

Price: \$30



GRADING AND PACKAGING

APPENDIX

OF FLOORING GRADES

NOFMA GRADES

Note: The following rules are current as of the printing of this publication. For the most recent rules, consult NOFMA's "Official Flooring Grading Rules."

GRADING CHARACTERISTICS for OAK: PLAIN SAWN, QUARTER SAWN, RIFT SAWN, QUARTER/RIFT SAWN

PLAIN SAWN: Flooring that is marked or specified as PLAIN SAWN or PLAIN, may contain any combination of the following types of grain classification: Plain Sawn, Rift Sawn, and Quarter Sawn.



QUARTER SAWN: Flooring that is marked or specified as QUARTER SAWN or QUARTERED; at least 50% of the piece must contain Quartered characteristics. Quartered characteristics as defined by NOFMA are: In cross section the angle of the annual ring tangent to the face of the piece to be between 45° and 90°. Grain lines to be mostly parallel to the length of strips,

and medullary ray flecks present and more than 1/16" wide.

RIFT SAWN: Flooring that is marked or specified as RIFT SAWN or RIFT; at least 75% of the piece must contain Rift characteristics. Rift characteristics as defined by NOFMA are: In cross section the angle of the annual ring tangent to the face of the piece to be between 30° to 60°. Grain lines to be mostly parallel to the length of strips and medullary ray flecks less than 1/16" wide.

QUARTER/RIFT SAWN: Flooring that is marked or specified as QUARTER/RIFT SAWN or QUARTER/RIFT, is a combination of QUARTER SAWN and RIFT SAWN developing from the production run.

OAK FLOORING GRADING RULES

(NOTE: Characters included in a higher grade are automatically accepted in lower grades.)

Clear Oak

A flooring product of mostly heartwood with a minimum number of character marks and discoloration, providing a uniform appearance while allowing for all heartwood natural color variations.

Will admit the following: 3/8" bright sapwood entire length of strip or equivalent if not extending further than 1" for 1/2 length of piece; small burls and fine pin worm holes; and equivalent characters



Select Oak



such as small tight checks; in the absence of these, one thin brown streak 3" long to be allowed every 6'.

Standard Packaging - Bundles to be 1 1/4' and longer; Average length, bundled or nested, 3 3/4'. **Shorter Packaging** - Average length for 7' and shorter packages, nested or otherwise, 3 1/2'.

A flooring product with coloration variations produced by differences of natural heartwood and sapwood, along with characters described.

The face may contain: unlimited sound sapwood; slight imperfections in milling; a small tight knot every 3'; pin worm holes; burls and a reasonable amount of slightly open checks. Brown streaks should not extend

the entire length of a piece. Two flag worm holes to every 8' are permitted. Slight imperfections in face work (torn grain) admitted. An intermittent, brown machine burn across the face not exceeding 1/4" width admitted. Also, a slight quantity of bark on the back or sides admitted. Will admit pieces with 1/2 tongue. Spot filling is generally required for open characters.

Standard Packaging - Bundles to be 1 1/4' and longer; Average length, bundled or nested, 3 3/4'. **Shorter Packaging** - Average length for 7' and shorter packages, nested or otherwise, 3'.

No. 1 Common Oak



A flooring product which contains prominent variations in coloration and varying characters.

The following are not admitted: broken knots over 1/2" in diameter, large grub worm holes; and splits extending through the piece. Open characters such as checks and knot holes are admitted, but must be sound and readily fill.

Not more than 20" scant stock in thickness allowed to every 5'. Minor imperfections in machining permitted. Shall admit sticker stain; varying wood characteristics, such as flag worm holes, heavy streaks, checks, and worm holes; and an occasional dark machine burn across the face not exceeding 1/2" wide, 1/8" deep and

not more than two each 3'. $\frac{1}{4}$ " tongue allowed. Extremely dark pieces are not to be included.

Standard Packaging - Bundles to be 1½' and longer; Average length, bundled or nested, 2¾'. Shorter Packaging - Average length for 7' and shorter packages, nested or otherwise, 2½'.

No. 2 Common Oak



May contain sound natural variations of the forest product and manufacturing imperfections. The purpose of this grade is to furnish a floor suitable for homes, general utility use, or where character marks and contrasting appearance is desired.

The following are not admitted: shattered or rotten ends, large broken knots, excessive bad

millwork, shake, advanced rot, and similar unsound defects. Dark machine burns exceeding $\frac{3}{4}$ " deep not admitted. Knot holes and open characters which will readily fill are admitted. A limited number of pieces with no tongue which may be face nailed are admitted.

Standard Packaging - Bundles to be 1½' and longer; Average length, bundled or nested, 2¾'. Shorter Packaging - Average length for 7' and shorter packages, nested or otherwise, 2'.

1½' Shorts Oak

Pieces 9" to 18" long are to be bundled together and designated as 1½' Shorts. Pieces graded NO. 1 COMMON, SELECT and CLEAR to be bundled together and designated NO. 1 COMMON & BETTER with pieces grading NO. 2 COMMON bundled separately and designated as such. Although pieces 6" under and only 3" over the nominal length of the bundle may be included, the pieces must average 1½', which is achieved through the natural preponderance of longer lengths.

PREFINISHED OAK GRADING RULES

White Oak and Red Oak in STANDARD & BETTER Grades with a natural coloration, to be separated. All other colors and grades may be mixed Red Oak and White Oak. Grades are established after the flooring has been sanded and finished.

Prime Prefinished Oak

This is the top grade and the overall appearance shall be good. The face of strips shall be selected for appearance after finishing. This grade includes characteristics found in the unfinished grades of CLEAR and SELECT grade.

The following characters are admitted: Unlimited Sapwood and the natural variations of color; Occasional small Burls; Light

brown Steaks not more than $\frac{1}{8}$ " in width and 6" in length or the equivalent; an occasional very small tight $\frac{1}{8}$ " Knot; and limited $\frac{1}{32}$ " fine Pinworm Holes, may be included in any one piece when properly filled. Will not admit pieces with less than $\frac{3}{4}$ " full tongue.

