

From the forest  
to the floor



# INSTALLATION MAINTENANCE and WARRANTY GUIDE RESIDENTIAL

**Muskoka**  
Solid Sawn Collection  
and Hand Scraped Collection

## INSTALLATION AND WARRANTY

Hardwood Flooring is a product of nature and, like nature, has its imperfections. These imperfections are standard in the industry and expected. Although Muskoka Hardwood Flooring inspects every piece of Solid Sawn Hardwood Flooring before being boxed, a 5% defect and grading tolerance is permitted. Defects may be of natural or manufacturing origin. This tolerance will not exceed 5% of the total floor purchased, and must be taken into consideration when ordering your floor. Before installing your Solid Sawn Hardwood Flooring, the installer, be it professional or DIY, must verify the installation environment and sub-floors involved, meet or exceed all the requirements specified in the Solid Sawn Hardwood Flooring Installation Guide.

The installer/homeowner is considered to be the final inspector and grader. The installer/homeowner must use reasonable selection criteria (common sense) when installing. Any Solid Sawn Hardwood Flooring installed, will be considered acceptable by installer/homeowner, and will not be subject to claim or replacement. When in doubt, leave it out or relocate the piece to a closet or an inconspicuous area. In the unlikely event that a flawed piece appears after installation, Muskoka Hardwood Flooring will be responsible for the replacement of the material only. Congratulations on your new Solid Sawn Hardwood Flooring. It will bring you years of satisfaction.

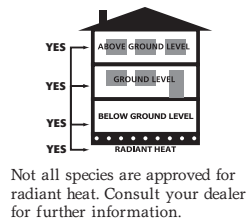
## PRODUCT SPECIFICATION

Muskoka Solid Sawn Hardwood Flooring is 3/4" (19mm) by 3-1/4" (83mm), 4" (102mm) and 5" (127mm). The planks are solid sawn and have a micro bevel edge on all 4 sides, with 3 ply construction. The top face is sawn and is 4.2mm thick before finishing. The lengths will range from 14" (356mm) to 85" (2159mm). The number of pieces per box will vary, however the average length will be approximately 38" (965mm). Sq. ft. per box will depend on the width of the board. Consult your Authorized Muskoka Dealer for accurate sq. ft. per box. Your Solid Sawn Hardwood Flooring also comes with Muskoka's Aluminum Oxide Finish, backed by Muskoka's 25-year wear warranty. Radiant Heat: Muskoka's Solid Sawn Hardwood Flooring can be installed below grade, on grade, or above grade. Some Solid Sawn Hardwood Flooring species can also be installed over radiant heat, providing installation requirements have been met. Consult your Muskoka Dealer for radiant heat approved species.

\*IF YOU EXCEED THE MAXIMUM TEMPERATURE YOUR FLOOR WILL START TO CUP, CRACK AND DELAMINATE. If you exceed the maximum temperature your warranty will be void. **Special Note about Radiant heat:** Maximum water temperature in tubes is 129°F (54°C). The average tube temperature is 104°F (40°C). Maximum concrete temperature is 81°F (28°C). Application for radiant heat can be floating or direct glue down. Consult dealer for authorized species because they may change.

## IMPORTANT: Job Site Inspection

Important Note: DO NOT ACCLIMATE FLOORING PRIOR TO INSTALLATION. OPEN BOXES AT TIME OF INSTALLATION AND INSTALL IMMEDIATELY.



Muskoka's Solid Sawn Hardwood Flooring should be one of the last items installed when renovating your home or condominium. For new construction, the heating system must be operating for at least one week (7 days) at normal residential temperatures (approx. 70°F / 22°C) prior to installation. The relative humidity level in your home must be maintained at 50% (i.e. between 30-80%) throughout the year. Where conditions in the home have high and low humidity levels, Solid Sawn Hardwood Flooring is much more dimensionally stable in comparison to 3/4" solid hardwood flooring.

**SPECIAL NOTE:** Although Solid Sawn Hardwood Flooring is much more stable, it will however, react to changes in relative humidity according to the season.

