

A Visual Guide to U.S. Softwood Species & Grades



U.S. SOFTWOODS

Introduction

There are more than 22 commercially important softwood species that are native to the U.S. These are manufactured into hundreds of products and sold according to specifically defined grades. Grades are grouped into three basic categories: 1) Structural, 2) Appearance, and 3) Shop/Factory remanufacturing products. This sample pack includes a selection of species and grades from the first two categories (Structural and Appearance) for easy comparison of differences.

Additional information about these species is included on publications page of the Softwood Export Council website (www.softwood.org). The site includes species-specific guides and guides detailing Eastern and Western softwood species and applications.

Softwood Export Council
Portland, OR USA
www.softwood.org



SOFTWOOD SPECIES

Single & Combinations

MAJOR SPECIES & SPECIES COMBINATIONS

California Redwood

Sequoia sempervirens

* Douglas Fir - Larch (Species Group)

Douglas Fir

Pseudotsuga menziesii

Western Larch

Larix occidentalis

* Eastern White Pine

Pinus strobus

* Hem-Fir (Species Group)

California Red fir

Abies magnifica

Grand fir

Abies grandis

Mountain Hemlock

Tsuga mertensiana

Noble Fir

Abies procera

Pacific Silver fir

Abies amabilis

Western Hemlock

Tsuga heterophylla

White fir

Abies concolor

Idaho White Pine

Pinus monticola

* Ponderosa Pine

Pinus ponderosa

Spruce Pine Fir (Species Group)

Engelmann Spruce

Picea engelmannii

Lodgepole Pine

Pinus contorta

Sitka Spruce

Picea sitchensis

Sugar Pine

Pinus lambertiana

Western Cedars (Species Group)

Alaskan Cedar

Chamaecyparis nootkatensis

Incense Cedar

Libocedrus decurrens

Port Orford Cedar

Chamaecyparis lawsoniana

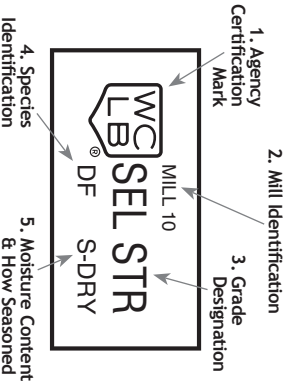
Western Red Cedar

Thuja plicata

* = Photographic product samples of these species and their grades are shown in this this guide.

GRADE STAMPS

Description & Elements



- 1. Certification Mark**
The grading agency's registered mark. Attests to quality control supervision.
- 2. Mill Identification**
Reveals the manufacturing mill's identity. It may be a name or assigned mill number.
- 3. Grade Designation**
Grade name, number, letter, or abbreviation.
- 4. Species Identification**
Indicates species by individual species or species combination.
- 5. Moisture Content & How Seasoned**
Indicates the moisture content/condition of seasoning when timber was surfaced at the mill.

Typical Grade Stamps Abbreviations	
BTR	Better
CLR	Clear
COM	Common
CONST	Construction
DF or D.Fir	Douglas fir
FIN	Finish
HEM	Western hemlock
HEM FIR	W. hemlock & true firs
HEM-FIR	W. hemlock & true firs
H-F	W. hemlock & true firs
IND	Industrial
KD	Kiln Dried
MC	Moisture Content
MER	Merchantable
PREM	Premium
PP	Ponderosa pine
R-List	Export R-List Grading Rules
S-DRY	Surfaced Dry (seasoned)
SEL	Select
SEL STR	Select Structural
S-GRN	Surfaced Green (unseasoned)
STAND	Standard
STUD	Stud grade
UTIL	Utility
WEST WOODS	Western Woods
WW	White Woods

APPEARANCE GRADES

Descriptions & Uses

Products in the “Appearance” category are graded for their aesthetic appeal. Grades range from the highest - clear and nearly clear premium products - to the most utilitarian. Strength is not a consideration except in stress-rated boards. Instead, grain, texture, number and size of knots, and a variety of natural characteristics and manufacturing imperfections are considered. These factors are defined for each lumber grade in each grading agency’s Grading Rules. End uses include paneling, furniture, cabinetry, case goods, cladding, shelving, flooring, and all types of decorative installations. Appearance grade lumber is available in a variety of standard and custom-sized thicknesses, widths and lengths to suit customer needs. Highest grade lumber is typically not grade-stamped to avoid marring the wood.