Minimum average length 3¾'. Bundles 1½' and up.

Standard Prefinished Oak

The face of strips may contain sound wood characteristics which are even and smooth after filling and finishing. This grade includes some characteristics found in the unfinished grades SELECT, NO.1 COMMON, and NO. 2 COMMON.

The following characters are admitted; Worm holes; Season and Kiln Checks, Broken Knots up to $\frac{3}{8}$ " in diameter, minor imperfections in machining, Torn Grain and Burns. Other characters will be admitted if they do not impair the soundness of the floor. All larger admitted open characters are to be properly filled and finished. Limited unfinished/unfilled small open grade characters permitted.

Large Grub Worm Holes, Splits extending through the piece, Shake and similar unsound defects not admitted.

For naturally finished coloration- All the varying color characteristics of the wood admitted to include, Sticker Stain, and Dark Streaks up to $\frac{3}{8}$ " in width not to exceed 1" in length for each lineal foot.

For stained finishes- All varying colorations and streaks permitted, predominantly dark boards not permitted.

Minimum average length 2½'. Bundles 1½' and up.

Standard & Better Prefinished Oak

A combination of PRIME and STANDARD grade developing from the production run.

Minimum average length 2½'. Bundles 1½' and up.

Tavern Prefinished Oak

Should lay a serviceable floor.

A limited amount of unfilled/unfinished open characters admitted. A limited amount of pieces with finish irregularities such as bubbles, small skips, lines, stain/color variation, surface handling scratches, minor trash, and the like are allowed.

The following characters are NOT admitted: Mis-manufactured boards; shattered or rotten ends; large open Knots and other unsound defects of a similar nature; pieces with less than $\frac{3}{4}$ " full tongue.

Minimum average length 2'. Bundles 1½' and up.

Tavern & Better Prefinished Oak

A combination of PRIME, STANDARD and TAVERN grades developing from the production run. Minimum average length 2'.

BEECH, BIRCH & HARD MAPLE GRADING RULES

NOFMA recognizes $\frac{3}{4}$ ", $\frac{25}{32}$ " and $\frac{3}{8}$ " as standard thicknesses for the manufacture of Hard Maple, Beech, and Birch flooring. NOFMA members may, at their option, produce either $\frac{25}{32}$ " or $\frac{3}{4}$ " thick Hard Maple, Beech, and Birch flooring.

First Grade Beech, Birch & Hard Maple

Shall have the face practically free of all defects, but the natural color of the wood shall not be considered a defect. The highest standard grade, combines appearance and durability.

Will admit the following: variations in the Natural Color of the wood (with use of some finishes, slight shadows and color variation may appear); an occasional small, firm Pin Knot, not over $\frac{1}{8}$ " in diameter, provided it does not occur on edges or ends of strips; occasional dark Green or Black Spots or Streaks not over $\frac{1}{4}$ " wide and 3" long (or its equivalent) which may contain a tight check not over $\frac{1}{2}$ " long, provided it is boxed within the piece; Bird's Eyes and small Burls; slightly Torn Grain; or similar defect which can be readily removed by the ordinary method of sanding the floor after it is laid; a slightly Shallow Place not over 12" long on underside of the flooring if it does not extend to either end of the piece. Pieces with $\frac{1}{2}$ " Tongue for no more than 25% of the length are allowed. The wood must be sound and free of Shake. Bark Streaks shall not be permitted.

Bundles shall be 1'- $\frac{1}{4}$ " and longer through 7' or 8' as the stock will produce. Not over 55% of the total footage shall be in bundles under 4'; Not more than 25% of the total footage shall be in 2' bundles, and not more than 10% of the footage shall be in 1'- $\frac{1}{4}$ " bundles.

Nested bundles: Maximum average number of pieces under 1'- $\frac{1}{4}$ " shall be 8 pieces. Average length is 3'.

Second Grade Beech, Birch & Hard Maple

A floor with varying wood characteristics and colors to include distinct color variations, numerous Streaks, stained Sapwood, sound Knots, and Checks. All defects must readily fill.

Will admit the following: sound tight Knots, provided they do not occur on edges or ends of strips; slight Imperfections in machining; distinct Color Variations; Sticker Stain/Shadow; numerous dark Green or Black Spots or Streaks, provided they do not occur in combination with predominantly dark heartwood; slight Checks not exceeding 3" in length (may be slightly open) and running parallel with and well inside the edges and ends of the strips; dark Spots or Streaks with slight Checks in center; small Rough Spots (Torn Grain) which cannot be wholly removed by ordinary method of sanding the floor after it is laid; slightly Torn Edges; Short Tongue if sufficient to hold properly in the floor; Shallow or Waney Back, if piece has sufficient bearing of full thickness to support it in the floor; small bark Streaks where bark is as sound as surrounding wood; and slight variation in Angle of End Matching. The face shall be free of Shake and wood must be sound.

Bundles shall be 1'- $\frac{1}{4}$ " and longer through 7' or 8', as the stock will produce. Not over 60% of the total footage shall be in bundles under

4', Not more than 27% of the total footage shall be in 2' bundles; and not more than 15% of the footage shall be in 1'- $\frac{1}{4}$ " bundles.

Nested bundles: Maximum average number of pieces under 1'- $\frac{1}{4}$ " shall be 12 pieces. Average length 2 $\frac{1}{2}$ '.

Third Grade Beech, Birch & Hard Maple

Must be of such character as will lay and give a good serviceable floor. The wood must be firm, serviceable and may contain all defects common to Maple. Pieces with $\frac{1}{4}$ " full Tongue admitted.

Third Grade will not admit- Knot Holes over $\frac{3}{8}$ " in diameter or unsound Knots where the unsound portion is over 1" in diameter; Voids on Ends or Edges; or Shake, Heart Checks, badly Split Ends and Imperfections in Manufacture which would materially impair the serviceability of the floor.

