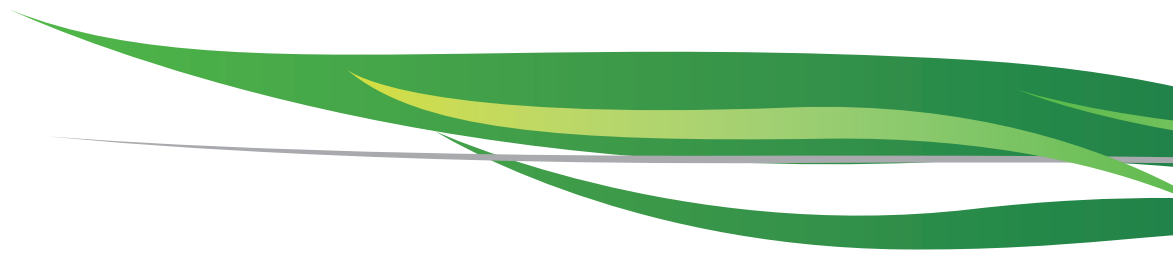


Accoya® Radiata Pine Lumber Grading Specifications

Grade Names & Definitions for Accoya® Radiata Pine
Version 9.0



Accoya® Radiata Pine Lumber Grades

Rough Accoya® Wood



Accoya® Radiata Pine Lumber Grades

A1 Minimum grade definition

4 sides primarily clear with total allowance (combination of all sides) of the following:

Less than 50 mm thickness:

- > Up to 3 of the following defects or equivalent:
 - Knot (pin): 8 mm or less
 - Bark or resin pocket: 8 mm wide, 50 mm long or equivalent.

50 mm thickness and greater:

- > Up to 6 of the following defects or equivalent:
 - Knot (intergrown, partially intergrown and tight encased): 15 mm
 - Bark or resin pocket: 10 mm wide, 100 mm long or equivalent.

Resin streaks

Three up to 8 mm wide, 100 mm long or equivalent, slightly more for a short distance.

Surface checks

- Three up to 1 mm wide, 250 mm long or equivalent, slightly more for a short distance.
- For boards 200-300 mm wide the following additional allowance applies: Up to 1 surface check per 50 mm width, no wider than 1 mm, 250 mm long or equivalent, slightly more for a short distance.

Splits

Short split, up to width of board and not to exceed 200 mm.

Needle fleck/birds eye

Medium birds eye or fleck.

Warp

As given in tables 1,2,3,4.

Wane

Up to 8 mm in width and depth, ¼ length of board or equivalent, slightly more for a short distance.

Surfaced Front Side

Surfaced Backside



Accoya® Radiata Pine Lumber Grades

A2 Minimum grade definition

1 surface, 1 edge primarily clear with allowance of the following:

Better face and edge combined total:

Less than 50 mm thickness:

- > Up to 4 of the following defects or equivalent:
 - Knot (intergrown, partially intergrown and tight encased): 15 mm or equivalent smaller.
 - Bark or resin pocket: 10 mm wide, 100 mm long or equivalent.

Reverse face and edge combined total:

Less than 50 mm thickness:

- > Up to 6 of the following defects or equivalent:
 - Knot (intergrown, partially intergrown and tight encased): 30 mm or equivalent smaller.
 - Bark or resin pocket: 10 mm wide, 100 mm long or equivalent.

Collapse

Insufficient to affect dry-dressed dimensions.

Resin streaks

One, 1/5 width, 1/3 length or equivalent, slightly more for a short distance.

Surface checks

- Three up to 1 mm wide, 250 mm long or equivalent, slightly more for a short distance.
- For boards 200-300 mm wide the following additional allowance applies: Up to 1 surface check per 50 mm width, no wider than 1 mm, 250 mm long or equivalent, slightly more for a short distance.

Splits

Short split, up to the width of board and no more than 200 mm.

Needle fleck/birds eye

Medium birds eye or fleck.

Wane

Up to 8 mm in width and depth, ¼ length of board or equivalent, slightly more for a short distance.

Surfaced Front Side

Surfaced Backside



Accoya® Radiata Pine Lumber Grades

A3 Minimum grade definition

1 side primarily clear with allowance of the following:

Better face combined total:

50 mm thickness and greater:

Resin streaks

One, 1/5 width, 1/3 length or equivalent, slightly more for a short distance.

Surface checks

- Three up to 1 mm wide, 250 mm long or equivalent, slightly more for a short distance.
- For boards 200-300 mm wide the following additional allowance applies: Up to 1 surface check per 50 mm width, no wider than 1 mm, 300 mm long or equivalent, slightly more for a short distance.

Splits

Short split, up to the width of board and no more than 200 mm.

Needle fleck/birds eye

Medium birds eye or fleck.

Wane

Up to 8 mm in width and depth, ¼ length of board or equivalent, slightly more for a short distance.

Reverse face and edge combined total:

Bark or resin pockets

20 mm wide, 100 mm long or equivalent, slightly more for a short distance.

