



SPC - ZimpleCLICKTM Flooring with Uniclic[®] & i4f[®] click profiles

Installation Manual

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Rudiger Group Inc. bears no responsibility or liability for damage(s) resulting from the contents contained within this manual. All tasks performed by the product user are at the own risk and liability of the user. Unless otherwise specified in this manual, the most current NFCA Floor Covering Reference Manual shall dictate the installation or service requirements of resilient products. The information pertained within this guide is for reference only and does not supersede instructions from other product manufacturers or building codes. Consult and follow manufacturer's specific installation and safety instructions. Information may change without notice. Visit www.bodensurfaces.com for most current revision. We have made every attempt to limit spelling and grammatical errors, if you note an error, please advise us in writing, our contact information is available at www.bodensurfaces.com

1.0SPC – Tips on reading this manual

This installation manual is intended to be straightforward and educational. In an effort to make this manual relatable, we have inserted real world metaphors (some intentionally light hearted and cheeky).

Our manual references industry standard when applicable, thus where you see “NFCA” in this manual, it refers to the “National Floor Covering Association of Canada”. To make the references easy to spot, direct quotes from the NFCA are in red text.

1.1SPC - Owner and Installer Responsibility

You must read and fully understand this installation manual before installing the flooring. You must abide by this entire installation manual or you will void your floorings warranty.

Refer to www.bodensurfaces.com for the most up to date instruction manual and warranty document.

The most current manual available at www.bodensurfaces.com at the time of the installation is considered to be the manual in effect for installation requirements.

The installer of the flooring must carefully examine the flooring to acknowledge acceptance of the color, finish and that there are no product defects before installing. If the flooring is not acceptable at the time of installation, the flooring should not be installed, until the installer or owner are satisfied with the product quality. Once the flooring is installed, it is considered as acceptance by the installer and the owner.

The labels on each carton indicate product color, production number(s) and / or date(s).

The installer must confirm the product number, production number(s) and / or date(s) on the cartons match PRIOR to installation. If there is a discrepancy, it must be resolved before the installation begins.

The installer must use & wear all necessary personal protective equipment when installing flooring to ensure they are not injured during the installation. This includes wearing an appropriate dust mask, protective eye wear, gloves, hearing protection, etc.

Jobsite must have adequate lighting during the entire installation process.

Never sand, scrape, sweep, drill or agitate an existing flooring or surface which has not been yet tested or confirmed to be free of asbestos or lead.

Per NFCA Specification Guide 09 65 00:

“... to alleviate problems resulting from the improper selection and or installation of resilient flooring, it is the consumers responsibility to be properly informed.”

This flooring is available in different click profile formats depending on the series.

Before installing the flooring, identify which click profile you have. The click profile is identified by a “hologram” label on the front box flap. Identify the relevant installation manual and installation method for your specific click profile, otherwise you will damage the flooring.

If you are unsure which click profile you have, contact Boden Surfaces, so we can advise you.

Do not install this product in a commercial installation, as rolling loads such as carts, wheelchairs, dollies will damage the flooring. Additionally transitions will be damaged by rolling loads. Furthermore it can be difficult to allow a true “floating floor” when heavy commercial commercial objects (such as heavy desks, display coolers, office furniture, etc) are placed onto the flooring. We suggest as an alternate commercial flooring to use a commercially rated LVP glue down product such as Boden ZimpleLAY.

For warranty information and warranty document, visit www.bodensurfaces.com.

2.1SPC – SPC Flooring in a nutshell

The flooring market contains many SPC click products, some marketed by overstated & unverified performance claims. For an unbiased, professional spin on SPC floorings real-world limitation, we refer you to this [NFCA Specification Guide 09 65 00 quote](#):

“SPC has a fragile locking mechanism, easily fractured during transportation, handling and installation.”

Therefore, for a successful installation SPC must be installed following each and every installation requirement to ensure success. The good news? If you read, understand and follow every requirement of our manual, your flooring installation will perform as intended. If you skip or ignore an installation requirement, you are needlessly risking an installation failure, thus be sure to read and fully understand this installation manual before installing the flooring. You must abide by this entire installation manual or you will void your floorings warranty.

Here are some real world FAQ's you may be asking:

Q: I want a floor that has no doorway transitions?

A: Then don't use a click flooring. Why? The [NFCA specification Guide 09 65 00 states](#): **“expansion transitions are required in all doorways to separate rooms”**.

This is because a fundament of a floating floor is that it is not glued into place, thus floats (moves) with minor differences in traffic patterns and temperatures of each room. By isolating the rooms with expansion joints, each room can float freely. If you don't do this, the movements from each room can compound, potentially breaking click profiles, often at the butt joint, which is not warrantied.

Q: Other brands claim their SPC flooring doesn't expand and contract, does yours?

A: We can't speak to another manufactures claims, however consider this:

Is your house made of wood? (wood framing, wood subfloor, etc.) Ok, consider that even IF the flooring magically did not expand or contract, the house itself is expanding and contracting (wood is organic and expands and contracts with changes in humidity and temperature).