Bundles shall be 1'- $\frac{1}{4}$ " and longer through 7' or 8', as the stock will produce. Not over 85% of the total footage shall be in bundles under 4'; and not more than 55% of the total footage shall be 1'- $\frac{1}{4}$ " bundles.

Nested bundles: Maximum average number of pieces under 1'- $\frac{1}{4}$ " shall be 42. Average length 2 $\frac{1}{4}$ '.

Second & Better Beech, Birch & Hard Maple

A combination of FIRST GRADE and SECOND GRADE developing from the production run. The lowest grade pieces admissible shall not be less than SECOND GRADE.

Bundles shall be 1'- $\frac{1}{4}$ " and longer through 7' or 8' as the stock will produce. Not over 60% of the total footage shall be in bundles under 4'. Not more than 27% of the total footage shall be in 2' bundles, and not more than 15% of the footage shall be 1'- $\frac{1}{4}$ " bundles.

Nested bundles: Maximum average number of pieces under 1'- $\frac{1}{4}$ " shall be 12 pieces. Average length 2 $\frac{1}{2}$ '.

Third & Better Beech, Birch & Hard Maple

A combination of FIRST GRADE, SECOND GRADE, and THIRD GRADE developing from the production run. The lowest grade pieces admissible shall not be less than THIRD GRADE.

Bundles shall be 1'- $\frac{1}{4}$ " and longer through 7' or 8', as the stock will produce. Not over 60% of the total footage shall be in bundles under 4'.

Nested bundles: Maximum average number of pieces under 1'- $\frac{1}{4}$ " shall be 42. Average length 2 $\frac{1}{4}$ '.

SPECIAL GRADES for Beech, Birch & Hard Maple

First Grade White Hard Maple

Is special stock, selected for uniformity of color. It is almost ivory white and is the finest grade of Hard Maple flooring that can be produced. Sapwood/Heartwood pieces must have 95% Sapwood on the face. Strips must be free from stain and Heartwood portion must be nearly white. All FIRST GRADE rules apply.

EXCEPTIONS: Streaks- should be light brown or light green, not over $\frac{1}{4}$ " wide and 3" long (or equivalent) one per 3'. Black Spots, Sticker Stain/Shadow- not admitted.

First Grade Red Beech & Birch

Are special grades produced from all red faced stock, and are specially selected for color. The color is rich, being a soft tint which lends these two woods an individuality found in no other species. Strips must have 95% red faced characteristics. All FIRST GRADE rules apply.

EXCEPTIONS: Streaks- Should be light brown, Black Spots, Sticker Stain/Shadow- not admitted.

HICKORY / PECAN**First Grade Hickory / Pecan**

Shall have the face practically free of all defects, but the natural color of the wood shall not be considered a defect. The highest standard grade, combines a nearly uniform appearance with exceptional durability.

The following characters are admitted: variations in the Natural Color of the wood, Heartwood and Sapwood: an occasional small, firm Pin Knot or Bird Peck, not over $\frac{1}{8}$ " in diameter, provided it does not occur on edges or ends of strips; dark Streaks not over $\frac{1}{4}$ " wide and 3" long (or its equivalent one for every 3 ft. in length); slight Checks not over $\frac{1}{2}$ " long, provided Check is boxed within the piece; small Burls; slight Torn Grain or slight intermittent Machine Burn; or similar defect which can be readily removed by the ordinary method of sanding the floor after it is laid; a slightly Shallow Place not over 12" long on underside of the flooring if it does not extend to either end of the piece. Pieces with $\frac{1}{2}$ " tongue for no more than 25% of the length are allowed. The wood must be free of Shake. Bark Streaks shall not be permitted.

Packaging: 8' or shorter, Nested or bundled. Pieces/Bundles shall be $1\frac{1}{4}$ " and longer through 7' or 8' as the stock will produce (9" Minimum, 102" Maximum). Average length $3\frac{3}{4}$ ". Average length for 7' and shorter packages, nested or otherwise - 3'.

Second Grade Hickory / Pecan

A floor with varying wood characteristics and colors to include heavy Streaks, stained Sapwood, sound Knots, Checks and small Splits. All defects must readily fill and be sound.

The following characteristics are admitted: Broken Knots up to $\frac{1}{2}$ " in diameter; distinct Color Variations (predominantly dark, discolored pieces not allowed); Sticker Stain/Shadow; numerous dark Streaks or black spots; Checks to $\frac{1}{8}$ " not exceeding 3" in length, and running parallel and well inside the strip edges; small End Split $\frac{1}{8}$ " x $\frac{1}{2}$ " showing no movement; Bird Pecks to $\frac{1}{2}$ " where bark is sound and as hard as surrounding wood.

Minor imperfections in machining permitted; Torn Grain (less than $\frac{1}{8}$ " deep and 3" long for full width); slightly Torn Edges, and an occasional dark Machine Burn $\frac{1}{2}$ " in width (1 per 3').

Will admit pieces with $\frac{1}{2}$ " full Tongue entire length of piece.

Packaging: 8' or shorter, Nested or bundled. Pieces/Bundles shall be $1\frac{1}{4}$ " and longer through 7' or 8' as the stock will produce (9"

Minimum, 102" Maximum). Average length $2\frac{3}{4}$ ". Average length for 7' and shorter packages, nested or otherwise- $2\frac{1}{2}$ ".

Second & Better Hickory / Pecan

A combination of FIRST GRADE and SECOND GRADE developing from the production run. The lowest graded pieces allowed are SECOND GRADE.

Packaging: 8' or shorter, Nested or bundled. Pieces/Bundles shall be $1\frac{1}{4}$ " and longer through 7' or 8' as the stock will produce (9" Minimum, 102" Maximum). Average length $2\frac{3}{4}$ ". Average length for 7' and shorter packages, nested or otherwise- $2\frac{1}{2}$ ".