Surface checks

Reverse face and edge, knot checks and surface checks unrestricted.

Splits

Up to twice the width of board or equivalent smaller.

Collapse

Insufficient to affect dry-dressed dimensions more than 1 mm per side.

Holes, loose knots, and decayed knots

20 mm (40 mm in pieces exceeding 150 mm wide or 50 mm in thickness, 4 per length).

Knots (intergrown, partially intergrown, tight encased)

100 mm (singly), sum of sizes in any combination half of the width of the piece.

Sound spike knots and sound double spike knots, intergrown or partially intergrown

50 mm wide, projected length two-thirds of width of piece.

Pith

Up to 12 mm wide, 50% of length or equivalent, slightly more for a short distance.

Resin streaks

1/5 width, 1/3 length or equivalent, slightly more for a short distance.

Shakes other than through shakes

1/5 of length.

Needle fleck/birds eye

Unrestricted.

Warp

As given in tables 1,2,3,4.

Wane

Up to 18 mm width and depth, 50% of length or equivalent, slightly more for a short distance.

Surfaced Front Side

Surfaced Backside



Accoya® Radiata Pine Lumber Grades

B Primarily for Finger Jointing Usage

Both faces containing knots, bark or resin pockets with total allowance of the following:

50 mm thickness and greater:

Bark or resin pockets

20 mm wide, 100 mm long or equivalent, slightly more for a short distance.

Checks

Knot checks and surface checks not more than 150 mm.

Splits

Up to twice the width of the board, not more than 300mm.

Collapse

Insufficient to affect dry-dressed dimensions more than 1 mm per side.

Holes, loose knots, and decayed knots

20 mm (40 mm in pieces exceeding 150 mm wide or 50 mm in thickness, 4 per length).

Knots (intergrown, partially intergrown, tight encased)

100 mm (singly), sum of sizes in any combination half of the width of the piece.

Sound spike knots and sound double spike knots, intergrown or partially intergrown

50 mm wide, projected length two-thirds of width of piece.

Pith

up to 12 mm wide, 50% of length or equivalent, slightly more for a short distance.

Resin streaks

1/5 width, 1/3 length or equivalent, slightly more for a short distance.

Shakes other than through shakes

1/5 of length.

Needle fleck/birds eye

unrestricted.

Warp

As given in tables 1,2,3,4.

Wane

Up to 18 mm width and depth, 50% of length or equivalent, slightly more for a short distance.

Surfaced Front Side

Surfaced Backside



Accoya® Radiata Pine Lumber Grades

General Specifications

Thickness	No more than 1 mm less than the specified size.
Width	No more than 1 mm less than the specified size.
Length	No more than 20 mm shorter than nominal length.
Moisture Content	Less than 10%.

Additional Grade Specifications

Internal Defects Not Visually Present on Surface: Accoya® wood is produced from a natural resource. All wood has natural variation from tree to tree and board to board. This natural variation results in a product that can have defects naturally present within the wood. Furthermore, the process of cutting trees into lumber and drying of the lumber can induce defects such as shakes, cracks and checks. Accoya® wood is produced from lumber visually inspected on the surface to meet the grade specifications, however upon further processing internal defects can be discovered.

Manufacturing Imperfections

Lumber may have slight manufacturing related imperfections.

Overall Deviation from Specifications

Up to 5% of boards off grade shall be deemed acceptable.

Surfacing Considerations

Discoloration

The acetylation process can result in discoloration and sticker marks upto 6mm in depth, and on occasion due to wood's natural variation slightly deeper. This is typically over come in an application such as decking by milling 1mm off the back side and a higher proportion from the appearance side. Removal of discoloration is not typically required when opaque coatings are used.



Lightly surfaced (machined)



Heavily surfaced (machined)

Accoya® Radiata Pine Lumber Grades

Table 1: Allowed Bow

Length [m]	Thickness [mm]					
	22 & 25	32	38	50	63	75
1,8	15	15	10	10	10	5
2,1	25	20	15	10	10	10
2,4	30	25	20	15	15	10
2,7	40	30	25	20	20	15
3,0	45	40	30	25	25	15
3,3	55	45	35	30	30	20
3,6	65	55	40	35	35	25
3,9	80	65	50	40	40	25
4,2	90	75	55	45	45	30
4,5	105	90	65	55	55	35
4,8	120	100	75	60	60	40

