

# **NWFA/NOFMA**

## **International Standards for Factory Finished Solid Wood Flooring**



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## Configuration Guidelines & Machining Tolerances

Based on ¾" (19.05 mm) standard thickness flooring. Other thicknesses can be certified as a proprietary thickness.

Machining tolerances are measured at time of manufacture only and with a moisture content of 6% to no more than 10% mc. After the product leaves the manufacturing facility/warehouse, the manufacturer has no further control over the product. Moisture content, cut of the board, site conditions, etc., will affect the machining tolerances after manufacturing.

Standards should be maintained at all times to the actual measurements, not the acceptable allowance.

<u>Item</u>	<u>Standard</u>
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<u>Width</u>	
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Actual width	≤ ¾" (82.55 mm), ± .005" (.13 mm)
	> ¾" (82.55 mm), ± .008" (.20 mm)

<u>Match Position</u> (Measuring from the face of the flooring)	
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.547" (13.89 mm)	≤ .008" (.20 mm) difference or space between bottom of tongue & top of lower groove lip
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Must be slight contact/friction between the bottom of the tongue and the top of the lower groove lip.

<u>Match Position</u>	
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Tongue thickness	.250" (6.35 mm), - .004" (.10 mm) to +.008" (.20mm)
Groove width	.250" (6.35 mm), + .012" (.31 mm)

The tongue thickness should never be within .003" of the groove opening width. Difference between the tongue and groove engagement shall not exceed .012" (.31 mm).

<u>End Match/Squareness</u>	
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Square	≤ ¾" (82.55 mm) - 2% at .031" (.79 mm) unsquare; or 5% at .016" (.41mm) unsquare
	> ¾" (82.55 mm) - 2% at .01" (.25 mm) unsquare per 1" (25.40 mm) of width, or 5% at .005" (.13 mm) per 1" (25.40 mm) of width.

The end match squareness applies to products that have been properly end matched and products with no end match.

<u>Thickness</u>	
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.725" (18.42 mm) to .760" (19.30 mm), thickness of each individual manufacturer will vary upon thickness of board at time of unfinished manufacture, the amount sanded off, and the mil thickness of the finish.

The thickness must be ± .005" (.13 mm) within each specific product. This is an area where proprietary thickness products will be allowed. To become certified, manufacturing thickness guidelines/tolerances must be sent to the NWFA office.

<u>Over/Under-Wood for Flat Finished Surfaces</u>	
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(This is a manufacturer tolerance, not an installed tolerance.)

Beveled Edge and Beveled/Square End Joint	None, .014" (.36 mm) max. allowed
Micro-beveled Edge and Beveled/Square End Joint	None, .012" (.31 mm) max. allowed

Square Edge and End Joint

None, .010" (.25 mm) max. allowed

No tolerance established for distressed or hand scraped surfaces.

### Bevel

Bevel tolerances are proprietary to individual manufacturers. The bevel must be the same throughout the entire product. Detailed description must be supplied to the NWFA office/inspector upon request.

General Edge Descriptions:

Beveled edge: > .045" (1.14 mm)

Micro beveled edge: > .025" (.64 mm) to ≤ .045" (1.14 mm)

Eased edge: ≤ .025" (.64 mm)

## **Moisture Content Guidelines**

### The Moisture Content Standard

Flooring is manufactured with moisture content between 6% and 10.0 % mc with a 5% allowance for pieces outside that variance.

If manufactured to higher or lower moisture content than the standard, it must be stated on the packaging and the inspectors must know this prior to the inspection.

## **Grading Guidelines**

Certified flooring is graded in accordance with the manufacturer appearance guidelines. Appearance guidelines are all proprietary to individual manufacturers. All strip/plank flooring designated within that appearance grade name must conform to that description.

Certified flooring is certified in accordance with the specifications set forth in the NWFA/NOFMA manufacturing standard and the manufacturer appearance guidelines.

A copy of the proprietary grade rules/names must be supplied to the NWFA office in order for it to be inspected and designated to be certified.

### The Off-Grade Appearance Standard

A 5% tolerance for pieces not in compliance with the desired appearance grade allowed. Appearance rules are determined by the flooring manufacturer. The manufacturers' appearance grade rules must be supplied to the NWFA office 10 days prior to any inspection and any revisions must be supplied when updated.

## **Gloss Level Guidelines**

### Standard

The gloss level is ± 5 of the stated gloss level sheen for each individual product. The manufacturer specifications will dictate their standards for each product.

## **Finish Adhesion Guidelines**

### Standard

The cross hatch test for adhesion will follow the ASTM Standard D3359, classification 4b: 90 % or better finish adhesion.

## **Board Length Guidelines**

### The Average Board Length Standard & Compliance

Factory finished flooring is generally designated by two or three appearance grades. The following average board lengths apply:

### **Less than or equal to 3¼" (82.55 mm) Board Width**

Appearance Grade	Average Board Length Standard
Comparable to a Select and Better	36" (914.40 mm)
Comparable to a #1 Common and Better	30" (762.00 mm)
Comparable to a #2 Common	22" (558.80 mm)

For boards wider than 3¼" (82.550 mm) the manufacturer establishes the average board length standard that must be maintained. This information must be supplied to the NWFA office 10 days prior to any inspection and revisions must be supplied when updated.

### **Color Match Sample Guidelines**

#### Standard

Color match sample matches the product to master color sample boards at time of manufacture. Color match/blend is a visual inspection. New flooring may not match sample boards in a showroom due to the light sensitivity of the different species of wood.

### **Square Footage Guidelines**

#### Standard

Footage per box should meet or exceed the stated footage per box. This does not include any end match allowance.

### **Crook Guidelines**

#### Standard

Up to 3¼" (82.55 mm)                      3/32" = .094" (2.39 mm) for boards ≤ 3' (914.40 mm) or 5/32" = .156" (3.96 mm) for boards > 3' (914.40 mm)

More than 3¼" (82.55 mm)                1/16" = .063" (1.60 mm) for boards ≤ 3' (914.40 mm) or 3/32" = .094" (2.39 mm) for boards > 3' (914.40 mm)

### **Finish Warranty Guidelines**

#### Standard

The manufacturer establishes the warranty guidelines/standards.

### **Packaging Guidelines**

#### Standard

All packages of factory finished flooring are required to be marked/designated by the appearance grade, color (or species if applicable), and /or identification marking supplied by the manufacturer.

The actual packaging, other than the above mentioned, is established by the manufacturer.

### **Board Identification Guidelines**

#### Standard

Each manufacturer has an identification process for their flooring which must be made available to the NWFA upon request.