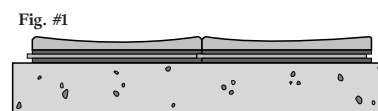
Moisture or lack of it is wood's worst enemy. **If relative humidity is below 30% for a prolonged period of time, the floor will contract causing the surface of the board to cup** (see Fig.#1 for cupping). Cupping is considered normal when relative humidity is too low. The floor should return to its normal state once the relative humidity is back to normal (30-80%). These variations can be minimized with proper ventilation, dehumidifying or heating. You may need to improve your humidification and/or dehumidification system in order to maintain the required 30-80% humidity levels.

Muskoka's Solid Sawn Hardwood Flooring will perform extremely well with high humidity. However, if the humidity drops below 30% the face lamella will start to contract. The construction of solid sawn floors are such that the core material will minimize the face lamella's contraction. If the humidity drops below 20% the core will continue to do its job and minimize the contraction again. However, there comes a point where the face lamella is under so much stress, and the core is not allowing the face to move (minimize cupping) that the face lamella has no other choice but to relieve its pressure by stress cracking. Stress cracking is **NOT covered under this warranty.**

Using a moisture meter check the moisture content of the sub-floor. The sub-floor should not exceed 12% and, must be within 4% of the moisture content of the wood being installed. If the moisture content of the sub-floor is too high, postpone installation. Increasing ventilation, and turning up the heating system will assist in drying out the sub-floor. The concrete sub-floor must be dry and should be at least 60 days old before installing the Solid Sawn Hardwood Flooring.

The installer and/or owner will take full responsibility for moisture testing to ensure that the wood sub-floor and the concrete slab (when applicable) are within acceptable moisture tolerance levels.

Preparation of Plywood Sub-Floor: Muskoka Hardwood Flooring recommends that all Solid Sawn Hardwood Flooring be installed with a minimum of 5/8" A.P.A. approved, C.S.P/D.F.P. stamped plywood, or 23/32" O.S.B. Underlay grade PS2-92 rated, or concrete slab. Consult your Authorized Muskoka Dealer for recommendations on your specific sub-floor application. Any failure of Solid Sawn Hardwood Flooring relating to improper sub-floors, or sub-floor preparation is not the responsibility of Muskoka Hardwood Flooring, and will not be covered under warranty. Sweep and vacuum sub-floors. Ensure



that old carpets, oils, foreign particles, protruding nails, carpet glues, etc., are removed. For wood sub-floors, make sure they are level, clean, dry and securely fastened. Repair and/or replace any section that is rotted or damaged.

## TOOLS AND ACCESSORIES

Tools and Accessories that you will need for installing your Flooring: Nail Down: Table Saw, Miter Saw, Measuring Tape, Nail Set, Hammer, Tapping Block, Nail Gun (Manual or Pneumatic), Square, Chalk Line, Putty Fill, and Muskoka Cleaning Kits. Model 210 Pneumatic or Manual Power nailer with 2" T-Type Power Cleats Nails (or equivalent). Keep all work areas swept of debris to maintain a clean surface.

Glue Down: Table Saw, Miter Saw, Measuring Tape, Straight 1"x 2"x 8' length of wood, Nail Set, Hammer, Tapping Block, Square, Chalk Line, Putty Fill, Trowel, Cleaning Solvent and Muskoka Cleaning Kits. You will also need an approved moisture cured glue - See your Muskoka Dealer for authorized glues.

**NOTE:** It is extremely important that you use the proper trowel to ensure maximum coverage and produce a good bond between sub-floor and Flooring. You may also require a 100-150 pound roller.

Floating Floors: Table Saw, Miter Saw, Measuring Tape, Hammer, Tapping Block, Square, Chalk Line, Muskoka Cleaning Kits, T.G White Glue, 1/8" (4mm) Foam with Vapor Back, Mineral Solvents (for cleaning glue), and Shims. You will also need a broom and dustpan.

## GLUE DOWN APPLICATION

### Step by Step Instructions

#### Step #1 - Mark your starting line

Muskoka Hardwood Flooring recommends that your Solid Sawn Hardwood Flooring be installed parallel to the longest, straightest wall in the room. Start by measuring out from the wall 35-1/4" (927mm), for 3-1/4" (83mm) flooring. For 5" flooring start by measuring 25-1/4" (654mm) from the wall. For 7" start by measuring 35-1/4" (908mm) from the wall. These measurements allow for 3/4" (19.5mm) expansion gap. Using a chalk line draw a guideline parallel to the wall based on the above measurements. This will eliminate any ripping of material at the end of the job for the last row.

