



ALL SPECIES

EXTERIOR PATIO DECKING Rough or Surfaced - K.D., A.D. or Unseasoned 5/4" to 2" Thicknesses, 4" & wider For Flatwise Load Applications Where Spans Are Not To Exceed 16" On Centre

126. Exterior Patio Decking is produced to standard sizes (See Para. 820b) with the option of radius edges per buyer's specification.

There are two grades of Exterior Patio Decking: "**SELECT PATIO**" and "**COMMERCIAL PATIO**."



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126a. "SELECT PATIO"

Unless otherwise specified, characteristics on the reverse face may be one grade lower ("Commercial Patio").

Characteristics permitted and limiting provisions shall be:

Checks	- medium
Compression	
Wood	- shall be limited in effect to other appearance or strength reducing characteristics permitted in the grade.
Heart Stain	- firm.
Holes	- pin to small in size, equivalent to chipped knots.
Manufacture	- Standard "D." See Para. 722d.
Peck (Cedar)	- reverse face, small spots or streaks limited to 1/6 the width.
Pin Holes	- limited.
Pitch	- light.
Pitch Streak	- 1 small.
Pockets	- bark - medium. - pitch - small.
Sapstain	- medium.
Shake	- light - several along length, none through. If through at ends, limited to splits.
Skip	- very light, 1 per 12'. Light on reverse face and edges.
Slope of Grain	- 1 in 8.
Splits	- short.



⊕

ALL SPECIES

- Wane - reverse face only, 1/2 the thickness and 1/3 the width.
- Warp - light.
- Knots - sound and tight are permitted in the following sizes. Measurements as per Para. 320a.

Nom. Width	Knot Sizes
4"	1 1/2"
5"	2"
6"	2 1/2"
8"	3"
10"	3 1/2"
12"	4"

- Spike & Narrow
- Face Knots - limited to equivalent displacement.
Measurements as per Para. 320b.
- Chipped Knots - not to exceed 1/3 thickness, 2 per 12'.

126b. "COMMERCIAL PATIO"

⊕ Unless otherwise specified, characteristics on the reverse face may be 25% larger or more numerous than those permitted on the face. ⊕

Characteristics permitted and limiting provisions shall be:

- Checks - not limited.
- Compression Wood - limited in effect to other appearance or strength reducing characteristics permitted in the grade.
- Grub/Teredo Holes - As per Part 2 - NLGA Interpretations
- Honeycomb - reverse face: firm, small spots or streaks limited to 1/6 the width.
- Manufacture - Standard "F." See Para 722f.
- Peck (Cedar) - reverse face in spots or streaks limited to 1/3 the width.
- Pin Holes - not limited.
- Pitch - not limited.
- Pitch Streaks - not limited.
- Pockets - Bark pocket - large.
Pitch pocket - medium.
- Shake - medium, 1/4 length, none through. If through at ends, limited to splits.

ALL SPECIES

- Skip - light on face, 2 per 12'. Hit and miss $\frac{1}{32}$ " on reverse face. Medium on edges.
- Slope of Grain - 1 in 8 for 4" wide lumber and 1 in 6 for wider widths up to 12".
- Splits - medium.
- Stained Wood - firm.
- Wane - reverse face only, $\frac{1}{2}$ thickness & $\frac{1}{3}$ width or equivalent on each face, provided that wane not exceed $\frac{2}{3}$ thickness or $\frac{1}{2}$ width for up to $\frac{1}{4}$ the length.
- Warp - medium.
- White Speck - firm, $\frac{1}{3}$ volume. Reverse face, firm.
- Knots - permitted in the following sizes. Measurements as per Para. 320a.

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Nom. Width	Sound & Tight Knots	Unsound, Loose & Holes *
4"	2"	$\frac{3}{4}$ "
5"	$2\frac{1}{2}$ "	1"
6"	3"	$1\frac{1}{4}$ "
8"	$3\frac{1}{2}$ "	$1\frac{1}{2}$ "
10"	4"	$1\frac{3}{4}$ "
12"	$4\frac{1}{2}$ "	2"

* One hole or equivalent smaller holes per 12'

- Spike & Narrow
- Face Knots - limited to equivalent displacement. Measurements as per Para. 320b.


ALL SPECIES

DECKING
2" to 4" Thick, 4" & Wider

127. Decking is widely used for walls or roofs where appearance and load-bearing features are important. Moisture content is subject to special agreement.

Orders may specify "Square End Trim" as per Para. 749.

Decking is usually surfaced with a single tongue and groove pattern in 2" thicknesses and a double tongue and groove pattern in 3" & 4" thicknesses, with edge "V" one side.

The side with the "V" or "pattern" shall be considered the face side.

There are two grades of Decking: "**SELECT DECKING**" and "**COMMERCIAL DECKING.**"

127b. "SELECT DECKING"

Characteristics and limiting provisions are:

- Checks - medium.
- Crook - light, occasional piece.
- Holes - equivalent to chipped knots.
- Pitch - light, or equivalent, very small streak.
- Pockets - Bark: medium. Pitch: very small, dry.
- Rate of Growth - medium grain, Douglas Fir & Western Larch only. See Para. 350a.
- Skips - very light, maximum 10% of face in occasional pieces.
- Slope of Grain - 1 in 10.
- Splits - short, occasional piece.
- Stained Wood - medium.
- Tongue - $\frac{1}{16}$ " scant, occasional piece.
- Torn or Raised Grain - medium.
- Twist - very light, occasional piece.
- Knots - sound and tight on exposed face, well-spaced.

