

INSPECTION OF CYPRESS LUMBER

General Instruction

Note: *National Hardwood Lumber Association Inspectors will apply these rules when called upon to inspect cypress lumber unless otherwise specified.*

1. These rules for Cypress are complete under this caption and are not to be confused with any standard grades or other species shown elsewhere in this book.
2. Requests to Association inspectors for inspection of Cypress at loading point should be accompanied by a copy of the order on which shipment is to be made. Requests for inspection at destination should also be accompanied by copy of order, but in the absence of such information the inspector will grade the lumber according to the following standard Cypress grades giving preference to grades in the order named: Selects & Better, No. 1 Common, No. 2 Common, and Peck.
3. Lumber shall be inspected and measured as the inspector finds it, of full length and width. He shall make no allowance for the purpose of raising the grade, except that imperfections in rough stock which can be removed in dressing to standard surfaced thickness shall not be considered in determining the grade; otherwise the defects admissible in rough and dressed stock shall be the same for like kinds and grades.
4. These rules define the poorest piece in any given grade, but the respective grades shall contain all pieces up to the next higher grade.
5. The grade shall be determined from the better face of the board. In Selects & Better the reverse side shall grade not below No. 1 Common. In No. 2 Common, the reverse side shall not prevent the serviceability of this utility grade.

Measurement & Tally

6. Lumber of standard size shall be tallied board measure. In lumber of standard thickness less than 1 inch, the board-foot measurement shall be based on the surface dimensions. In lumber measured with a board rule a piece tally in feet shall be made and this tally shall be the number of feet board measure of 1-inch lumber. The tally of lumber thicker than 1 inch shall be multiplied by the thickness as expressed in inches and fractions of an inch.
7. In material measured with a board rule, random width pieces measuring to the even half foot shall be alternately counted as of the next higher and lower foot count; fractions below the half foot shall be dropped and fractions above the half foot shall be counted as of the next higher foot.
8. Lumber shipped on stock or specified widths shall be tallied by the number of pieces of each size and length.
9. Recommended Sawing Sizes: When fresh sawn, stock widths should be $1/4"$ to $1/2"$ over nominal width. When dry, stock widths must be full width allowing 10% $1/8"$ scant in width. When dressed two edges, pieces less than 8" wide can be $1/2"$ scant of the nominal width. Pieces 8" and wider can be $3/4"$ scant of the nominal width. Thickness in rough sawn lumber must be $1/16"$ to $1/8"$ over nominal thickness. When dry, lumber must be full thickness allowing 10% $1/16"$ scant. All grades shall be stock widths, unless otherwise specified.
10. Lumber having greater variation in thickness, except as to wane, between the thinnest and thickest points, than shown in the following table shall be measured for thickness at the thinnest point and classed as miscut, and shall be graded and reported as such.
 - $1/16"$ in thicknesses of $3/8"$ and $1/2"$
 - $1/8"$ in thicknesses of $5/8"$ and $3/4"$
 - $1/4"$ in thicknesses of 1" to 2"
 - $3/8"$ in thicknesses of $2-1/2"$ and 3"
 - $1/2"$ in thicknesses of 4".
11. The limitations for dry lumber are as follows: In Selects & Better, moisture content shall not exceed 15%. Lumber shall be considered air dried when moisture content does not exceed 18%.

Definition of Defects & Blemishes

12. When defects or blemishes, or combinations thereof, not described in these grading rules are encountered, they will be considered as equivalent to known defects according to their damaging effect upon the piece in the grade under consideration.
13. Standard definitions of the defects and blemishes usual in Cypress are as follows:
14. A defect is defined as any irregularity occurring in or on wood that may lower some of its strength, durability, or utility values.
15. A blemish is defined as anything not classified as a defect, marring the appearance of the wood.

Checks

16. A check is a lengthwise separation of the wood, which occurs usually across the rings of annual growth.
17. A surface check is a check occurring on the surface of the piece.
18. A small surface check is a perceptible opening, not over 4" long.
19. A medium surface check is one not over 1/32" wide and over 4" but not more than 10" long.
20. A large surface check is one over 1/32" wide and over 10" long.
21. An end check is one occurring on an end of a piece.
22. A through check is one extending from one surface through the piece to the opposite surface or to an adjoining surface.
23. A heart check is one starting at the pith and extending toward but not to the surface of the piece.

Decay & Peck

24. Decay is a disintegration of the wood substance due to the action of the wood-destroying fungi. The words "dote" and "rot" mean the same as decay.
25. Incipient decay is the early stage of decay in which the disintegration has not proceeded far enough to soften or otherwise change the hardness of the wood perceptibly. It is usually accompanied by a slight discoloration or bleaching of the wood.
26. Advanced (or typical) decay is the older stage of decay in which the disintegration is readily recognized because the wood has become punky, soft and spongy, stringy, ring shaked, pitted, or crumbly. Decided discoloration or bleaching of the rotted wood is often apparent.
27. A peck is typical decay which appears in the form of a hole, pocket, or area of soft rot usually surrounded by sound wood. Slight peck is not through the piece occupying less than 10% of the surface area.