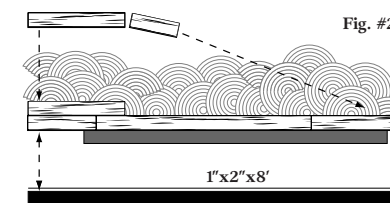
Using the straightest pieces of 1"x 2"x 8' length of wood and 2-inch concrete nails or screws, fasten the strips to the concrete. Your first row of starter boards will butt against this, so make sure that the strips are in line with the chalk line because this will determine how straight your floor will be.

#### Step #2 - Spread the adhesive

**NOTE:** Muskoka Hardwood Flooring will only guarantee installation when a moisture-cured glue is used. Do not use latex based glues.

Apply the recommended adhesive with a trowel according to the manufacturer's installation instructions (found on adhesive pail) for the specific adhesive that is being used.

**SPECIAL NOTE:** Open time on adhesives vary from manufacturer to manufacturer so read instructions



carefully before starting. Opening time can also be affected greatly depending on the temperature and humidity.

The trowel should be held at approximately 45 degrees to the floor when spreading the adhesive. This will give you the recommended spread rate of approximately 40 to 50 sq.ft. per gallon, depending on the adhesive manufacturer. Only spread adhesive over an area that can be covered in less than 1.5-2 hours, otherwise the adhesive may become dry and lose its ability to bond.

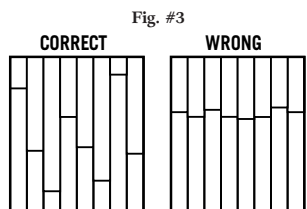
#### Step #3 - Install the strips

You should inspect each piece of Solid Sawn Hardwood Flooring before installation. Boards that you may not like the look of, or with a flaw that you think will affect the look of the floor, should be used as the cut pieces for your start and/or end pieces. You may also choose to put these pieces in less conspicuous areas such as closets or under couches, etc.

Start your first piece with the tongue facing the area that will be completed last. Line up the tongue of the boards against the holding strip, and then press the board into the adhesive. Working from left to right, lay the next board and continue working towards the right, until you reach the wall and require a cut piece. Choose one of the pieces set aside for cutting and cut the desired length.

**NOTE:** If you are cutting a piece that has not been set aside for cutting, make sure it is long enough to yield your next row's starting piece. Leave 3/4" (19.5mm) between the wall and the end of each strip in each row (see Fig.#2).

Start the second row with a strip of at least 6" (150mm) longer or shorter than the strip used in the first row. This will eliminate unsightly step effects (see Fig.#3). The remainder of the floor should follow this rule to insure an aesthetically clean looking floor.



Minimize glue from getting into the tongue or groove, otherwise, the strips of the flooring may not fit tightly. If glue gets on the finished side of the strips, clean immediately with appropriate cleaning products - see your Authorized Muskoka Dealer.

Solid Sawn Hardwood Flooring pieces may require slight tapping in order to ensure a tight fit. You may use 3M's blue tape (if required), to hold pieces together until glue bond has developed.

If a roller is required to obtain maximum adhesion, wrap a foam sheet around it to minimize any damage to the surface of the floor. When you get to the end of the wall, you may require a pry bar to get the pieces tight. Use shims where required until the glue has dried.

#### Step #4 - Installation of Accessories & Cleaning

After the floor has dried, you may install the baseboards and quarter rounds. Make sure that the nails penetrate the wall and not the floor.

**NOTE:** Always keep left over pieces for future use. Flooring may become damaged and require replacing several pieces. It's a good idea to have the same production dates put aside.

Use a vacuum to pick up any dust and loose fibers. Using your Muskoka Cleaning Kit, available at all Authorized Muskoka Dealers, follow instructions and clean the whole floor.

## FLOATING APPLICATION

### Step by Step Instructions

Sweep and vacuum the sub-floor before laying any material. Make sure that any high points in the sub-floor are removed, cleaned and sanded.