Measurements as per Para. 320a.

Nom. Width	Knot Size (both faces)	3 x 6 & 4 x 6 Knot Sizes
4"	1 $\frac{1}{2}$ "	
6"	2 $\frac{3}{8}$ "	2 $\frac{1}{2}$ "
8"	3 $\frac{1}{4}$ "	
10"	4"	
12"	5"	



ALL SPECIES

Spike & Narrow

- Face knots - equivalent. In occasional pieces, firm and tight knots not exceeding $1\frac{1}{2}$ " in diameter are permitted if not through the piece and limited to 2 per 12 lin. ft. or equivalent smaller.
- Knots - may contain chipped or unsound spots of approximately $\frac{3}{4}$ " in diameter not through, 2 per 12 lin. ft. or equivalent smaller.

Back &



- Unexposed Edges - hit & miss skips, wane approximately $\frac{1}{3}$ face and other characteristics which do not affect the intended end use.

In WR Cedar, peck is permitted on back and unexposed edges in narrow streaks well scattered which do not affect the strength more than other characteristics allowed.

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127c. "COMMERCIAL DECKING"

Characteristics and limiting provisions are:

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- Checks - not limited.
- Crook - medium on occasional piece.
- Holes - 1".
- Pitch - streaks.
- Pockets - bark or pitch.
- Rate of Growth - medium grain in Douglas Fir and Western Larch only. See Para. 350a.
- Shake - not serious.
- Skips - hit & miss.
- Slope of Grain - 1 in 8.
- Splits - $\frac{1}{6}$ length.
- Stained Wood - not limited.
- Torn Grain - not limited.
- Tongue - $\frac{1}{16}$ " scant.
- Twist - very light on occasional piece.
- Unsound Wood - in small spots or streaks up to 1" wide on any face. In WR Cedar spots or streaks of peck $\frac{1}{3}$ of any face.
- Wane - $\frac{1}{6}$ face width.
- White Specks - $\frac{1}{3}$ width or equivalent.



ALL SPECIES

Knots - well-spaced. Measurement as per Para. 320a.

Nom. Width	Knot Size (both faces)	3 x 6 & 4 x 6 Knot Size
4"	1 ³ / ₄ "	
6"	2 ⁷ / ₈ "	3"
8"	3 ³ / ₄ "	
10"	4 ⁷ / ₈ "	
12"	6"	

Spike or Narrow

Face knots - equivalent.

Chipped &

Broken-out Knots - approximately 1¹/₂" in diameter not through.

Back & Unexposed

Edges - wane approximately 1/3 face and other characteristics not affecting intended end use.



ALL SPECIES

MACHINE GRADED LUMBER 2" and less in thickness, 2" & wider

128. GENERAL

The grading of lumber by mechanical means is recognized as an acceptable method of grading. All equipment and methods shall be approved and certified by the ALSC Board of Review and the CLSAB Board of Directors.

There are three (3) classifications of machine graded lumber: “**MACHINE STRESS-RATED LUMBER**” (**MSR**), “**MACHINE EVALUATED LUMBER**” (**MEL**), & **E-LAM LUMBER** of which there are two (2) categories: “**E-RATED STRUCTURAL LAMINATION LUMBER**” and “**MSR/MEL TENSION LAMINATION LUMBER**”.

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Grades of MSR and MEL and their allowable design values are to be established by the rules writing agencies and are shown in Para. 910 (for use in the U.S.). Grades of MSR/MEL Tension Lamination lumber and their allowable design values are the same as MSR and/or MEL.

For use in Canada, design values are established by the CSA Technical Committee on Engineering Design in Wood. Grades of MSR, MEL and E-Rated Structural Lamination Lumber and their characteristic property values are referenced in the NLGA Special Products Standard (**SPS 2**). Grades of MSR and MEL may be produced with alternate design value assignments when provided for in the NLGA rules.

For use in the U.S., assigned specific gravity (based on oven-dry weight and volume) and compression perpendicular to grain ($F_{C_{perp}}$) design values for MSR and MEL are provided in Para. 910.

When the specific gravity (**SG**) for a grade (based on oven-dry weight and volume) exceeds the value for the species average shown in Para. 910 (for use in the U.S.) and is controlled as part of the qualification and daily quality control program, the allowable stress for compression perpendicular to grain ($F_{C_{perp}}$) and horizontal shear (F_v), may be calculated using the formula given in Para. 910 (for use in the U.S.). When qualified, the **SG** values must be included on the grade stamp indicating that these properties exceed the published value.





ALL SPECIES

Note: For the species combination for Spruce-Pine-Fir (S-P-F), if a grade of 2.OE is run in conjunction with a higher E grade(s) then specific gravity must be quality controlled for the 2.OE grade.