Third Grade Hickory / Pecan

Must be of such character as will lay and give a good serviceable floor. The wood must be firm, and may contain defects of every character. This grade is intended to give a "rustic" appearance.

The following defects are not allowed: Knot Holes over $\frac{3}{8}$ " in diameter or unsound Knots where the unsound portion is over 1" in diameter (the unsound portion can not extend through piece); Shake, Soft Rot, Splits and open defects which extend through piece or show movement, Torn Grain more than $\frac{1}{4}$ " deep, Edge Splinters, and Imperfections in Manufacture which would materially impair the serviceability of the floor.

Knot Holes, Bird Pecks, Worm Holes, and the like which will readily fill are admitted. Pieces with $\frac{1}{4}$ " full tongue admitted.

Packaging: 8' or shorter, Nested or bundled. Pieces/Bundles shall be $1\frac{1}{4}$ " and longer through 7' or 8' as the stock will produce (9" Minimum, 102" Maximum). Average length $2\frac{3}{4}$ ". Average length 7' and shorter packages, nested or otherwise- 2'.

Third & Better Hickory / Pecan

A combination of FIRST GRADE, SECOND GRADE, and THIRD GRADE developing from the production run. The lowest graded pieces allowed are THIRD GRADE.

Packaging: 8' or shorter, Nested or bundled. Pieces/Bundles shall be $1\frac{1}{4}$ " and longer through 7' or 8' as the stock will produce (9" Minimum, 102" Maximum). Average length $2\frac{3}{4}$ ". Average length for 7' and shorter packages, nested or otherwise- 2'.

Special Grades Hickory/Pecan**First Grade Red Hickory / Pecan**

Is a special stock selected for its deep red/brown color with the minimal contrast of the lighter Sapwood.

Face of pieces shall be Heartwood (95%). All First Grade Rules apply.

First Grade White Hickory / Pecan

Is special stock selected for its creamy color with the minimal contrast of the darker Heartwood. The face of pieces shall be bright Sapwood (95%). All First Grade rules apply.

EXCEPTIONS: Streaks should be light brown not over $\frac{1}{4}$ " wide and 3" long (or equivalent) one per 3'. Black Spots not allowed, Sticker

Stain/Shadow none allowed.

Second Grade Red Hickory / Pecan

Is special stock selected for minimal contrasting lighter Sapwood. The face of pieces shall be Heartwood (85%). All Second Grade rules apply.

ASH GRADING RULES

Clear Ash

The face shall be practically free of defects.

The following characters are admitted: Small burls (less than $\frac{1}{8}$ " in diameter); fine pin worm holes with no discoloration (1 for every 3' in length); or in the absence of these, one (1) thin light brown streak (3" long to be allowed for every 6' of length or equivalent).

Brown Heartwood is allowed as follows; $\frac{3}{8}$ " entire length or 1" for one-third the length of the strip.

Clear Ash is usually chosen for its light color. Bundles to be 1 $\frac{1}{4}$ ' and up. Average length (Standard Packaging) 3 $\frac{3}{4}$ '. Average length for shorter packaging, nested or otherwise, 3 $\frac{1}{2}$ '.

Select Ash

The face shall contain mostly Sapwood, unstained.

The following characters are admitted: Narrow streaks not running entire length of the strip; pin worm holes (up to 3 every 3' in length); imperfection in milling (Torn grain) which will sand out; One (1) small tight knot ($\frac{1}{4}$ " in diameter) to every 3' in length; Small pith fleck (less than $\frac{1}{4}$ " diameter); An intermittent brown machine burn across the face not exceeding $\frac{1}{4}$ " in width; and Unlimited cambium miners. Brown Heartwood is allowed as follows: $\frac{3}{8}$ " entire length or 1" for one-third the length of the strip.

Will admit pieces with $\frac{1}{2}$ " tongue. Most defect are lost sight of after the floor is laid and finished, giving a good appearance.

Bundles to be 1 $\frac{1}{4}$ ' and up. Average Length (Standard Packaging) 3 $\frac{3}{4}$ '. Average length for Shorter packaging, nested or otherwise, 3'.

No. 1 Common Ash

A floor with varying wood characteristics such as Heavy streaks, Stained sapwood, and Sound knots typical of this grade. All defects must readily fill and be sound.

The following characters are admitted: Broken knots up to $\frac{1}{2}$ " in diameter; Pith flecks less than $\frac{3}{16}$ " in diameter; Worm holes up to $\frac{3}{16}$ "; Checks and End splits less than $\frac{1}{16}$ " wide and not extending through the piece; and Sticker stain.

Minor imperfections in machining permitted; Torn grain (not over one-fourth ($\frac{1}{4}$) of the surface, less than $\frac{1}{16}$ " in depth); One (1) dark machine burn across the face for every 3' of length, not exceeding $\frac{1}{2}$ " in width, $\frac{1}{4}$ " in depth.

Will admit pieces with $\frac{1}{4}$ " tongue. Bundles to be 1 $\frac{1}{4}$ ' and up. Average Length (Standard Packaging) 2 $\frac{3}{4}$ '. Average Length for

Shorter Packaging, nested or otherwise, 2 $\frac{1}{2}$ '.

No. 2 Common Ash

Defects of every character admitted, but should lay a serviceable floor.

The following defects are NOT allowed: Saft rat; Broken knots where the unsound portion extends through piece; Torn grain over $\frac{3}{16}$ " in depth; Splits and Open defects extending through the piece; Shake and Pith flecks that are saft if over $\frac{1}{4}$ " in diameter.

Knot holes and defects which will readily fill are admitted.

A limited number of pieces with no tongue and limited number of pieces that are thin (scant) in thickness but will End Match admitted. Bundles to be 1 $\frac{1}{4}$ ' and up. Average Length (Standard Packaging) 2 $\frac{3}{4}$ '. Average length for Shorter Packaging, nested or otherwise, 2'.