\*\*\*When installing over a wood sub-floor, you should install your flooring perpendicular to the joist to avoid any sinking between the floor joists.

#### Step #1 - Laying the under pad

Roll out a flexible acoustic cork or foam insulation under pad material (see your Authorized Muskoka Dealer) onto the sub-floor. Make sure the under pad is butted edge to edge, joining the lengths at the edges with a clear adhesive tape, and leaving a gap approx 1/4" (6mm) around the edges of the room butting up to the walls. If the insulation material selected is not effective against dampness rising from the sub-floor, put down a layer of 6 mil polythene sheeting first.

#### Step #2 - Laying the wood floor

Using the longest pieces available, lay the first row against the longest and straightest wall. Carefully apply glue (see Fig.#4) to the upper edge of the tongues along the whole length of the piece, using Solid Sawn Hardwood Flooring adhesive. Lay the first piece with the grooved edge against the wall. If the wall is not square, use wedges/shims between the flooring strips and the wall to achieve the desired 3/4" (19mm) expansion gap.

Start the second row with a strip of at least 6" (150mm) longer or shorter than the strip used in the first row. This will eliminate unsightly step effects (see Fig.#3). The remainder of the floor should follow this rule to insure an aesthetically pleasing looking floor. Clean any glue that gets on the finished side of the flooring before the glue dries.

Solid Sawn Hardwood Flooring pieces may require slight tapping in order to insure a tight fit. You may use 3M's blue tape, if required, to hold pieces together until glue bond has fully developed.

Rip the strips for the last row to the required width, not forgetting to allow for expansion. Use a crowbar to insure tight fitting boards, use shims to hold in place until glue has dried. Remove the wedges 24 hours after laying.

#### Step #3 - Installation of Accessories & Cleaning

After the floor has dried, you may install the baseboards and quarter rounds. Make sure that the nails penetrate the wall and not the floor.

NOTE: Always keep left over pieces for future use. Flooring may become damaged and require replacing pieces. It's a good idea to have the same production dates put aside.

Use a vacuum to pick up any dust and loose fibers. Using your Muskoka Cleaning Kit, available at all Authorized Muskoka Dealers, follow instructions and clean the whole floor.

## IMPORTANT

As the work proceeds, take care to leave the expansion gap along the walls and around any obstacle (pipe work, foot of stairs, post, fireplace, etc.).

## NAILED DOWN APPLICATIONS

### Step by Step Instructions

Special note for all nail down applications: You must use a Pneumatic or Manual Power nailer with 2" L-Type or T-Type Cleats (or equivalent). Consult your Authorized Muskoka Dealer for the equivalent nailing equipment.

#### Step #1 - Mark your starting line

Using a chalk line, draw a guide line out from the starting wall at 5 1/4" (210mm) for 5" flooring and 7 1/4" for 7". This line is where your first strip of flooring is going, and also allows for the 3/4" (19.5mm) expansion gap. It is very important for the starting line to be straight and square (see Fig.#5).

Although Muskoka Hardwood Flooring takes every precaution to ensure that Solid Sawn Hardwood Flooring is graded and shipped to industry standards, you must inspect each piece of Solid Sawn Hardwood Flooring before installation. Boards that you may not like the look of, or contain a mark that you think will affect the look of the floor should be used as cut pieces for your start/end pieces. You may also use these pieces in less conspicuous areas such as in closets or under couches, etc.

#### Step #2 - Install the strips

Face nail or glue the first row of strips with the grooved side facing the wall; put the nails as close to the wall as possible, this way the quarter round will cover the nail heads. You may have to face nail (see Fig.#6) for the first few rows before there is enough room to use the nail gun. It must be nailed down or glued by hand rather than with the hardwood floor nailing machine because of the vertical wall obstruction. When clearance allows the use of the hardwood floor nail gun, you may start using the nail gun. Nails should be spaced a minimum 2" (51mm) from both ends of the boards, and all other nails are spaced 6-8" (152 - 203mm) apart.

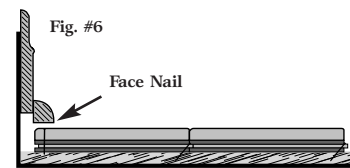
Measure and cut the strip to the required length to finish the first row. The remaining section should be used to start the second row, in order to minimize cut waste. The strip selection for completing the first row must be long enough to yield a remaining section of adequate length. Leave 3/4" (19.5 mm) between the wall and the end of each strip in each row.