Strength reducing characteristics larger than those listed below for MSR and MEL are permitted provided the additional requirements outlined in the NLGA Special Products Standard **SPS 2** are followed and tension (**F_t**) qualification and daily quality control are performed. In such cases, the limiting size of the strength reducing characteristic shall be documented and included on the grade stamp.

When the grade stamp on Machine Graded Lumber includes the designation "**1W**", it signifies that the lumber has been visually graded to meet or exceed the optional "**1W**" wane limitations as described in the Para. 128a. or 128b. of the NLGA Grade Rules and Section 6 of SPS 2.

128a. MACHINE STRESS-RATED LUMBER (MSR)



Machine stress-rated lumber is lumber that has been evaluated by mechanical stress rating equipment. MSR lumber is distinguished from visually graded lumber in that each piece is nondestructively tested and marked to indicate the grade modulus of elasticity (**MOE**). MSR lumber is also required to meet the visual requirements set forth herein.

A grade mark on machine stress-rated lumber indicates that the stress rating system used meets the requirements of the grading agency's certification and quality control procedures. The grade mark shall show the agency trademark, the mill name or number, the phrase "**Machine Rated**" or "**MSR**," the species identification, the seasoning designation, and the "**E_g**" and "**F_b**" rating for the grade. The "**E**" rating is the rated modulus of elasticity in millions of pounds per square inch.

VISUAL RESTRICTIONS

Machine stress-rated lumber must be well manufactured and visually graded to limit certain characteristics even though the actual strength may not be affected. Characteristics permitted and limiting provisions shall be:

- | | |
|--------|--|
| Checks | - seasoning checks not limited. Through checks at ends are limited as splits. |
| Shake | - if through at ends, limited as splits. Away from ends through shakes up to 2' long, well separated. If not through, single shakes shall not exceed 3' or 1/4 the length, whichever is greater. |

ALL SPECIES

- Skips - hit & miss, with a maximum of 5% of the pieces containing hit or miss or heavy skip 2 feet or less in length. See Para. 720e, f and g.
- Splits - equal in length to $1\frac{1}{2}$ times the width of the piece.
- Slope of Grain - For grading machines⁽⁴⁾ not evaluating slope of grain, slope of grain shall be limited by the assigned allowable bending design value:
- 1 in 8 for 0 F_b to 1450 F_b ;
 - 1 in 10 for 1500 F_b to 2050 F_b ;
 - 1 in 12 for 2100 F_b & over.

⁽⁴⁾ Machines which measure MOE by deflection indirectly evaluate slope of grain.

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- Unsound Wood - (Excluding white specks) Small spots or streaks of firm honeycomb or peck are limited to $\frac{1}{6}$ the width. Any other unsound wood is limited to a spot $\frac{1}{12}$ the width and 2" in length or equivalent smaller.
- Wane - $\frac{1}{3}$ the thickness and $\frac{1}{3}$ the width full length, or equivalent on each face, provided that wane not exceed $\frac{2}{3}$ thickness or $\frac{1}{2}$ the width for up to $\frac{1}{4}$ the length. See Para. 750.
- Optional "1W" Wane - $\frac{1}{4}$ the thickness and $\frac{1}{4}$ the width full length, or equivalent on each face, provided that wane not exceed $\frac{1}{2}$ the thickness or $\frac{1}{3}$ width for up to $\frac{1}{4}$ the length. See Para. 750.
- Warp - light. See table, Para. 752.
- White Specks - firm, $\frac{1}{3}$ the face or equivalent

In addition to the visual limitation listed, knots, knot holes, burls or abnormal grain distortion, partially or wholly at edges of wide faces, shall not occupy more of the net cross-section than:

- $\frac{1}{2}$ for 0 F_b to 900 F_b ;
- $\frac{1}{3}$ for 950 F_b to 1450 F_b ;
- $\frac{1}{4}$ for 1500 F_b to 2050 F_b ;
- $\frac{1}{6}$ for 2100 F_b & over.

The ends of the lumber not tested by the stress-rating equipment shall be limited as follows:



- Edge Knots - as limited above;



ALL SPECIES

- Knots other than
Edge Knots - equal to the largest knot tested in the tested portion of the piece or the Edge Knot permitted in the next lower F_b class, whichever is greater;
- Cross-Section
Knots - the size or displacement of all knots in the same cross-section may not exceed the size of the permitted largest knot as described above;
- Slope of Grain - general slope of grain shall not exceed:
1 in 8 for 0 F_b to 1450 F_b ;
1 in 10 for 1500 F_b to 2050 F_b ;
1 in 12 for 2100 F_b & over.
- Other strength reducing characteristics, such as knot holes, burls or abnormal grain distortion, shall be considered the same as knots.

128b. MACHINE EVALUATED LUMBER (MEL)



Machine Evaluated Lumber (MEL) is lumber that has been non-destructively evaluated by ALSC or CLSAB approved grading machines to predict certain mechanical properties. The MEL machine evaluates each piece and shall be capable of sorting and marking the material into mechanical properties. MEL shall meet the MSR requirements with the exception of the minimum modulus of elasticity specification and shall meet the following requirements:

- tension (F_t) qualification and daily quality control is a mandatory requirement; and
- the process lower fifth percentile of edge bending MOE (E_{5th}) shall equal or exceed 0.75 times the characteristic mean MOE value for the grade E.