DOUGLAS FIR

C & Better

140 mm
5.5"

184 mm
7.25"

235 mm
9.25"



DOUGLAS FIR

D Grade

140 mm
5.5"

184 mm
7.25"

235 mm
9.25"



DOUGLAS FIR

Select Merchantable

140 mm
5.5"

184 mm
7.25"

235 mm
9.25"



DOUGLAS FIR

R-List 2 Clear

140 mm
5.5"

184 mm
7.25"

235 mm
9.25"



DOUGLAS FIR

R-List 4 Clear

140 mm
5.5"

184 mm
7.25"

235 mm
9.25"



DOUGLAS FIR

R-List No. 1 Merchantable

140 mm
5.5"

184 mm
7.25"

235 mm
9.25"



EASTERN WHITE PINE

D & Better Select

140 mm
5.5"

184 mm
7.25"

235 mm
9.25"



EASTERN WHITE PINE

Finish

140 mm
5.5"

184 mm
7.25"

235 mm
9.25"



EASTERN WHITE PINE

Premium

140 mm
5.5"

184 mm
7.25"

235 mm
9.25"



EASTERN WHITE PINE

Standard

140 mm
5.5"

184 mm
7.25"

235 mm
9.25"



EASTERN WHITE PINE

Industrial

140 mm
5.5"

184 mm
7.25"

235 mm
9.25"



HEM-FIR

C & Better

140 mm
5.5"

184 mm
7.25"

235 mm
9.25"



HEM-FIR

D Grade

140 mm
5.5"

184 mm
7.25"

235 mm
9.25"



HEM-FIR

Select Merchantable

140 mm
5.5"

184 mm
7.25"

235 mm
9.25"



HEM-FIR

R-List 2 Clear

140 mm
5.5"

184 mm
7.25"

235 mm
9.25"



HEM-FIR

R-List 4 Clear

140 mm
5.5"

184 mm
7.25"

235 mm
9.25"



HEM-FIR

R-List No. 1 Merchantable

140 mm
5.5"

184 mm
7.25"

235 mm
9.25"



PONDEROSA PINE

C & Better Select

140 mm
5.5"

184 mm
7.25"

235 mm
9.25"



PONDEROSA PINE

D Select

140 mm
5.5"

184 mm
7.25"

235 mm
9.25"



PONDEROSA PINE

1 Common

140 mm
5.5"

184 mm
7.25"

235 mm
9.25"



PONDEROSA PINE

2 Common

140 mm
5.5"

184 mm
7.25"

235 mm
9.25"





PONDEROSA PINE

3 Common

PONDEROSA PINE

4 Common

140 mm
5.5"

184 mm
7.25"

235 mm
9.25"



STRUCTURAL GRADES

Descriptions & Uses

Structural lumber is graded based on characteristics that impact its strength. Numeric engineering values, established through testing programs and used for design, are assigned to each species, grade and size.

The National Grading Rule classifies structural lumber into four classifications. These include:

- **Structural Light Framing**
Used in construction, the strongest grades of structural light framing lumber are used for high strength applications. This lumber is available in sizes from 38 - 89 mm thick x 38 - 89 mm wide.
- **Light Framing**
Used in general construction applications and available in the same sizes as structural light framing lumber.
- **Stud**
Used in wall framing and vertical support applications.
- **Structural Joists and Planks**
Large sizes are used for floor joists, roof support, and high strength construction and engineering uses.

There are special grades available for lumber that is machine stress-rated, and special purpose grades for lumber used for deck construction. There are also grades specific to species such as redwood and cedar. Structural products are always grade-stamped.



DOUGLAS FIR

Construction 2X4

↑
89 mm
3.5"
↓

↑
89 mm
3.5"
↓

↑
89 mm
3.5"
↓

↑
89 mm
3.5"
↓

↑
89 mm
3.5"
↓



DOUGLAS FIR

Standard 2X4

↑
89 mm
3.5"
↓

↑
89 mm
3.5"
↓

↑
89 mm
3.5"
↓

↑
89 mm
3.5"
↓

↑
89 mm
3.5"
↓



DOUGLAS FIR

Utility 2X4



DOUGLAS FIR

Select Structural

140 mm
5.5"

184 mm
7.25"

235 mm
9.25"





140 mm
5.5"



184 mm
7.25"



235 mm
9.25"

DOUGLAS FIR

No. 1

DOUGLAS FIR

No. 2

140 mm
5.5"

184 mm
7.25"

235 mm
9.25"



DOUGLAS FIR

No. 3

140 mm
5.5"

184 mm
7.25"

235 mm
9.25"





140 mm
5.5"



184 mm
7.25"



235 mm
9.25"