The subsequent rows must be installed in the same manner. Don't be afraid to waste a few strips in order to adjust and test the nailing machine.

See Hardwood Floor Nailing Tips.

When you reach the last few rows, you may not be able to complete these rows with the nail gun, due to vertical obstructions. The nail, face nail, or glue the last remaining rows.

NOTE: You may have to rip the last strips along the wall in order for them to fit properly. Don't forget to leave 3/4" (19.5mm) minimum space for expansion.



#### Step #3

Finally, install the transition pieces, baseboards and/or quarter round moldings. Following the initial

installation, vacuum thoroughly and clean the floor with your Muskoka Hardwood Cleaning Kit.

\*For detailed installation guidelines for your specific installation, contact your Authorized Muskoka Hardwood Flooring Dealer. Here are a few tips to make your job easier, should you decide to use a hardwood floor nailer.

#### Hardwood floor nailing tips

1. Prevent any scratches and indentations on the surface of the board by keeping the nailer plate (base) clean, free from nicks and scratches at all times. Also by putting down the nailer on the plywood or on a piece of cardboard, not directly on the prefinished floor.
2. By adopting a standing position while using the manual nailer, you will deploy more strength when you drive the nails in. Nails that are nearly embedded can be driven in place by using the hammer and nail punch.
3. Hold the nailer firmly in place and hit the head with the rubber end of the mallet.
4. Make sure the nailer base is squared and sits well on the edge of the strip to ensure the nails are nailed into the nailing channel at the proper angle to prevent dimpling and damaging the edges of the strips.
5. Verify regularly the hardwood floor nailer is in working condition to prevent damages to the strips.

\*Pneumatic nailer. Air pressure should be adjusted adequately for each species of hardwood floor being installed and checked regularly (always try it before using) so that the cleats are seated properly in the nailing channel to avoid dimpling.

\*Great attention to detail during fabrication on the part of the Muskoka Hardwood Flooring team ensures exceptional QUALITY in the finished product. Longevity of hardwood floors is directly related to proper installation and lifetime commitment to appropriate care and maintenance.

## MAINTENANCE & PREVENTION TIPS

Here are a few tips that will help you enjoy a great looking hardwood floor longer.

1. Regularly sweep or vacuum the floor to prevent sand or abrasive dust from accumulating and scratching finish.
2. Sand and water are wood's worst enemies. Place rugs inside every outside entrance of house, in front of kitchen sink, working stations and dishwasher to protect the floor from water or oily detergent.
3. Use adequate floor protection (felt pads) under all furniture and chair legs, in order to ease their movements and to prevent scratches and dents.
4. High heels, second only to water, are one of hardwood floors worst enemies. Keep "high heel" shoes in good condition. Damaged or worn out high heels may expose a metal tip which will certainly damage the surface finish.
5. Never use wax, oil based detergent or any other household cleaners on your Solid Sawn Hardwood Flooring. These may dull or damage finish, leaving a greasy film, and may make the floor slippery and

more difficult to clean. These products will also void your warranty.

6. Light scratches or dents may be easily repaired by using some wood filler and thin coats of polyurethane.

7. Protect your floor against direct sunlight or any intense source of artificial lighting. Over time intense light will discolor exposed surfaces. Fading due to UV lighting is not covered under your warranty.

## LIFETIME STRUCTURAL WARRANTY

Muskoka Hardwood Flooring puts every piece of flooring through a strict quality control measure. Muskoka Hardwood Flooring warrants the Solid Sawn Hardwood Flooring, to the original purchaser, in the original manufactured/purchased condition, to be free from milling defects, delamination and grading for the lifetime of the floor. Any damage due to improper transportation, storage, handling, installation, or any other cause, is not covered by this warranty. As per industry standards, Muskoka Hardwood Flooring reserves the right for a 5% defect allowance, which is not covered under this warranty.