MEL is also required to meet certain visual requirements as set forth herein.

The grade stamp on Machine Evaluated Lumber indicates the stress rating system used meets requirements of the grading agency's certification and quality control procedures. The grade stamp will show the agency trademark, the mill number, the species identification, seasoning designation, and a grade code. The grade code references a specific set of allowable design values.

The allowable design values shown on the grade stamp will be fibre stress in bending (F_b), tension (F_t), average modulus of elasticity (E), and if applicable, specific gravity (SG).

ALL SPECIES

VISUAL RESTRICTIONS

Machine Evaluated Lumber must be well manufactured and visually graded to limit certain characteristics even though the actual strength may not be affected.

Characteristics permitted and limiting provisions shall be:

- Checks - seasoning checks not limited; through checks at ends limited as splits.
- Manufacture - Standard F. See Para. 722f.
- Splits - equal in length to $1\frac{1}{2}$ times the width of the piece.
- Shake - if through at ends, limited as splits. Away from ends through shakes up to 2' long, well separated. If not through, single shakes shall not exceed 3' long or $\frac{1}{4}$ the length, whichever is greater.
- Skip - hit & miss, with a maximum of 5% of the pieces containing hit or miss or heavy skip 2' or less in length. See Paras. 720e, f, and g.
- Slope of Grain - For grading machines ⁽⁴⁾ not evaluating slope of grain, slope of grain shall be limited by the assigned allowable bending design value:
1 in 8 for 0 F_b to 1450 F_b ;
1 in 10 for 1500 F_b to 2050 F_b ;
1 in 12 for 2100 F_b & over.
- ⁽⁴⁾ *Machines which measure MOE by deflection indirectly evaluate slope of grain.*
- Unsound Wood - (Excluding white specks) Small spots or streaks of firm honeycomb or peck are limited to $\frac{1}{6}$ the width. Any other unsound wood is limited to a spot $\frac{1}{12}$ the width and 2" in length or equivalent smaller.
- Wane - $\frac{1}{3}$ the thickness and $\frac{1}{3}$ the width full length, or equivalent on each face provided that wane not exceed $\frac{2}{3}$ thickness or $\frac{1}{2}$ the width for up to $\frac{1}{4}$ the length. See Para. 750.
- Optional "1W" Wane - $\frac{1}{4}$ the thickness and $\frac{1}{4}$ the width full length, or equivalent on each face, provided that wane not exceed $\frac{1}{2}$ the thickness or $\frac{1}{3}$ width for up to $\frac{1}{4}$ the length. See Para. 750.
- Warp - light. See table, Para. 752.
- White Specks - firm, $\frac{1}{3}$ the face or equivalent



ALL SPECIES

In addition to the visual limitation listed, other strength reducing characteristics such as knots, knot holes, burls or abnormal grain distortion partially or wholly at edges of wide faces, shall not occupy more of the net cross-section than:

- 1/2 for 0 F_b to 900 F_b ;
- 1/3 for 950 F_b to 1450 F_b ;
- 1/4 for 1500 F_b to 2050 F_b ;
- 1/6 for 2100 F_b & over.

The ends of the lumber not tested by the grading machine, shall be limited as follows:

Edge Knots - as limited above;

Knots other than

Edge Knots - equal to the largest knot tested in the tested portion of the piece or the Edge Knot permitted in the next lower F_b class, whichever is greater;

Cross-Section

Knots - the size or displacement of all knots in the same cross-section may not exceed the size of the permitted largest knot as described for knots other than edge knots listed above;

Slope of Grain - general slope of grain shall not exceed:

- 1 in 8 for 0 F_b to 1450 F_b ;
- 1 in 10 for 1500 F_b to 2050 F_b ;
- 1 in 12 for 2100 F_b & over.

Other strength reducing characteristics such as knot holes, burls, abnormal grain distortion shall be considered the same as knots.

128c. E-RATED STRUCTURAL LAMINATION LUMBER

E-Rated Structural Lamination lumber is lumber that has been non-destructively evaluated by ALSC and CLSAB approved grading machines.

E-Rated Structural Lamination lumber is distinguished from visually graded lumber in that each piece is nondestructively tested and marked to indicate the long-span flat-wise grade E (LSE) classification. E-Rated Structural Lamination lumber shall meet the visual requirements as set forth herein.

For E-Rated Structural Lamination lumber, moisture content is subject to special agreement.

ALL SPECIES

A grade stamp on E-Rated Structural Lamination lumber indicates the stress rated system used meets the requirements of the grading agency's certification and quality control procedures.

The grade stamp must show the agency trademark, the mill number, the species identification, seasoning designation and a E-grade designation followed by the word "**LAM**".

The "**E**" designation shall be the average "**flat-wise**" long span "**E**" of the grade as determined by qualification testing and maintained by quality control. The grade stamp may also indicate the applicable MSR or MEL grade in accordance with the preceding sections of Para. 128.