GENERAL RULES (ALL SPECIES)

(NOTE: Characters included in a higher grade are automatically accepted in lower grades)

Flooring shall be Tongued and Grooved and End Matched (unless otherwise indicated). Flooring shall not be considered of standard grade unless the lumber from which the flooring is manufactured has been properly kiln dried. The NOFMA standard is that flooring is manufactured at a 6% - 9% Moisture Content with a 5% allowance for pieces outside that range up to 12% Moisture Content, and to fit a "GO NO-GO" NOFMA flooring gauge.

NOFMA members are required to mark all bundles of standard grade flooring with the grade and color (or species if applicable).

Plank Flooring designated by a grade name listed in this Grading Rule Book must conform to that grade description.

Members may manufacture Plank Flooring under other grade names and descriptions which are registered with the NOFMA office to qualify for Complaint Inspection Services.

PACKAGING

To determine the (nominal) length of a piece of flooring, $\frac{3}{8}$ " end match allowance shall be added to the actual face length when measuring.

Individual strips may range in length from 9" minimum to 102" maximum.

The average length as referred to in the Official Flooring Grading Rules apply to the total footage of any one shipment consisting of 1,000 sq. ft. or greater amounts.

The percentages under 4', as referred to in the Official Flooring Grading Rules apply to the total footage of any one shipment

consisting of 1,000 sq. ft. or greater amount.

Bundled flooring- An individual bundle contains pieces from 6" over to 6" under the nominal length of the bundle. Bundle lengths ranging from 1 1/4' to 7' or 8', as the stock will produce, and placed (nested) end to end in units (pallets) of 8' nominal length are designated "Standard Packaging"; or units of 7' and shorter nominal length are designated "Shorter Packaging".

Nested Flooring- A nested bundle contains flooring strips positioned end to end continuously in runs measuring from 6" over to 6" under the nominal length of the nested bundle.

For 3/4 x 2 1/4" Flooring- A 12 run, 8' nominal length bundle, containing 24 bd. ft. of flooring is designated "Standard Packaging".

Nested bundles shorter than 8' nominal length are designated "Shorter Packaging".

Shorter Nested Bundles or Boxes- Bundles or Boxes containing more or fewer runs of flooring are "Non Standard Packaging" and considered acceptable packaging where the average length is maintained.

GUIDE TO HARDWOOD FLOORING GRADES

(NOTE: Characters included in a higher grade are automatically accepted in lower grades)

Appearance alone determines the grades of hardwood flooring since all grades are equally strong and serviceable in any application. Oak, the most popular of the hardwoods, has four basic grades, "CLEAR" is mostly uniform in appearance, has a limited number of character marks and is mostly heartwood. "SELECT" also has a uniform appearance, but this grade contains more of the natural characteristics such as knots and color variations, particularly variation associated with heartwood, sapwood differences. The "COMMON" grades have more character markings than either of the other two grades and are often specified because of these natural features and the character they bring to the installation. Grades are sometimes combined (i.e. SELECT & BETTER). Also, grades of short pieces (SHORTS) produced in manufacturing can be combined (i.e. NO. 1 COMMON & BETTER SHORTS).

STANDARD THICKNESS AND WIDTH

Strip Flooring

3/4" Thickness: Face Widths 1 1/2", 2", 2 1/4" & 3 1/4".
 1/2" Thickness: Face Widths 1 1/2", & 2".

Maple, Beech & Birch Flooring ONLY

3/4", 25/32" & 33/32" Thickness: Standard Widths.

Plank Flooring

3/4" Thickness: Face Widths 3", 4", 5", 6", 7", or 8"

Square Edge Strip Flooring

5/16" Thickness: Face Widths 7/8", 1", 1 1/8", 1 1/4", 1 1/2", 1 3/4", 2".
 1/2" Thickness: Face Widths 1 1/2", 2".

(All faces in 5/16" square edge are finished 3/16" over face.)

Square Edge Bundling

CLEAR	1 1/4' and up	Average Length 5'
SELECT	1 1/4' and up	Average Length 4'
NO. 1 COMMON	1 1/4' and up	Average Length 3'
NO. 2 COMMON*	1 1/4' and up	Average Length 2 1/2'

(*May contain defects of all characters but will lay a serviceable floor.)

Special Order ONLY

3/8" Thickness: Face Widths 1 1/2" & 2".

MFMA GRADES

Note: The following rules are current as of the printing of this publication. For the most recent rules, consult MFMA's "Grading Rules for Hard Maple."

GENERAL RULES

Moisture Control

We recommend maintenance of 6 percent to 9 percent average moisture content following manufacture. Upon receipt of shipment proper moisture controls must be exercised to maintain proper moisture content.

Edge-Grain Flooring

Edge-grain hardwood flooring is specially selected and consists of pieces in which the annual rings range from 30 degrees horizontal to 90 degrees vertical. Since hard maple is generally produced from lumber sawn out of relatively small logs with varying knurls, resulting in considerable variation in a single piece, flooring shall be considered to be all edge-grain if 75 percent of each piece falls within the above-mentioned range.

Standard Measurement

Flooring 25/32" and thicker, all faces, is measured 3/4" waste for side and end-matching.

Bundling

Hardwood flooring is bundled by averaging the lengths. A bundle may include pieces from 6 inches under to 6 inches over the nominal length of the bundle. No piece shorter than 9" is admitted.

Nesting-For 25/32" x 2-1/4"

Nested flooring is random length flooring bundled end to end continuously in 7' or 8' bundles (6-1/2' to 8-1/2' actual length). Flooring is bundled by grade in conformance with regular grade requirements except those pertaining to length. No piece shorter than 9" is admitted. Maximum average number of pieces under 1-1/4' per bundle by grade shall be:

FIRST GRADE	8
SECOND AND BETTER GRADE	12
THIRD GRADE	42

Kiln Drying

Flooring shall not be considered of specified grade unless the lumber from which the flooring is manufactured has been properly kiln-dried.

End Matching

All flooring shall be end-matched unless otherwise specified.