## WEAR WARRANTY

"Subject to the Warranty Exclusions set out below, Muskoka Hardwood Flooring, manufacturer of Solid Sawn Hardwood Flooring, warrants to the original purchaser that, under normal residential conditions, the finish wear layer of Solid Sawn Hardwood prefinished flooring in the original manufactured/purchased condition will not wear through or peel from the wood for a period of twenty five (25) years from the date of purchase by the original purchaser. Regular maintenance as specified by Muskoka Hardwood Flooring must be followed in order to validate this warranty. The sole remedy pursuant to this warranty is available to the original purchaser only and shall be limited to the repair, refinishing or replacement of the defective Solid Sawn Hardwood Flooring only. If the product cannot be repaired, refinished or replaced after a reasonable number of attempts, Muskoka Hardwood Flooring will, upon request, refund the original purchase price of the defective floor on a pro rata basis. Any attempt to repair, refinish or replace the defective product prior to inspection by Muskoka Hardwood Flooring will invalidate this warranty."

#### Lifetime Stability Warranty:

Stability warranty guarantees the original purchaser that their flooring will remain stable, provided the relative humidity is maintained between 30-80%. **This floor will cup or crown if the relative humidity is outside the range specified.**

Muskoka Hardwood Flooring will guarantee the original purchaser for the lifetime of the floor that your Solid Sawn Hardwood Flooring will not cup.

## WARRANTY EXCLUSION

"Muskoka Hardwood Flooring warranties do not extend or cover scratches, dents or any noticeable markings caused by improper handling, installation, water damage, flooding, fire, furniture, shoes of all types, pets, insects and furthermore, Muskoka Hardwood Flooring will not warranty any product that is faulty from installation, neglect, environmental extremes, or improper storage of product. The sub-floor is the responsibility of the installer. Failure of Muskoka's Solid Sawn Hardwood Flooring relating to the sub-floor, in any

manner, is not the responsibility of Muskoka Hardwood Flooring and is not covered under the warranty. The use of tape on the surface of Solid Sawn Hardwood Flooring will void the warranty (unless specifically specified by Muskoka Hardwood Flooring). The finish wear surface must be easily noticeable and cover at least 15% of the total floor area for a claim to be considered. Any variation or reduction in gloss level will not be considered under this warranty. Small cracks that develop from improper moisture control, flooding, excessive drying, will not be covered under this warranty. Hardwood flooring is made from natural products which have cells running parallel with the grain, therefore, all wood floors will expand and contract with the change of seasons. This CUPPING effect, expanding and contracting, is not covered under this warranty. It is recommended that you maintain a relative humidity of 30-80% in your home by using a humidifier and/or dehumidifier to minimize movement of your hardwood floor. Color variations are a natural occurrence in flooring due to age, species and exposure to ultraviolet sunlight. For this reason, you may encounter mild color variations from board to board, or when replacing damaged boards with new product. Also, normal sunlight will cause fading/darkening, depending on the species of your floor. Area rugs should be moved occasionally as they block sunlight and may give the appearance the floor is discoloring under the rug; this discoloring is not covered under warranty."

**Dimpling, also known as wood displacement, can be caused by a number of reasons: nail gun pressure, poor workmanship, wrong cleats or staples used or installing very dark colors. This is not covered under the Muskoka Warranty Program.**

## FILING A CLAIM

If a claim needs to be filed under the Residential Warranty, you must first contact your Authorized Muskoka Dealer where you originally made your purchase. If your Authorized Muskoka Dealer is unable to satisfy your claim, you may advise Muskoka Hardwood Flooring, in writing, at the herein listed address: Muskoka Hardwood Flooring, 80 Old North Road RR 3 Huntsville, ON P1H 2J4 Attn: Customer Service. Muskoka Hardwood Flooring, after being contacted by the dealer or in writing by the purchaser, will have an Authorized Muskoka Hardwood Flooring representative inspect the floor. If after inspection, Muskoka Hardwood Flooring concludes that the complaint is valid, it will at its discretion, refinish, repair or replace that portion of the floor that is in question. If after repeated attempts, Muskoka Hardwood Flooring is unable to correct the floor, Muskoka Hardwood Flooring may choose to reimburse the homeowner for the portion of the flooring in question. Vintage Hardwood Flooring reserves the right to have a Muskoka representative to inspect and remove any samples that are required to determine the exact cause of the complaint in question.



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