If a more restrictive visual quality level is qualified, then the grade stamp shall include the visual quality level (**VQL**). (ie. If a VQL of 1/3 cross-section is qualified for a grade of 1.9E-LAM the grade stamp for this product would read: 1.9E LAM-3 in which the -3 signifies the denominator of the allowable VQL).

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VISUAL RESTRICTIONS



E-Rated Structural Lamination lumber shall be well manufactured and visually graded to limit defined characteristics even though the actual strength may not be affected.

Characteristics permitted and limiting provisions shall be:

- Checks - Seasoning checks not limited. Through checks on ends are limited as splits.
- Knots - Knots may be sound, unsound or not firmly fixed. A knot or knots shall not occupy more than 1/2 the cross section. A knot of the permitted size may be anywhere on the piece.
- Holes - Knot holes are interchangeable with knots in size and spacing. Other holes are permitted if no more damaging in effect than the allowable knot.
- Manufacture - Standard "C". See Para. 722(c).
- Pitch or Bark Pockets - Medium, scattered.
- Pitch Streaks - Not to exceed 1/6 the width.
- Shake & Splits - Permitted if extending from wide faces into the thickness at an angle of 45 degrees or more from the wide face. Other restrictions are subject to special agreement.



ALL SPECIES

- Skips Face: - Hit & Miss, with a maximum of 5% of the pieces containing Hit or Miss.
- Edge: - Hit & Miss, with a maximum of 5% of the pieces containing Hit or Miss or heavy skip 2' in length or less (See Paras. 720 e, f and g) unless a more restrictive requirement is specified.
- Slope of Grain - For machines not evaluating slope of grain; the edge knot limits the slope of grain as follows:
1/3 edge knot displacement & larger: 1 in 10
1/4 edge knot displacement & smaller: 1 in 12
- Stain - Medium stained sapwood. Firm heart stain.
- Torn Grain - Medium. Spots of heavy torn grain around knot areas or equivalent.
- Warp - Light.
- Wane: - Not to exceed 1/4" on the wide face by 1/4" deep or equivalent on the edge unless a more restrictive requirement is specified.
- White Specks - Firm. A combination of white speck and a knot in the same cross section shall not occupy more than 1/2 the width or equivalent.
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128d. MSR/MEL TENSION LAMINATION LUMBER

MSR/MEL Tension Lamination lumber is lumber that has been non-destructively evaluated by ALSC and CLSAB approved grading machines.

MSR/MEL Tension Lamination lumber shall meet all the requirements of MSR or MEL, as applicable, including mandatory UTS qualification and daily quality control.

Qualification and subsequent quality control are required for each of the following properties: Edge modulus of elasticity (**E**), long-span flat-wise modulus of elasticity (**LS E**), bending strength (**F_b**) and tensile strength (**F_t**).

For MSR/MEL tension laminations lumber, moisture content is subject to special agreement.

In addition to the grade stamp requirements of Para. 128c, a grade stamp on MSR/MEL Tension Lamination lumber shall include the applicable MSR or MEL grade stamp information.

ALL SPECIES

VISUAL RESTRICTIONS

The visual requirements listed in Para. 128c shall apply to MSR/MEL Tension Lamination lumber with the following exceptions:

- i) Strength reducing characteristics such as knots, knot holes, burls, abnormal grain distortion or decay partially or wholly at the edges of wide faces, shall not occupy more of the net cross-section than:

1/2 for	0 F _b to	900 F _b
1/3 for	950 F _b to	1450 F _b
1/4 for	1500 F _b to	2050 F _b
1/6 for	2100 F _b & over	

- ii) The ends of the lumber not tested by the grading machine shall be limited as follows:

Edge Knots - as limited above in i);

Knots other

than Edge Knots - equal to the largest knot in the tested portion of the piece or the edge knot permitted in the next lower F_b class, whichever is greater;

Cross Section

Knots - the size or displacement of all knots in the same cross-section shall not exceed the size of the permitted largest knot as described for knots other than edge knots listed above;

Slope of Grain - general slope of grain shall not exceed

1 in 8	for	0 F _b to	1450 F _b ;
1 in 10	for	1500 F _b to	2050 F _b ;
1 in 12	for	2100 F _b & over.	

Other strength reducing characteristics such as knot holes, burls or abnormal grain distortion shall be considered the same as knots.



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ALL SPECIES

129. GLUED LUMBER

129a. GENERAL

NLGA **SPS 1** - Special Products Standard for Fingerjoined Structural Lumber, **SPS 3** - Special Products Standard for Fingerjoined "Vertical Stud Use Only" Lumber and **SPS 4** - Special Products Standard for Fingerjoined Machine Graded Lumber (FJ-MGL) are applicable to gradestamped structural fingerjoined lumber and NLGA **SPS 5** - Special Products Standard for Face-Glued Lumber and NLGA **SPS 6** - Special Products Standard for Structural Face-Glued Lumber are applicable to structural face-glued lumber of the grades and species covered in the rule. These Standards are approved by CLSAB.