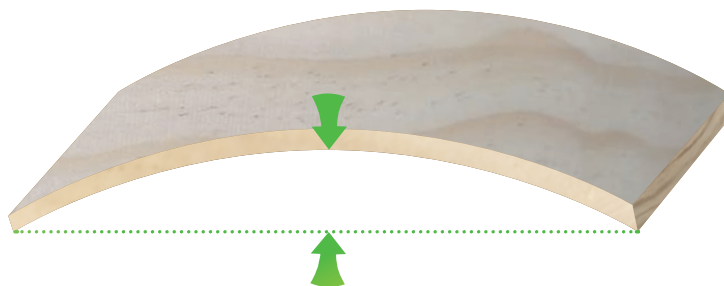
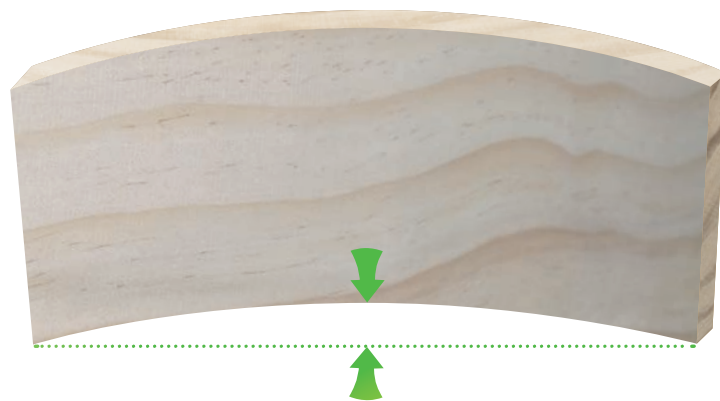


Table 2: Allowed Crook

Length [m]	Width [mm]					
	75	100	125	150	200	>200
1,8	5	4	3	3	2	2
2,1	10	5	5	4	3	2
2,4	10	10	5	5	4	3
2,7	15	10	10	5	5	4
3,0	15	10	10	10	5	5
3,3	20	15	10	10	5	5
3,6	25	15	15	10	10	5
3,9	25	20	15	15	10	10
4,2	30	25	20	15	10	10
4,5	35	25	20	20	15	10
4,8	40	30	25	20	15	10



Accoya® Radiata Pine Lumber Grades

Table 3: Allowed Twist per 100 mm Width

Length [m]	Thickness [mm]					
	22 & 25	32	38	50	63	75
1,8	10	10	5	5	5	3
2,4	10	10	10	5	5	4
3,0	15	15	10	10	10	5
3,6	20	15	10	10	10	5
4,2	20	20	15	10	10	5
4,8	25	20	15	10	10	10

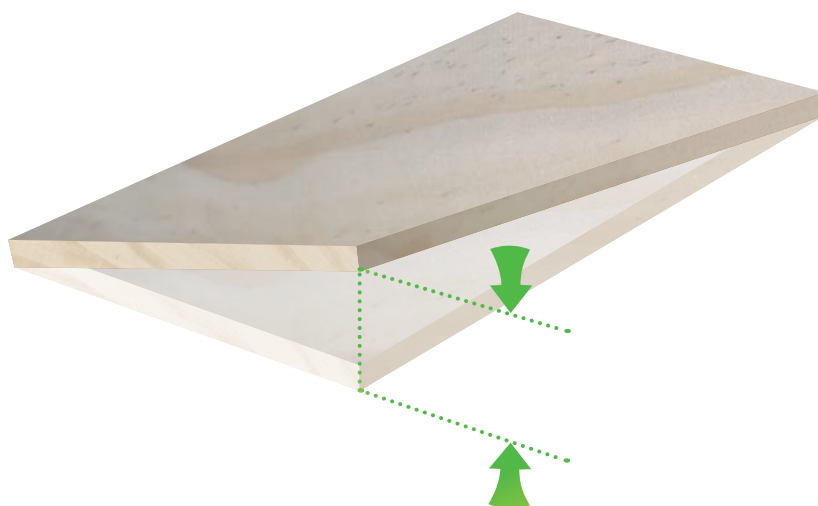
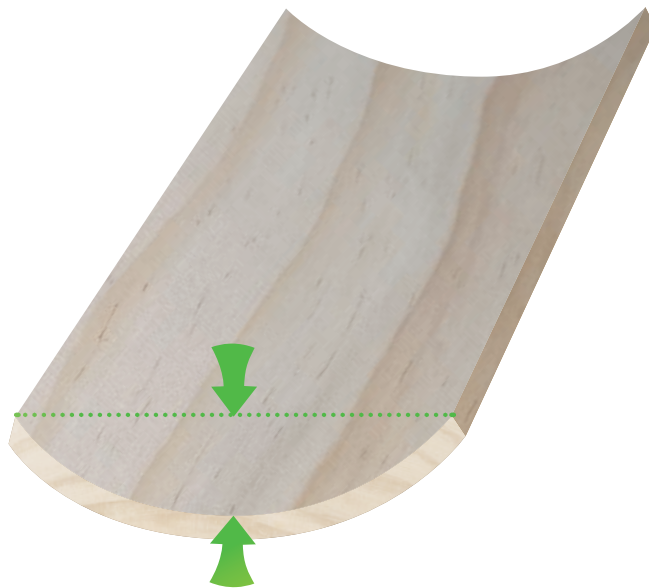


Table 4: Allowed Cupping

Width [mm]	Allowed cupping [mm]
75	1
100	1
125	2
150	2
200	3
225	4
250	5
300	6





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