Beech and Birch Flooring

These rules also apply to beech (*fagus grandifolia*) and birch (*betula alleghaniensis*) flooring.

GRADING RULES

Competition Grade



(First Grade MFMA Hard Maple)

25/32" and thicker shall have the face practically free of all defects, but the varying natural color of the wood shall not be considered a defect. Standard lengths in this grade shall be in 1-1/4' bundles and longer through 7' or 8', as the stock will produce. Not over 55 percent of the total footage shall be in bundles under 4', not more

than 25 percent of the total footage shall be in 2' bundles, and not more than 10 percent of the footage shall be in 1-1/4' bundles.

The highest standard grade. An extremely durable and desirable floor for any building; particularly suitable for fine homes, apartments, churches, clubs, dance floors, gymnasiums, handball and racquetball courts, school classrooms, hospitals, hotels, offices, roller-skating rinks, and other applications where fine appearance and long wear are desired. With the use of some finishes, slight shadows and color variations may appear.

This grade combines appearance and durability and has a face free of defects that will materially mar the appearance of the finished floor or impair its durability. A practical application of this rule will admit variations in the natural color of the wood; an occasional small, firm pin knot not over 1/8" in diameter, provided it does not occur on edges or ends of strips; occasional dark green or black spots or streaks not over 1/4" wide and 3" long (or its equivalent) which may contain a slight check not over 1/2" long, providing it is boxed within the piece; bird's-eyes and small burls; a slightly torn grain; or similar defect which can be readily removed by the ordinary method of smoothing the floor when it is laid.

Bark streaks shall not be permitted. A slightly shallow place not over 12" long on underside of flooring, if it does not extend to either end of the piece, and an otherwise perfect tongue which is one-half short for 25 percent of length of piece are admissible, but the face must be free of shake, and the wood must be live and sound.

Standard Grade

(Second and Better Grade MFMA Hard Maple)

25/32" and thicker, will admit tight, sound knots and slight imperfections



in dressing, but must lay without waste. Standard lengths in this grade shall be in 1½ bundles and longer through 7' or 8', as the stock will produce. Not over 60 percent of the total footage shall be in bundles under 4', not more than 27 percent of the total shall be in 2' bundles, and not more than 15 percent of the footage shall be in 1½ bundles.

This grade will provide the same long life and low maintenance performance as Competition Grade. Standard (Second and Better) Grade is an ideal choice for gymnasiums, handball and racquetball courts, multipurpose rooms, cafeterias, and shops in schools, industrial plants, offices, commercial buildings, and residences. With the use of some finishes, slight shadows and color variations may appear.

This grade admits tight, sound knots, provided they do not occur on edges or ends of strips; distinct color variations; numerous dark green or black spots or streaks – provided they do not occur in combination with predominately dark heartwood; slight checks not exceeding 3" in length and running parallel with and well inside the edges and ends of the strip; dark spots or streaks with slight checks in center; small rough spots which cannot be wholly removed by the ordinary method of smoothing the floor when it is laid; slightly torn edges; short tongue if sufficient to hold properly in the floor, shallow or waney back if piece has sufficient bearings of full thickness to support it in the floor; and slight variation in angle of end matching. While these and similar features are admissible, sufficient attention is given to appearance to make this grade desirable and satisfactory for use in stores, schools, factories, and similar places where superficial defects and blemishes are not a real factor of consideration. The face must be free of shake, and the wood must be live and sound. Bark streaks shall not be permitted.

Multipurpose Grade

(Third Grade MFMA Hard Maple)



²⁵/₃₂" and thicker, must be of such character as will lay and give a good serviceable floor. Standard lengths in this grade shall be in 1-½ bundles and longer through 7' or 8', as the stock will produce. Not over 85 percent of the total footage shall be in bundles under 4', and not more than 55 percent of the total footage shall be in 1-1/4' bundles.

This grade is an ideal choice for gymnasiums, multi-purpose rooms, cafeterias, and shops in schools, industrial plants, offices, commercial

buildings and residences. Third Grade MFMA Maple gives excellent performance in recreation rooms, factories, warehouses, grain storage and other farm buildings, and rooms of antique decoration where a unique floor is desired. Multipurpose (Third) Grade is suitable for factories, warehouses, and kindred uses where good wearing qualities are required together with medium cost and appearance. This grade may contain all defects common to maple, but the wood must be firm and serviceable. It will not admit voids on edges or ends, or knot holes over ³/₈" in diameter, partially unsound knots where the unsound portion is over 1" in diameter; or shakes, heart checks, badly split ends and imperfections in manufacture which materially impair the serviceability of the flooring for the purpose intended.

Third and Better Grade MFMA Hard Maple

In all thicknesses and widths is a combination of Competition, Standard and Multipurpose Grades developing in a strip standard without crosscutting. The lowest grade pieces admissible shall not be less than Multipurpose Grade and no more than 40 percent of the footage shall be Multipurpose Grade. Standard lengths in this grade shall be in 1½ bundles and longer through 7' or 8', as the stock will produce. Not over 60 percent of the total footage shall be in bundles under 4'.

The percentage rules noted above for all grades do not apply to nested bundles. Rules for nested bundles are noted on page 2.

SIZES OF MFMA HARD MAPLE FLOORING

Tongued and Grooved Flooring

Thicknesses

²⁵ / ₃₂ "	1.984 cm (19.84 mm)
³³ / ₃₂ "	2.619 cm (26.19 mm)

Face Widths

1½"	3.81 cm (38.1 mm)
2¼"	5.715 cm (57.15 mm)
3¼"	8.255 cm (82.55 mm)

Jointed Flooring

Thicknesses

²⁵ / ₃₂ "	1.984 cm (19.84 mm)
³³ / ₃₂ "	2.619 cm (26.19 mm)

Face Widths

2¼"	5.715 cm (57.15 mm)
3¼"	8.255 cm (82.55 mm)
3½"	8.89 cm (88.9 mm)

CLA Grading Rules

Note: The following rules are current as of the printing of this publication. For the most recent rules, consult CLA's "Canadian Hardwood Flooring Grading Rules."