Holes

28. Holes in wood may extend partially or entirely through the piece and be from any cause. When holes are permitted the average of the maximum length and maximum width shall be used in measuring the size, unless otherwise stated.
29. A pin worm hole is one not over 1/16" in diameter.
30. A medium worm hole is one over 1/16" but not more than 1/4" in diameter.
31. A large worm hole is one over 1/4" in diameter.

Knots

32. Knots are classified according to size, form, quality, and occurrence. The average of the maximum length and maximum width shall be used in measuring the size of knots, unless otherwise stated.
33. A pin knot is one not over 1/2" in diameter.
34. A small knot is one over 1/2", but not more than 3/4" in diameter.

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35. A medium knot is one over $3/4$ ", but not more than $1-1/2$ " in diameter.
 36. A large knot is one over $1-1/2$ " in diameter.
 37. A round knot is one oval or circular in form.
 38. A spike knot is a branch or limb sawed in a lengthwise direction.
 39. A sound knot is solid across its face, as hard as the surrounding wood, and shows no indications of decay. It may vary in color from red to black.
 40. An unsound knot will not impair the strength of the board.
 41. A decayed knot is softer than the surrounding wood and contains advanced decay.
 42. A tight knot is one so fixed by growth or position that it will firmly retain its place in the piece.
 43. An intergrown knot is one whose rings of annual growth are completely intergrown with those of the surrounding wood.
 44. A water-tight knot is one whose rings of annual growth are completely intergrown with those of the surrounding wood on one surface of the piece, and which is sound on that surface.
 45. An encased knot is one whose rings of annual growth are not intergrown and homogenous with those of the surrounding wood. The encasement may be partial or complete.
 46. A loose knot is one not held firmly in place by growth or position and cannot be relied upon to remain in place in the board.
 47. A pith knot is a sound knot with a pith hole not more than $1/4$ " in diameter.
 48. A hollow knot is an apparently sound knot with a relatively large hole in it.

Manufacturing Defects

49. Manufacturing defects include all defects or blemishes which are produced in manufacturing, such as chipped grain, loosened grain, raised grain, torn grain, machine burn, and machine gouge.
50. Chipped grain means that a part of the surface is chipped or broken out in very short particles below the line of cut. It should not be classed as torn grain and, as usually found, shall not be considered a defect unless it is present in excess of 25% of the area.
51. Loosened grain means that a small portion of the wood has become loosened but not displaced.
52. Raised grain is a roughened condition of the surface of dressed lumber in which the hard summer wood is raised above the softer spring wood, but not torn loose from it.
53. Torn grain means that a part of the wood is torn out in dressing, and in depth is four distinct characters; slight, medium, heavy and deep.
54. Slight torn grain is not over $1/32$ " in depth.
55. Medium torn grain is over $1/32$ ", but not more than $1/16$ " in depth.
56. Heavy torn grain is over $1/16$ ", but not more than $1/8$ " in depth.
57. Deep torn grain is over $1/8$ " in depth.
58. A skip is an area on a piece that failed to surface.
59. A slight skip is one that failed to surface smoothly, whose area does not exceed the product of the width of the piece in inches multiplied by 6.
60. A heavy skip is one that the planer knife did not touch.
61. A machine burn is a darkening or charring of the wood due to overheating by the machine knives.
62. A machine gouge is a groove across a piece due to the machine cutting below the desired line of cut.

Shake

63. A shake is a lengthwise separation of the wood, which occurs usually between and parallel to the rings of annual growth.
64. A fine shake is one with a barely perceptible opening.
65. A slight shake is one with more than a perceptible opening but not over $1/32$ " in width.
66. A medium shake is one with an opening over $1/32$ " but not more than $1/8$ " wide.
67. An open shake is one with an opening over $1/8$ " wide.
68. A through shake is one extending from one surface through the piece to the opposite surface or to an adjoining surface.
69. A round shake is one completely encircling the pith.
70. A cup shake is one that does not completely encircle the pith.

Splits

71. A split is a lengthwise separation of the wood due to the tearing apart of the wood cells.
72. A short split is one not exceeding in length either the width of a piece or one-sixth its length.
73. A medium split is one exceeding in length the width of a piece but does not exceed one-sixth its length.
74. A long split is one exceeding in length one-sixth of the length of the piece.

Stain (or Discoloration)

75. Stain is a discoloration, occurring on or in lumber, of any color other than the natural color of the piece, on which it appears. It is classified as light medium and heavy.
76. Light stain is a slight difference in color which will not materially impair the appearance of the piece if given a natural finish.

77. Medium stain is a pronounced difference in color which, although it does not obscure the grain of the wood, would customarily be objectionable in a natural but not in a painted finish.
78. Heavy stain is a difference in color so pronounced as practically to obscure the grain of the wood.

Wane

79. Wane is bark, or the lack of wood or bark, from any cause on the edge or corner of a piece.
80. Slight wane is not over 1/4" wide on the surface on which it appears, for one-sixth of the length and one-fourth the thickness of the piece.
81. Medium wane is over 1/4" but not more than 1/2" wide on the surface on which it appears, for one-sixth the length and one-fourth the thickness of the piece.
82. Large wane is over 1/2" wide on the surface on which it appears, and/or over one-sixth the length and one-fourth the thickness of the piece.