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The present policy of the ALSC Board of Review does not call for Board of Review approval, however, these Standards are required to conform to the ALSC Glued Lumber Policy and the Board of Review monitors compliance to the Standards.

For proper identification:

- i) All previously affixed gradestamps must be obliterated.
- ii) In addition to the usual grade stamp information required, the gradestamp shall include the following:
 - a) "HRA" or "Non-HRA", as applicable; and
 - b) as applicable, the grade stamp criteria identified in Paras. 129b or 129c.

Note: The designatiuon "HRA" on a grade stamp indicates the adhesive used is qualified as a "Heat Resistant Adhesive" in accordance with the CLSAB requirements and the ALSC Glued Lumber Policy.

129b. STUCTURAL FINGERJOINED LUMBER GRADE STAMP CRITERIA

- i) For fingerjoined structural lumber meeting the requirements of SPS 1:

SPS 1
CERT FGR JNT

- ii) For fingerjoined lumber meeting the requirements of SPS 3:

SPS 3
CERT FGR JNT
VERTICAL STUD USE ONLY



ALL SPECIES

- iii) For fingerjoined lumber meeting the requirements of SPS 4:

SPS 4
CERT FGR JNT
DRY USE ONLY or **SPS 4**
CERT FGR JNT

Note: "DRY USE ONLY" to be added as specified in SPS 4,

129c. STRUCTURAL FACE GLUED LUMBER GRADE STAMP CRITERIA


- i) For face-glued lumber meeting the requirements of SPS 5:

SPS 5
CERT FACE GLUED
VERTICAL USE ONLY

- ii) For face-glued lumber meeting the requirements of SPS 6:


SPS 6
CERT FACE GLUED LBR

129d. NON-STRUCTURAL FINGERJOINED BOARDS



In fingerjoined boards, the grade limiting characteristics are the same as those on a solid sawn piece of lumber of the same grade and size. The joint shall also be tight and of good appearance.

For proper identification:

- a) All previously affixed gradestamps must be obliterated.
b) In addition to the usual information required, the gradestamp shall include the following:
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NON-STRUCTURAL GLUED LUMBER



ALL SPECIES

BEAMS AND STRINGERS

(Rectangular Timbers)

**Rough or Surfaced, 5" & Thicker,
Width more than 2" greater than thickness**

130. There are five grades of Beams and Stringers: "**SELECT STRUCTURAL**," "**No. 1**," "**No. 2**," "**STANDARD**," and "**UTILITY**." Three of these grades, "**SELECT STRUCTURAL**," "**NO. 1**," and "**NO. 2**," are stress grades.

Pieces 5" x 5" and larger, with the width not more than 2" greater than the thickness, may be graded under this paragraph provided all faces are graded as narrow faces. Pieces so graded will have design values the same as the following grades.

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In addition to the following specific provisions applicable to Beams and Stringers, the appropriate provisions in all other paragraphs in the rules apply.

For measurement of knots, shakes, checks, and splits refer to Paras. 320, 320b, 330 and 340 respectively. Knots appearing on the narrow faces are limited to the same displacement as knots at the edges of the wide faces.

Graded from all faces and both ends.

130a. "SELECT STRUCTURAL" BEAMS AND STRINGERS

Characteristics and limiting provisions shall be:

- Checks - in areas at ends, single or opposite, with a sum total equal to approximately 1/4 the thickness.
- Holes - pin limited.
- grub and toredo, one for each 2' of length.
- Pitch Streaks - not limited.
- Pockets - pitch or bark, medium.
- Rate of Growth - medium grain - Douglas Fir and Western Larch only.
- Shake - 1/6 thickness on ends.
- Skips - occasional 1/16" x 2' or equivalent.
- Slope of Grain - 1 in 14.
- Splits - 1/2 width in length or equivalent end checks.
- Stain - stained sapwood; 10% firm heart stain.
- Torn Grain - heavy.



ALL SPECIES

- Wane - 1/8 of any face or as equivalent 1/4 of any face for 1/4 length.
- Knots - sound, tight, well-spaced and are permitted in sizes not to exceed the following or equivalent displacement:

Nom. Width	At Edge of Wide Face	Centreline Wide Face
8"	1 ⁷ / ₈ "	2"
10"	2"	2 ⁵ / ₈ "
12"	2 ¹ / ₈ "	3 ¹ / ₈ "
14"	2 ³ / ₈ "	3 ¹ / ₄ "
16"	2 ¹ / ₂ "	3 ¹ / ₂ "
18"	2 ³ / ₄ "	3 ¹ / ₂ "

The size of the knots on the wide faces may be increased proportionately from the size permitted at the edge to the size permitted at the centerline.

In Cedar, characteristic soft knots 1/2 the size of the sound and tight knots are permitted.

ALL SPECIES

130b. "NO. 1" - STRUCTURAL BEAMS AND STRINGERS

Characteristics and limiting provisions shall be:

- Checks - in areas at ends, single or opposite, with a sum total equal to approximately 1/4 the thickness.
- Holes - pin limited.
- grub and teredo, one for each 1' length.
- in cedar, holes from any cause 1/2 the size of the allowable knots.
- Pitch Streaks - not limited.
- Pockets - pitch or bark, not limited.
- Rate of Growth - medium, Douglas Fir and Western Larch only.
- Shake - 1/6 thickness on ends.
- Skips - occasional 1/8" x 2' or equivalent.
- Slope of Grain - 1 in 10.
- Splits - short or equivalent end checks.
- Stain - stained sapwood, heart stain firm.
- Torn Grain - heavy.
- Wane - 1/4 of any face or as equivalent 1/3 of any face for 1/4 length.

