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

SOFTWOOD EXPORT COUNCIL

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

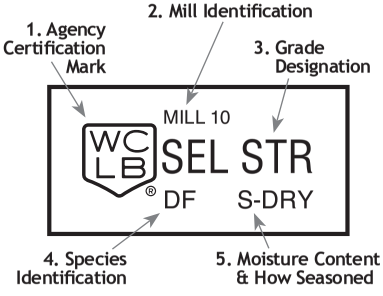
Spruce Pine Fir (Species Group)
Engelmann Spruce
Picea engelmannii
Lodgepole Pine
Pinus contorta
Sitka Spruce
Picea sitchensis

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

DOUGLAS FIR

D Grade

DOUGLAS FIR

Select Merchantable

DOUGLAS FIR

R-List 2 Clear

DOUGLAS FIR

R-List 4 Clear

DOUGLAS FIR

R-List No.1 Merchantable

EASTERN WHITE PINE

D & Better Select

EASTERN WHITE PINE

Finish

EASTERN WHITE PINE

Premium

EASTERN WHITE PINE

Standard

EASTERN WHITE PINE

Industrial

HEM-FIR

C & Better

HEM-FIR

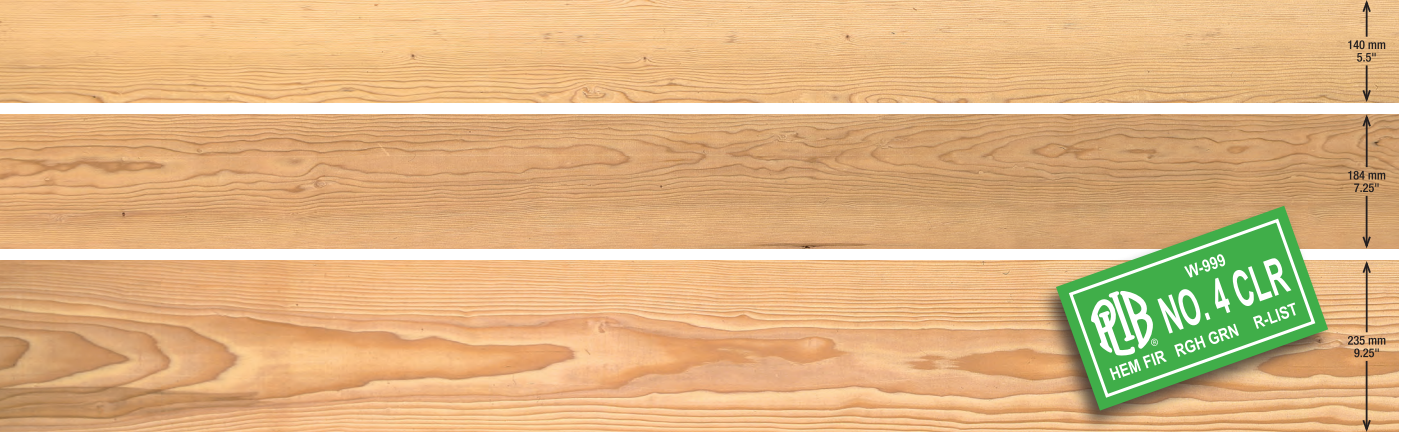
D Grade

HEM-FIR

Select Merchantable

HEM-FIR

R-List 2 Clear



HEM-FIR

R-List 4 Clear

HEM-FIR

R-List No. 1 Merchantable

PONDEROSA PINE

C & Better Select

PONDEROSA PINE

D Select

PONDEROSA PINE

1 Common

PONDEROSA PINE

2 Common

PONDEROSA PINE

3 Common

140 mm
5.5"

184 mm
7.25"

235 mm
9.25"

12 3 COM
KDHT

PONDEROSA PINE

4 Common

140 mm
5.5"

184 mm
7.25"

235 mm
9.25"