MAPLE/BIRCH

First Grade Northern Hard Maple/Clear Grade Canadian Birch

(Maple Shown)



In all thicknesses and widths face shall be reasonably free of defects. Varying natural colour, or faint seasoning shadows shall not be considered a defect. Standard lengths in all widths shall be bundled 2 feet and longer as the stock produces; the proportion of bundles 2 or 3 feet* inclusive, shall be what the stock produces up to 30% of the footage. Combines

appearance and durability; free of facial defects that materially mar the finished floor appearance, or impair durability.

Standard appearance is that of a finished floor, not a piano top. Practical application of this rule will admit mild discolourations, but not in such frequency as to detract from the intended general appearance, such as an occasional pin knot not exceeding $\frac{1}{8}$ inch in diameter; occasional dark green or black spot or streak not over $\frac{1}{4}$ inch in width and 3 inches long, (or its equivalent that may contain a slight check not over $\frac{1}{2}$ inch long), bird's-eye and small burls, slightly torn grain, or similar defect which can be readily removed by the normal sanding of the floor. A moderately shallow area, not exceeding 12 inches long on the underside of the flooring, if it does not extend to either end of the piece, and an otherwise perfect tongue that is one-half short for 25% of the length of the piece, are admissible. However face must be free of shake, and wood must be live and sound.

Second Grade Northern Hard Maple/ Select Grade Canadian Birch

(Maple Shown)

In all thicknesses and face widths, will admit tight, sound knots and slight imperfections in dressing, but must lay without waste. Standard lengths in all widths shall be bundled $1\frac{1}{2}$ feet and longer, as the stock will produce; the proportion of bundles $1\frac{1}{2}$ to 3 feet* inclusive shall be what the stock will produce up to 45% of footage.



Admits minor defects which exclude strips from Clear or First grades, but which do not materially impair floor appearance and serviceability. Admits tight, sound knots, prominent discolourations, seasoning stains, dark green or black spots and streaks, or slight checks not exceeding 3 inches in length, and running parallel with and well within strip edges; dark spots or

streaks, with slight checks in the centre, small rough spots which cannot be wholly removed by usual floor sanding when laid, shallow or waney back if the piece has sufficient areas of full thickness to provide support. While these and similar features are admissible, careful attention is given to appearance to make this grade desirable for many uses.



Factory Grade Northern Hard Maple/ Third Grade Canadian Birch

(Birch Shown)

In all thicknesses and face widths, must be of such character as will lay and give a good serviceable floor with some cutting. Standard lengths in all widths shall be bundled 1 foot and longer, as

the stock will produce; proportion of bundles 1 to 3 feet* inclusive, shall be what the stock produces up to 60% of the footage. Excellent for low cost housing where utility, strength and appearance are required.

Suitable for factories, warehouses and kindred uses where good wearing qualities are required at reasonable cost. May contain all defects common to Northern Hard Maple and Canadian Birch, but must be firm and serviceable. Will not admit voids on the edges, or knot holes over $\frac{3}{8}$ inch in diameter; partially unsound knots where the unsound portion exceeds 1 inch in diameter; or shakes, heart checks, badly split ends and imperfections in manufacture, which materially impair the serviceability and end-use.

Combination Grades

Shorts

Shall be of such quality as the stock will produce in lengths 9 to 18 inches. Well-suited floor for small rooms in residences requiring good appearance at low cost.

* $\frac{1}{8}$ inch flooring minimum length is 6 inches shorter than designated.

Prime Northern Hard Maple, Second and Better Northern Hard Maple

A combination of First and Second grades developing in production without cross-cutting for each grade. Shall contain approximate percentages of 60% First and 40% Second. The average length bundle in prime grade shall not be less than 3½ feet.

Select & Better Canadian Birch

A combination of Clear and Select Canadian Birch developing in production, without cross-cutting for each grade. Standard lengths in all widths in this grade shall be bundled 1½ feet and longer, as the stock will produce; the proportion of bundles 1½ feet to 3 feet inclusive shall be what the stock produces up to 40% of footage.

Third & Better (Mill Run Grade)

A combination of grades developing in production without cross-cutting for each grade. Standard lengths in all widths shall be bundled 1 foot and longer as the stock will produce; proportion of bundles 1 to 3 feet inclusive, shall be what the stock will produce up to 50% of the footage. The leading choice where utility and economy are required. Appearance and serviceability is further enhanced by careful laying.

Plank Flooring

A specialty item as per buyer/seller agreement.

NORTHERN RED AND WHITE OAK



Plain Sawn Grades/Clear Grade

Shall be practically free of facial defects (¾ inch of bright sapwood is permissible). Varying natural colour of the wood shall not be considered a defect, but must be reasonably uniform. Bundles shall be 2 feet or more in length*, and must not exceed 25% under 4 feet. This is a favourite with those

who prefer the richness of oak, without excessive colour variation.



Plain Sawn Grades/Select Grade

Face may contain sapwood, and will permit occasional pinworm holes of not more than ⅛ inch in diameter, as well as slight working imperfections and occasional small, tight knots. Varying natural colour is not a defect. Bundles 1½ to 3 feet*

inclusive, shall be what the stock produces up to 40% of footage.



#1 Common Grade

#1 Common Grade shall be of such quality as to lay a sound residential floor. Wood characteristics: flags, heavy streaks, scattered pinworm holes, tight knots and minor working imperfections. Will admit all discolourations, stains and black natural colour prevalent in this species. Bundles 1 to 3 feet* inclusive, shall be what the stock produces up to 50% of footage.

#2 Common Grade

#2 Common Grade may contain defects of any character, but shall be of such nature as to enable the laying of a serviceable floor.

Combination Grades

Shorts

Shall be of such Clear and Select grade quality as the stock produces in lengths 9 to 18 inches. Well-suited floor for small rooms requiring acceptable appearance at low cost.