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- Knots - sound, tight, well-spaced and are permitted in sizes not to exceed the following or equivalent displacement:

Nom. Width	At Edge of Wide Face	Centreline Wide Face
8"	2 ⁵ / ₈ "	3"
10"	2 ⁷ / ₈ "	3 ³ / ₄ "
12"	3 ¹ / ₄ "	4 ¹ / ₂ "
14"	3 ¹ / ₂ "	5"
16"	3 ³ / ₄ "	5 ¹ / ₄ "
18"	3 ⁷ / ₈ "	5 ⁵ / ₈ "

The size of the knots on the wide faces may be increased proportionately from the size permitted at the edge to the size permitted at the centerline.

In Cedar, characteristic soft knots half the size of the sound and tight knots are permitted.


ALL SPECIES

130c. "NO. 2" - STRUCTURAL BEAMS AND STRINGERS

Characteristics and limiting provisions shall be:

- Checks - not limited.
- Honeycomb or Peck - spots and streaks of firm honeycomb or peck are limited to 1/6 the width.
- Pitch Streaks - not limited.
- Pockets - pitch or bark, not limited.
- Slope of Grain - 1 in 6
- Skips - 1/8" deep and 2' in length or 1/16" scant full length
- Splits - medium or equivalent end checks.
- Stained Wood - not limited.
- Shake - 1/2 length, 1/2 thickness. If through at ends, limited as splits.
- Torn Grain - not limited.
- Unsound Wood - small spots, well scattered, 1/6 the face width.
- Wane - 1/3 of any face or equivalent, 1/2 of any face for 1/4 the length.
- White Specks - Firm, 1/3 volume.
- Knots - sound, not firmly fixed or holes, well-spaced and are permitted in sizes not to exceed the following or equivalent displacement:

Nom. Width	At Edge & Centreline of Wide Face
8"	4 1/2"
10"	5 5/8"
12"	6 7/8"
14"	7 1/2"
16"	8 1/4"
18"	8 5/8"

Unsound knots are limited to 1/2 the size of other knots.

130d. "STANDARD" BEAMS AND STRINGERS

Graded under Para. 131d.

130e. "UTILITY" BEAMS AND STRINGERS

Graded under Para. 131e.



ALL SPECIES

POSTS AND TIMBERS Rough or Surfaced 5" x 5" & Larger

Width not more than 2" greater than thickness

131. There are five grades of Posts and Timbers: "**SELECT STRUCTURAL**," "**NO. 1**," "**NO. 2**," "**STANDARD**," and "**UTILITY**." Three of these grades, "**SELECT STRUCTURAL**," "**NO. 1**," and "**NO. 2**," are stress grades.

In addition to the following specific provisions applicable to Posts and Timbers, the appropriate provisions in all other paragraphs of the rules apply. Except as provided in the grade descriptions, knots appearing on narrow faces are limited to the same displacement as knots specified for the wide faces.



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For measurement of knots, shakes, checks, and splits refer to Paras. 320, 320b, 330 and 340 respectively.

Graded from all faces and both ends.

131a. "SELECT STRUCTURAL" - POSTS AND TIMBERS

Characteristics and limiting provisions shall be:

- 
- 
- | | | |
|--------|---------------------------------|--|
| Checks | - | in areas at ends, single or opposite, with a sum total equal to approximately 1/4 the thickness. |
| Holes | - | pin limited. |
| | - | grub and teredo, one for each 2' of length. |
| Knots | - | sound, tight and well-spaced. They may be present anywhere in the piece in the following sizes or their equivalent displacement: |
| | 1" | in 5" width |
| | 1 ¹ / ₄ " | in 6" width |
| | 1 ⁵ / ₈ " | in 8" width |
| | 2" | in 10" width |
| | 2 ³ / ₈ " | in 12" width |
| | 2 ¹ / ₂ " | in 14" width |
| | 2 ³ / ₄ " | in 16" width |
| | 3" | in 18" width |

Assigned stress values do not apply to pieces 20" and wider or thicker; and/or 50' or longer. In pieces of this size or length, the knots may be proportionately larger.

In Cedar, characteristic soft knots 1/2 the size of the sound and tight knots are permitted.



ALL SPECIES

- Pitch Streaks - not limited.
Pockets - pitch or bark, medium.
Rate of Growth - medium. Douglas Fir and Larch only.
Shake - 1/3 thickness on ends.
Skips - 1/16" x 2' or equivalent.
Slope of Grain - 1 in 12.
Splits - 3/4 thickness in length or equivalent end checks.
Stain - stained sapwood; heart stain firm - 10% width or equivalent.
Torn Grain - heavy.
Wane - 1/8 any face or as equivalent 1/4 of any face for 1/4 length.



