



Western Juniper
Proprietary Log Sort Criteria

&
Lumber Grade Rules

First Edition- Summer 1998

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Proprietary Log Sort Criteria: Western Juniper

Markets for western juniper are not well-developed at this time, therefore there are only four log sorts: Old growth, veneer log, sawlog, and shaving or chip log. The veneer log and sawlog sorts are the only log sorts at this time suitable for producing veneer or lumber.

Old growth trees have little or no commercial value, but can be a critical component of wildlife habitat. A few artisans utilize portions of old growth trees (usually dead trees) in high-end furniture and artwork.

Old growth trees are normally easy to recognize due to their complex and often twisted limb structure. Some have obvious twisting grain and deeply furrowed bark. Old growth trees are usually found in areas protected from fire such as rocky flats, bluffs, or outcrops.

Veneer Log

This is the highest grade sort for western juniper logs. These logs are rare, estimated to comprise less than 1% of standing trees. Trees suitable for veneer logs are usually found in mixed conifer stands or in drainages where competition for sunlight results in reduced limb size and quantity. Veneer logs are suitable for peeling, slicing, or resawing into veneer products.

Standing Tree Evaluation

1. Spiral grain or twist- none
2. Forked stems or joined logs ("schoolmams")- none within log segments
3. Bark fluting- minimal
4. Minimum log or segment lengths- 8 ft. plus 6 in. trim
5. Minimum small end diameter- 8 in.
6. Limb spacing (best face)- 12 in. or more apart; if less than 12 in., limbs must average 1½ in. diameter or less at bark.

Log Preparation

1. Logs must be fresh-cut and transported to a processing facility within 30 days
2. Log ends must be coated with end seal or similar product
3. Rot not allowed
4. Ring shake not to encompass more than 20% of circumference
5. No more than one bark seam (ingrown bark) allowed



Sawlog

It is estimated that less than 20% of standing western juniper trees are suitable for sawlogs. Saw log trees are usually in dense juniper stands (75 trees per acre or more), mixed conifer stands, or in drainages where good soil conditions exist. Average heights of 35 ft. or taller are usually a good indicator that sawlogs are present.

Standing Tree Evaluation

1. Spiral grain or twist- none
2. Forked stems ("schoolmarms")- allowed provided they meet minimum diameter and length requirements after separation
3. Bark fluting- minimal
4. Log lengths- minimum of 25 ft. 6 in. to a 6 in. top
5. Diameter at breast height (DBH)- minimum of 10 to 12 in.
6. Limb spacing (best face)- 12 in. or more; if less than 12 in., limbs must average 2 in. diameter or less at bark.
7. "Cat face" or other major defects not allowed

Log Preparation

All cuts must be square and perpendicular. "Pig ears" not allowed.



Grade Mark

“ 3 ”

Premium

(tight knot & btr. both faces)

4/4, 5/4, 6/4, 8/4 x 6 ft. and longer.
(Widths to be agreed upon between
buyer and seller)

Knots not to exceed $\frac{3}{8}$ the width of
the face. Tight, black knots, well-
spaced are acceptable. No bark,
wane, voids, or rot allowed. Warp
(crook) not to exceed $\frac{1}{4}$ in. in 8
feet or multiples thereof.

Suitable for products that require
appearance on both sides. May be
resawn while maintaining high
percent of recovery.

Boards will meet grade standards
over 85% of the length.

Star checking of knots is normal.
Surface splits or cracks that extend
more than 15% of a board are not
acceptable.

Products:

Furniture, cabinetry, laminated
flooring, paneling, veneer, etc.

Heartwood and sapwood ratios to
be specified between buyer and
seller.

Premium





Grade Mark

“✓”

No. 1

(tight knot & btr., best face)

4/4, 5/4, 6/4, 8/4 x 6 ft. and longer.
(Widths to be agreed upon between
buyer and seller)

Knots not to exceed $\frac{3}{8}$ the width of
the face. Tight, black knots, well-
spaced are acceptable. No bark,
wane, voids, or rot allowed on best
face. Warp (crook) not to exceed 1
in. in 8 feet or multiples thereof.

Suitable for products that require
appearance on one side only.
Resawing could result in 50%
falldown due to backside defect.

Boards will meet grade standards
over 85% of the length.

Star checking of knots is normal.
Surface splits or cracks that extend
more than 15% of a board are not
acceptable.

Products:

Furniture, cabinetry, laminated
flooring, paneling, decking, doors,
etc.

Heartwood and sapwood ratios to
be specified between buyer and
seller.

No. 1 TK&Btr

Backside defect allowable:

Bark and/ or wane not to exceed $\frac{1}{4}$ the width or $\frac{1}{2}$ the thickness.

Well-spaced bark-encased knots must not penetrate more than $\frac{1}{2}$ the thickness of any board. These defects not to extend to within 1 in. of any side.

Backside surface splits or cracks not to exceed more than 15% of face.

No rot allowed.





Grade Mark

“O”

No. 2

(Cutstock)

4/4, 5/4, 6/4, 8/4 x 6 ft. and longer.
(Widths to be agreed upon between
buyer and seller)

Must consist of multiple cuttings of
no. 1 grade or better (tight knot &
btr, best face) over 60% of board.

Minimum cuttings are:
2 in. wide x 8 in. long or 3 in. wide
x 6 in. long.

Boards will meet grade standards
over 60% of the length.

Star checking of knots is normal.
Surface splits, cracks or rot not
acceptable in cuttings (best face).

Allowable backside defect equal to
grade no. 1.

Products:
Finger joint stock for edge-glued
panels or other value-added
products.

No. 2 Cutstock





Grade Mark

"X"

Rustic

4/4, 5/4, 6/4, 8/4 x 6 ft. and longer.
(Widths to be agreed upon between
buyer and seller)

Bark-encased knots not to extend
within 1 in. of any side. Well-
spaced voids are acceptable. Rot
not to exceed 15% of the piece.

Bark and/ or wane not to exceed $\frac{1}{4}$
of the surface or $\frac{1}{2}$ the sides.

Boards will meet grade standard
over 85% of the length. Surface
splits or cracks that materially
affect integrity are not allowed.

Products:

Rustic paneling, rustic furniture,
planter boxes, no. 3 fencing and
novelty items.

NOT SUITABLE FOR RESAWING

Rustic