Standard Grades

83. STANDARD GRADES: Selects & Better, No. 1 Common, No. 2 Common, and Peck. For most commercial sales, Selects & Better, then No.2 Common are shipped.

Selects & Better

84. The Selects & Better grade is of the highest quality and should be specified for any use where appearance is of the utmost importance, such as paneling, flooring, partition, etc.
85. Minimum size board 4" x 8' admitting 25% odd lengths.
86. Graded from better face with reverse side not below No. 1 Common.

Sapwood no defect.

Wane on No. 1 Common side shall not exceed 1/2 thickness or 1/3 length or 1/6 width in the aggregate.

- A. Pieces 4" and 5" wide must be clear allowing slight wane on one edge. (Par. 80)
- B. Pieces 6" and wider admit:
- Split equal to the width of board in the aggregate.
 - Wane equal to 1/2 the thickness and twice the length in inches and 3/4" wide.
 - Light stain – paragraph 76.

Defects Allowed: Pieces

- 6" wide – 1 medium knot
- 7" – 9" wide - 2 medium knots
- 10" and wider – 3 medium knots allowing one additional knot for every 3" in width.

Note: *Medium knot is from 3/4" – 1 1/2" average diameter and No. 2 Common must be sound except in 10" and wider lumber, 1 unsound medium knot permitted.*

Defects which can be substituted for 1 medium knot:

- 3 Pin Knots – pin knot is 1/2" average diameter or less.
- 2 Small Knots – small knot is 1/2" - 3/4" A.D.
- 3 Medium Surface Checks – 1 medium surface check is 4"- 10" Long and 1/32" Wide
- 1 Slight Manufacturing Defect as defined in Par. 50, 51, 54, 59, 61, 62.
- Fine Shake (Par. 64) equal to the width of the board.
- 10" and wider pieces allow 2 pin worm holes for each lineal foot.

No. 1 Common & No. 2 Common

87. The commons are a staple grade useful for all types of general construction, finish, trim, pattern stock, and other uses where ordinary tree characteristics either enhance the appearance of the piece or do not restrict the appropriate application of the piece.

No. 1 Common

88. Graded from standpoint of strength primarily used as poor face of a Select and Better board.
89. Minimum size board – 4" x 8' admitting 25% odd length.
90. Admits any number of the following or equivalent: checks, slight peck, pin worm holes.

Medium manufacturing defects as defined in paragraphs 50, 51, 55, 60, 61 and 62.

Sound Knots: Occasional unsound knots on one face only – 10% of the pieces.

Average diameter of any knot to be less than:

- 1-1/2" in 4" - 6" widths
- 2" in 7"- 11" widths
- 2 1/2" in 12" widths
- 3" in 13" and wider pieces

Shake that does not go through, stain, splits that do not exceed the width of the board in inches. Wane on one or both edges 1/2 thickness and 1/3 length and 1/6 width in the aggregate.

No. 2 Common

91. Defect graded from standpoint of strength.
92. Minimum size board 4" x 6' on even 2' increments. No odd lengths admitted unless otherwise specified.
93. Must be suitable for ordinary fencing or dimension purposes in its full width and length.

Grade same as No. 1 common except admits: unlimited diameter sound or (unsound knots), pith knots, slight peck, shake and checks.

Wane on better face not to exceed 1/2 the thickness or 1/3 the length and 1/6 the width of the piece. Wane on the poor face must not extend through the full thickness of the piece, leaving an 1/8" nailing edge on the good face.

Split equal to the length of piece in inches.

Pith is admitted.

No open holes are permitted. Any unsound knot must not impair the strength of the piece.

No. 1 & No. 2 Peck

94. No. 1 Peck: The piece must contain a minimum of 10% (surface measure) well distributed peck on the face side. The peck must not allow light to show through the piece.
95. No. 2 Peck: Contains pieces that are not allowed in No. 1 Peck due to the fact that the peck allows light to show through the piece. Each piece must be suitable for ordinary handling and construction without breakage.

Cypress Timbers

Sizes and lengths as specified.

Square Edge & Sound

Shall be free from through shake, unsound knots or a combination of admissible defects that seriously impair the strength of the piece.

Will admit firm pith (heart center) well boxed; season checks; stain; pin worm holes; sound knots; slight peck in ends; slight shake in ends not extending to the surface; slight shake and slight peck on the surface, the aggregate of each not exceeding one-fourth the length of the piece; wane not exceeding one-eighth the width of a face on one corner or its aggregate equivalent on two or more corners.

No. 1 Common Timbers

Will admit firm pith (heart center) well boxed; season checks; stain; pin worm holes; sound, encased and pith knots; an occasional unsound knot not to exceed in diameter 1/2" in 3" to 6" faces, 2" in 7" to 11" faces, 2-1/2" in 12" faces and 3" in wider faces; slight shake; medium shake not extending through the piece and not exceeding one-sixth its length; slight peck; split in each end not exceeding in length the width of the piece; wane not exceeding one-fourth the width of a face on one corner or its aggregate equivalent on two or more corners.