ALL SPECIES

131b. "NO. 1" - STRUCTURAL POSTS AND TIMBERS

Characteristics and limiting provisions shall be:

- Checks - in areas at ends, single or opposite, with a sum total equal to approximately 1/2 the thickness.
- Holes - pin limited.
- grub and teredo, one for each 1' length.
- in cedar, holes from any cause 1/2 the size of the allowable knots.
- Knots - sound, tight and well-spaced. They may be present anywhere in the piece in the following sizes or their equivalent displacement:
- | | | |
|---------------------------------|----|-----------|
| 1 ¹ / ₂ " | in | 5" width |
| 1 ⁷ / ₈ " | in | 6" width |
| 2 ¹ / ₂ " | in | 8" width |
| 3 ¹ / ₈ " | in | 10" width |
| 3 ³ / ₄ " | in | 12" width |
| 4" | in | 14" width |
| 4 ¹ / ₄ " | in | 16" width |
| 4 ¹ / ₂ " | in | 18" width |

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Assigned stress values do not apply to pieces 20" & wider or thicker; and/or 50' or longer. In pieces of this size or length, the knots may be proportionately larger.

In Cedar, characteristic soft knots 1/2 the size of the sound and tight knots are permitted.

- Pitch Streaks - not limited.
- Pockets - bark or pitch, not limited.
- Rate of Growth - medium. Douglas Fir and Larch only.
- Shake - 1/3 thickness on ends.
- Skips - 1/8" x 2' or equivalent.
- Slope of Grain - 1 in 10.
- Splits - short or equivalent end checks.
- Stain - stained sapwood; heart stain firm.
- Torn Grain - heavy.
- Wane - 1/4 any face or as equivalent 1/3 of any face for 1/4 length.





ALL SPECIES

131c. "NO. 2" - STRUCTURAL POSTS AND TIMBERS

Characteristics and limiting provisions shall be:

- Checks - not limited.
- Honeycomb or Peck - spots and streaks of firm honeycomb or peck limited to 1/6 width.
- Knots - sound, not firmly fixed or holes, well-spaced. They may be present anywhere in the piece in the following sizes or their equivalent displacement:
- | | | |
|---------------------------------|----|-----------|
| 2 ¹ / ₂ " | in | 5" width |
| 3" | in | 6" width |
| 3 ³ / ₄ " | in | 8" width |
| 5" | in | 10" width |
| 6" | in | 12" width |
| 6 ¹ / ₂ " | in | 14" width |
| 7" | in | 16" width |
| 7 ¹ / ₂ " | in | 18" width |

Unsound knots are limited to 1/2 the size of other knots.

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- Pitch Streaks - not limited.
- Pockets - pitch or bark, not limited.
- Shake - 1/2 length, 1/2 thickness. If through at ends, limited as splits.
- Skips - ¹/₈" deep and 2' in length or ¹/₁₆" scant full length.
- Slope of Grain - 1 in 6.
- Splits - medium or equivalent end checks.
- Stained Wood - not limited.
- Torn Grain - not limited.
- Unsound Wood - small spots, well scattered, 1/6 the face width.
- Wane - 1/3 of any face or equivalent 1/2 the width for 1/4 length.
- White Specks - firm, 1/3 volume.



ALL SPECIES

131d. "STANDARD" - POSTS AND TIMBERS

Characteristics and limiting provisions shall be:

- Checks - not limited.
- Holes - 1/2 width of face or equivalent
- Honeycomb or Peck - spots and streaks of honeycomb or peck limited to 1/4 width.
- Knots - 1/2 width of face or equivalent.
- Pitch Streaks - not limited.
- Pockets - bark or pitch, not limited.
- Shake - 1/2 thickness, 1/2 length or equivalent, if through at end limited as splits.
- Skips - 1/8" x 2' or 1/16" scant full length.
- Slope of grain - 1 in 4
- Splits - medium or equivalent end checks.
- Stain - stained wood.
- Torn Grain - not limited.
- Unsound Wood - spots 1/4 the face width.
- Wane - 1/3 of any face or equivalent, 1/2 width for 1/4 length.
- White Specks - 1/3 volume.




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ALL SPECIES

131e. "UTILITY" - POSTS AND TIMBERS

Characteristics and limiting provisions shall be:

- Checks - not limited.
 - Holes - 3/4 width of face or equivalent.
 - Honeycomb or Peck - spots or streaks 1/2 the face width.
 - Knots - 3/4 width of face or equivalent.
 - Pitch Streaks - not limited.
 - Pockets - bark or pitch, not limited.
 - Shake - Not through, single shake permitted full length.
Shake on ends limited to splits. Elsewhere, through shakes 1/2 length, scattered full length.
 - Skips - 1/8" scant if surfaced; 1/2" off nominal if rough.
 - Slope of grain - 1 in 4
 - Splits - 1/4 length.
 - Stain wood - not limited.
 - Torn Grain - not limited.
 - Unsound Wood - spots or streaks 1/2 face width.
 - Wane - 1/3 of any face or equivalent, 1/2 width for 1/4 the length.
 - White Speck - not limited.
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