Select and Better

Included in all thicknesses and widths is a combination of clear and select grades developing in a strip without crosscutting for each grade. The lowest grade pieces admissible shall not be less than select grade. The proportion of bundles 1½ feet to 3 feet inclusive shall conform to those established in the select grade.

#1 Common & Better (Mill Run Grade)

Clear-Select-1 Common grade combination developing in a strip without cross-cutting. Lowest grade pieces admissible shall not be less than standard 1 Common grade. Lengths and proportions of bundles 1 to 3 feet inclusive, shall be what the stock produces up to 50% of the footage. The percentage of 1 Common grade must not exceed 50% in any shipment.

Plank Flooring

A specialty item as per buyer/seller agreement.

* ¾ inch flooring, minimum length is 6 inches shorter than designated.

HARDWOOD PARQUET FLOORING RULES

Parquet is a patterned floor, assembled in a conveniently sized unit. Manufactured in square or rectangular shape, it features either square-edged or tongue and grooved. The following rules are applicable for grading the face surface of the sheet.



Select and Better Grade

Five percent (5%) of the slats may have two (2) sound knots per slat, 1/8 inch or less in diameter, except on the edge or end which must be clear. Slight streaks, not to exceed 25% of the slat surface accepted on 10% of the slats. Wane not accepted. Natural variability of colour between the slats of sapwood or heartwood accepted. Sheets

not selected for colour. End chip not accepted. All clear slats that the wood develops in manufacture shall be included.



Natural Grade

Two (2) sound knots per slat up to 1/4 inch in diameter accepted. Streaks accepted without limit. Pinworm holes not to exceed four (4) per slat. Wane on slats not to exceed 1/32 inch. Natural variability of colour between heartwood and sapwood accepted without limit. Sheets not selected for colour. End chip of slat not to exceed 1/16 inch depth, the area

of the chip not to exceed 1% of the surface of the slat, measured on the flat surface of the slat, not the contour of the chip. Minor imperfections in machining, such as saw score, planer burn, offset and knife mark, which do not affect the serviceability of the floor accepted.



Rustic Grade

Two (2) knots per slat, the greatest not to exceed 1/2 width of slat, accepted. Streaks and pinworm holes accepted without limit. Wane of slats not to exceed 1/16 inch. Check and split accepted to maximum separation of 1/2 inch wide. Maximum length of split not to exceed 1/4 length of slat. Natural variability of colour between heartwood and

sapwood accepted without limit. Sheets not selected for colour. End chip of slat not to exceed 1/8 inch depth, the area of the chip not to exceed 2% of the surface of the slat, measured on the flat surface of the slat, not the contour of the chip.

Parquet patterns may vary in size according to the manufacturers.

THICKNESSES AND WIDTHS

Hardwood flooring is usually manufactured as follows:

3/8" & 25/32" and 3/4" thicknesses:

widths: 1 1/2" - 1 3/4" - 2" - 2 1/4" and 3 1/4" faces.

1/2" (15/32") thicknesses:

widths: 1 1/2" - 1 3/4" and 2" faces.

5/8" (17/32") thicknesses:

widths: 1 1/2" - 1 3/4" faces.

STANDARD MEASUREMENTS

Flooring 3/4" and thicker (all faces) measured 3/4" over face measure. Flooring 5/8" (15/32") and 1/2" (15/32") thick, all faces, measured 1/2" over face measure.

Jointed flooring square edge all thicknesses and faces; measured 3/4" over face measure.

BUNDLING BY LENGTHS

Hardwood flooring is bundled by averaging lengths. A bundle may include pieces from 6 inches under to 6 inches over the nominal length of the bundle. No piece shorter than 9 inches is admitted.

NESTED BUNDLE

All random length grades rules apply with the exception of reference to length. In nested bundles, 9 inch to 18 inch pieces are limited as follows:

GRADE	MAX. NO. PIECES UNDER 18 IN.
First/Clear	4
Second/Select	8
Factory/No. 1 Common	as developed

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SOURCES AND CREDITS

NWFA TECHNICAL MANUAL COMMITTEE

- John Hoopes, 3M Company, Chair
- Daniel Boone, NWFA Director of Technical Training
- Coley Armstrong, Basic Coatings
- Joe Audino, Rode Bros. Floors
- Don Bollinger, Wood Floor Products
- Jeff Buysse, Minuteman International
- Chris Coates, Golden State Flooring
- Don Conner, Harris-Tarkett
- Tom Conser, The Roane Company
- Bill Costello, Dura Seal
- Tom Derleth, Indiana Hardwood Specialists
- Galen Fitzel, 3M Company
- Jim Garth, Decorative Flooring
- John Goss, Woodwise/Design Hardwood Products
- Kevin Hacke, Maple Flooring Manufacturers Association
- Woody Hilscher, BonaKemi USA
- Mel Hollis, Basic Coatings
- Tim McCool, Dri-Tac Adhesive Group
- Mickey Moore, National Oak Flooring Manufacturers Association
- Neil Moss, Robbins Hardwood Flooring
- Brian Roberts, Franklin International
- Bob Vanderlinden, Bruce Hardwood Floors

PUBLICATION EDITORS AND CONTRIBUTORS

- Kim Wahlgren, *Hardwood Floors* magazine
- Rick Berg, *Hardwood Floors* magazine
- Richard Lipman, Canadian Lumbermen's Association

- Jim Stann, Southern Forest Products Association
- Jim Mathews, Western Wood Products Association

ART DIRECTORS AND ILLUSTRATORS

- Jennifer Molander, *Hardwood Floors* magazine
- Marj Schultz, *Hardwood Floors* magazine
- Amy Mazar, *Hardwood Floors* magazine

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For more information, contact:

National Wood Flooring Association

16388 Westwoods Business Park
Ellisville, MO 63011

Phone: 800/422-4556 (U.S.)
800/848-8824 (Canada)

636/391-5161 (Local and International)

Fax: 636/391-6137