DOUGLAS FIR

Utility

HEMLOCK

Select Structural

↑
89 mm
3.5"
↓

↑
89 mm
3.5"
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↑
89 mm
3.5"
↓

↑
89 mm
3.5"
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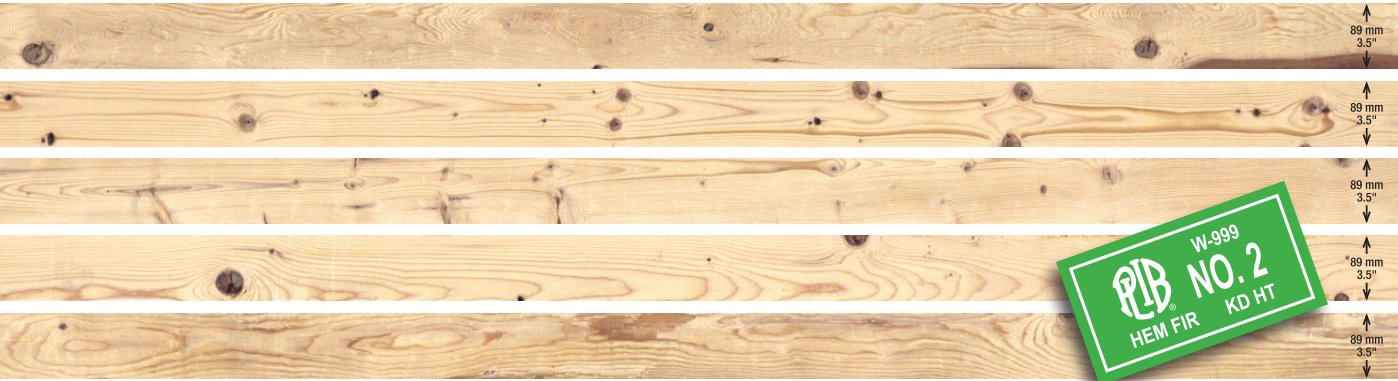
↑
89 mm
3.5"
↓





W-999
RIB® NO. 1
HEM FIR S-DRY

HEMLOCK
No. 1



↑
89 mm
3.5"
↓

↑
89 mm
3.5"
↓

↑
89 mm
3.5"
↓

↑
89 mm
3.5"
↓

↑
89 mm
3.5"
↓



HEMLOCK

No. 2



HEMLOCK

No. 3

HEMLOCK

Construction

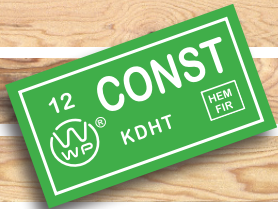
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89 mm
3.5"
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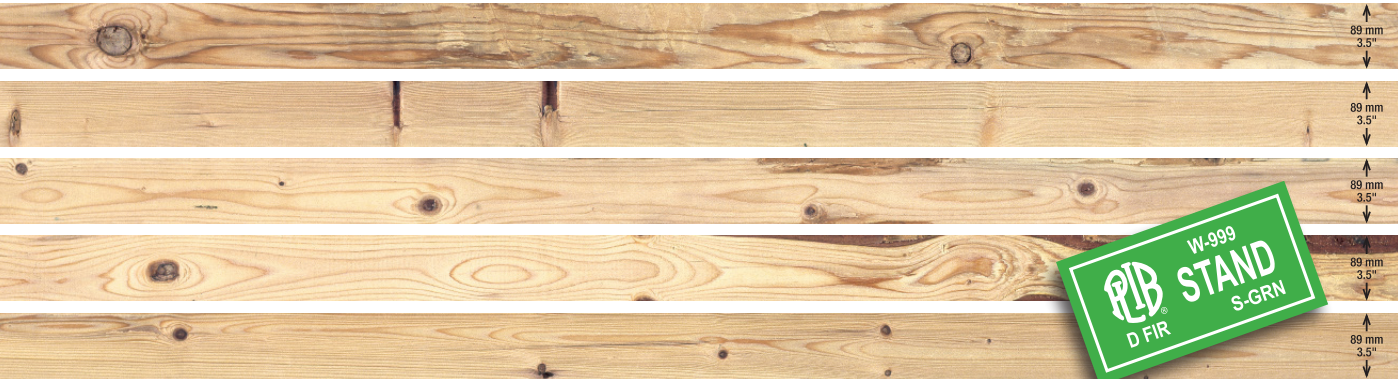
↑
89 mm
3.5"
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89 mm
3.5"
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↑
89 mm
3.5"
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↑
89 mm
3.5"
↓





HEMLOCK

Standard



↑
89 mm
3.5"
↓

↑
89 mm
3.5"
↓

↑
89 mm
3.5"
↓

↑
89 mm
3.5"
↓

↑
89 mm
3.5"
↓



HEMLOCK

Utility



The Softwood Export Council is a non-profit trade association made up of lumber grading agencies, industry trade associations, state export development agencies, and universities that work together to promote US softwood products internationally.

Softwood Export Council
Portland, Oregon USA
Email: admin@softwood.org
Website: www.softwood.org

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