MILL 10

WCLB®

4 COM

PP KD-HT

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

DOUGLAS FIR

Standard 2X4

DOUGLAS FIR

Utility 2X4

DOUGLAS FIR

Select Structural

DOUGLAS FIR

No. 1

DOUGLAS FIR

No. 2

DOUGLAS FIR

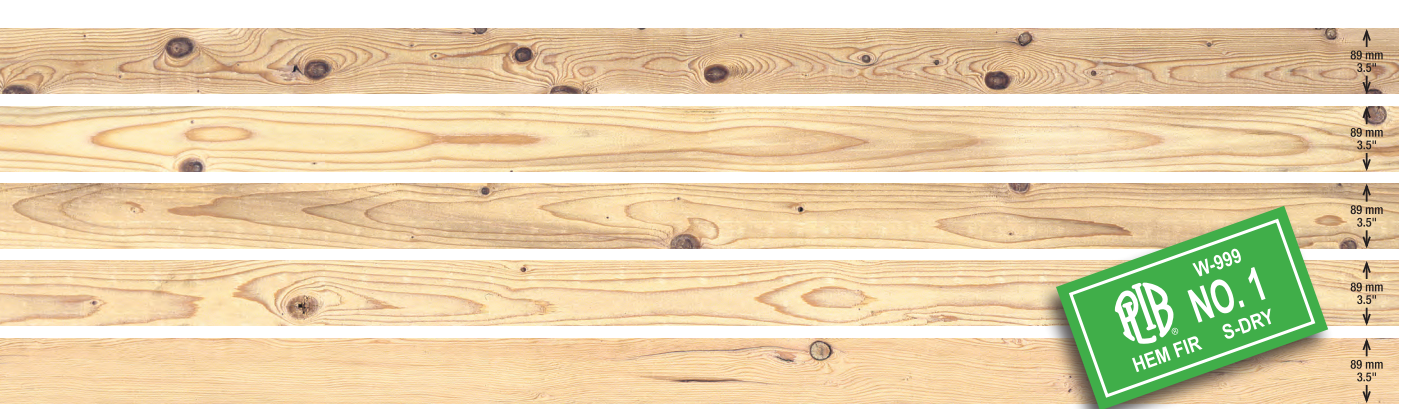
No. 3

DOUGLAS FIR

Utility

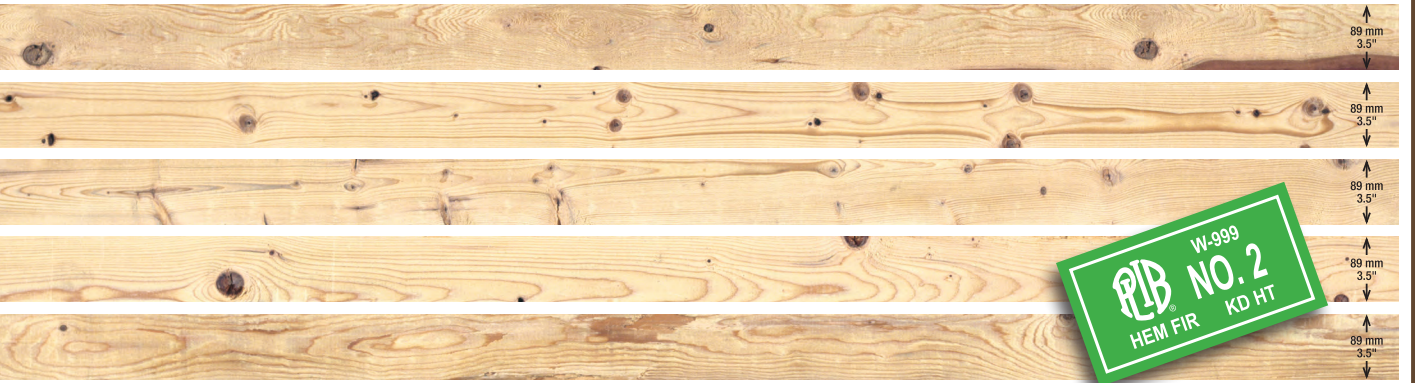
HEMLOCK

Select Structural



HEMLOCK

No. 1



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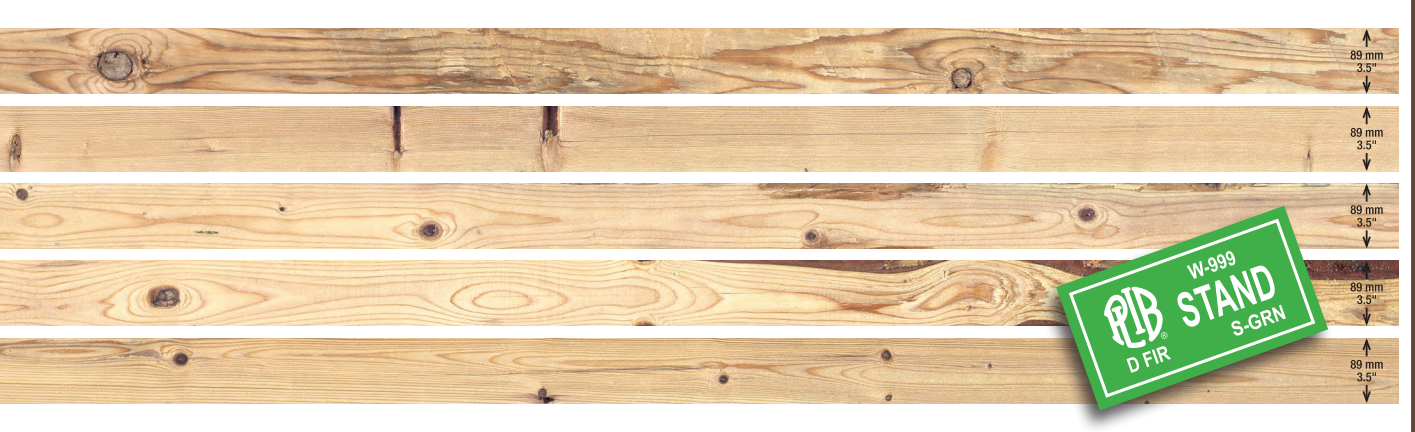
No. 2

HEMLOCK
No. 3

HEMLOCK
Construction



HEMLOCK
Standard

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
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