Mr Sandman Floors

Filling Gaps Between Timber Floor Boards – Frequently Asked Questions

As a floor sander I am often asked to fill the gaps between timber floor boards. When I sand and finish a floor, I take a "best guess" as to which filling technique MAY be possible. This does not guarantee it will work. When asked what I would recommend, **I ALWAYS ADVISE NOT TO FILL GAPS BETWEEN BOARDS** (with the exception of flood filling).

Timber is a natural product and responds to environmental changes such as temperature and moisture. As timber absorbs moisture from the atmosphere, it will "swell" increasing in width. Conversely, as it loses moisture to the atmosphere, it will shrink. This movement occurs continually with all timber floors, all the time, every minute of every day. The amount of movement in timber flooring depends on the species of timber, the availability of moisture in the atmosphere and temperature. It is important to recognise that you CANNOT stop timber from absorbing or losing moisture. It is a natural phenomenon of a material that is essentially cellular and is therefore porous. You cannot stop timber floors from moving.

Factors which affect the amount of movement in timber:

The species of timber	The more porous a timber, the more moisture can be gained and lost and therefore the more the timber will "move". Softwoods are more porous than hardwood species.
Level of moisture in the atmosphere	This will vary depending on location. Typically houses in the tropics (high humidity) or located within close proximity to a body of water, have more moisture available to absorb.
Amount of sunlight or heat on the floor	Sunlight will warm the timber causing it to lose moisture and shrink. Over an extended period this will cause the timber to become more porous.
Whether the house is lived in	When a home is occupied and windows and door are opening and closing, moisture content of the air is likely to change more than if the home is vacant.
The "packing" of the timber	Tightly packed boards will be able to distribute expansion across the width of a wider area than boards which are loosely packed. Loosely packed boards also have less "hold" offered by the tongue and groove interlocking and are therefore more likely to move.
Air-conditioning	Refrigerative air conditioners decrease humidity in a room, causing timber to shrink. Evaporative air-conditioners INCREASE humidity in a room, causing timber to swell.

Information About Type of Timber Fillers

Below is a list of the types of commercially available timber fillers and the likely result of their use when filling gaps BETWEEN TIMBER FLOOR BOARDS.

Brand / Name	Description	Characteristics when used to fill gaps between timber floor boards
Timbermate	A water soluble finish that dries to a semi-hard finish and may shrink, causing "pin holes" in the filler. Can absorb some finish if no sealer applied. Will absorb stain if floor is to be stained. Easy to wash off tools. **IDEAL FOR FILLING NAIL HOLES**	☹ If subject to large movements of the floor, this filler will crumble and fall out. ☹ Is difficult to apply to large gaps as it shrinks when drying and therefore requires multiple applications.
Redimate	A water soluble filler which dries to a hard finish and is much less likely to shrink. Does not absorb any coating when applied. Difficult to wash off tools when dry. Will not absorb stain very well if floor is to be stained. **IDEAL FOR FILLING NAIL HOLES**	☹ If subject to large movements of the floor, this filler will crumble and fall out.
Builder's Bog	A fibreglass filler with a hardener which is added. Dries to a very hard finish. Needs to be coloured to match the timber colour. Is pink or grey in colour, if no colour pigment is added. If coloured and then subsequently sanded, it can turn WHITE or SPECKLED. **USED ON SMALL, MEDIUM OR LARGE GAPS WITH LIMITED MOVEMENT**	☹ Although it dries very hard finish, timber will still swell and shrink around the bog. When the movement of the timber breaks the floor finish holding the bog, it will fracture and fall out in pieces. ☹ Is an expensive filling option.
Fibreglass Resin	A clear fibreglass filler with a hardener. More or less of the hardener can be added to create a fill that is either slightly flexible or very hard. **USED FOR FILLING GAPS UP TO 5mm BUT ONLY WHERE IT CAN BE APPLIED WITHOUT RUNNING OUT – i.e. DIRECT STICK FLOORS.**	☹ This type of fill is VERY strong. As the floor shrinks, if the resin "holds" the edges of the boards, it will force a rupture of the timber elsewhere. Basically it will break the floor board apart. ☹ As the floor expands, the resin has some flex, but may break and then eventually pieces will come out. ☺ If the resin sits in a U shaped channel between the boards and the boards move around it – it can prove to be a good filling option. ☺ CAN ONLY BE APPLIED TO FLOORS that are direct stick OR where the gaps between the boards is small as it

		is the consistency of honey when applied. Is a very expensive filling option.
Acrylic Gap Sealer	A water based flexible filler available in a variety of colours. Can be sanded and coated with floor finishes. Note that application need to be in a clean U-shaped channel between the boards. If the sealer cannot be applied deep enough by caulking (3-5mm) AND with a narrow spacing at the top (3-5mm) IT CAN EASILY BE LIFTED BY SANDING OVER THE TOP. This results in pieces or entire lengths of the sealer dislodging from the gap. Gap sealer can be applied after sanding and finishing of the floor, as it dries to a smooth matt finish. **USEFUL FOR CLEAN U-SHAPED GAPS UP TO ABOUT 4mm**	☹ Difficult to get into uneven gaps between the boards as it is the texture of peanut butter. ☹ Requires use of a caulking gun, which if gaps are small, results in filler not filling the gap. ☹ If gaps are WIDE OR SHALLOW, sanding will result in the filler being sanded out. ☹ As the timber expands and shrinks, the grip that the filler has on the sides of the timber will eventually release. If the finish above the sealer is broken, it will fall out. ☺ If gaps between the boards are an EVEN U-SHAPED channel 3-5mm wide, the sealer can be applied evenly with a caulking gun and has enough "mass" to hold in place when sanded.
Mix 'N Fill Fillers	A flexible water based filler to which fine sawdust from the floor is mixed to provide a colour-matched filling solution. **ONLY USED TO FLOOD FILL FLOORS WHERE GAPS ARE UP TO 2mm wide.**	☺ Very good for flood filling floors where gaps between boards do not exceed 2mm. This filler is the consistency of thin cream, so application on wider gaps would result in it simply running out beneath the boards.

Other Timber Fillers

Disheartened by the fact that their timber floor moves and one (or more) of the above gap filler options might not, or have not worked, clients often go in search of other solutions .

Whilst I know there are other gap filling options available, attempting different techniques on a floor that is showing obvious signs of movement is NOT part of my job. I would encourage clients to explore the options and welcome them to attempt different techniques to find the merits or faults themselves.

My experience in filling gaps between timber floor boards has spanned over 12 years and includes all of the above techniques on thousands of floors.

This is not to say that a technique you try yourself will not work.

To see what properly laid floors should look like (gap free), please visit the gallery page on our website: www.mrsandmanfloors.com.au/gallery