6 psi)	$E_{x\ min}$ (10^6 psi)	F_{by} (psi)	F_{cy} (psi)	F_{vy} (psi)	$E_{y\ true}$ (10^6 psi)	$E_{y\ app}$ (10^6 psi)	$E_{y\ min}$ (10^6 psi)	F_t (psi)	F_c (psi)	G		
24F-E15	HF/HF	U	2400	1600	500	500	215	1.9	1.8	0.95	1200	375	190	1.6	1.5	0.79	975	1500	0.43	0.43
24F-E11	HF/HF	B	2400	2400	500	500	215	1.9	1.8	0.95	1550	375	190	1.6	1.5	0.79	1150	1550	0.43	0.43



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Use the QR code to view our complete product line.

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Western Forest Products® is a leading forest products company that manufactures high-quality wood products.

Headquartered in Vancouver, British Columbia with operations in the coastal region of BC and Washington State, Western Forest Products meets the needs of customers worldwide with a specialty wood products focus and diverse product offering.

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