Thus the need for expansion joints, including in doorways is necessary, not optional, as the house itself is expanding and contracting and has to be accommodated for.

Q: I've installed click flooring for years without these requirements, I've never had a problem, why do I have to follow these requirements now?

A: This is no different than saying: “I've driven a car for years without wearing a seatbelt, I've never had a problem, why should I start wearing a seatbelt now.”

Just like a seatbelt in a car, following our requirements when installing your flooring gives you the greatest chance for the best possible outcome.

2.2SPC - Floor Flatness Introduction

This is not optional, it's an industry standard requirement per **NFCA specification Guide 09 65 00**:
"Performance of locking joint is dependent on a consistent, flat substrate."

The flooring must be installed on a flat floor as defined in the section "Floor Flatness Measurement 2.3SPC". If you can't provide a flat floor per the requirements, choose a different type of flooring.

Why? If the floor is flat, the flooring and click profile are fully supported and cannot fracture from deflection. Floor flatness must be achieved prior to installing the flooring using levelling and/or patching compounds and/or sanding sheet seams flush. If you install click flooring on a floor which is not flat, the click profiles will likely fail; which is not warranted.

Per **NFCA specification Guide 09 65 00**:

"Abrupt height differences shall be removed prior to installation. (nail heads, concrete ridges and other similar small protrusions)."

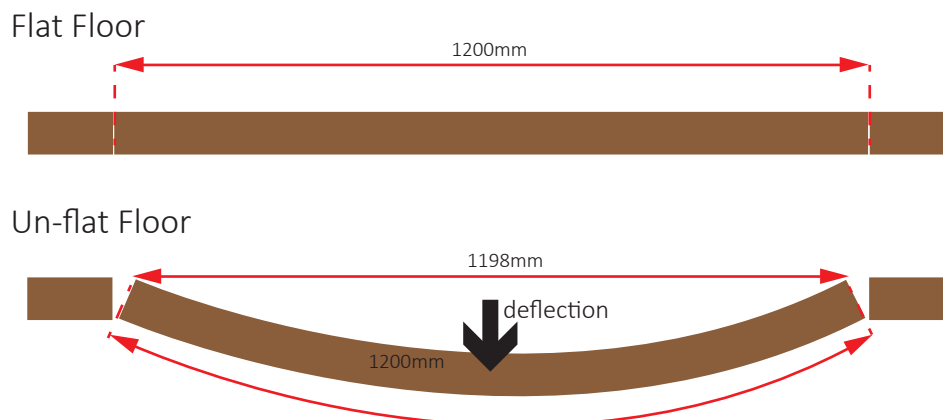
Practical example 1:

A home builder has a new construction residence, with OSB sheathing. Where the OSB sheet seams meet, there are slight "peaks/bulges" causing high spots which do not meet the requirements of section "Floor Flatness Measurement 2.3SPC" or the above NFCA requirement. To solve this, the builder has to simply sand the sheet seams, then fill / patch the seams flush with an appropriate cement patching compound, until the required flatness is created.

In the same process, the builder will measure the floor flatness to ensure there are no low or high spots which need to be levelled or filled. This is done prior to installing the flooring.

Practical example 2:

You can see why an un-flat floor will damage click flooring, as the un-flat section of flooring causes the plank to change dimension relative to the flat horizontal plane, effectively pulling or pushing the un-flat plank away from the other flooring pieces, damaging the click profile.

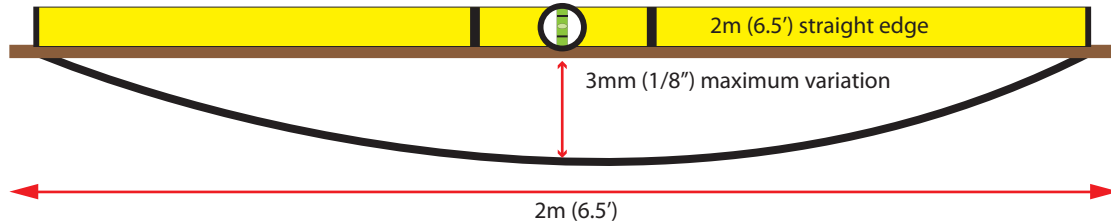


2.3SPC - Floor Flatness Measurement

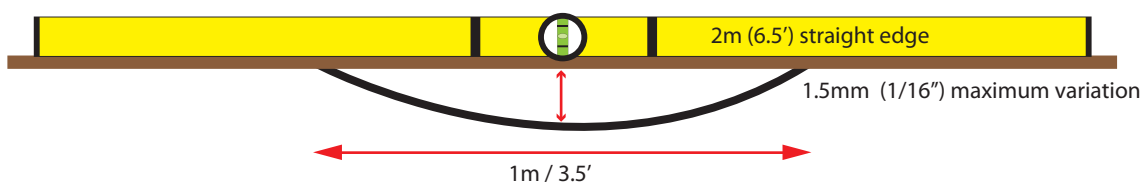
To use the Floor Flatness Chart:

- Take site measurements using a 2m (6.5') long straight edge.
- Take height / gap readings at 2m, 1m, 0.5m and 0.2m separate length increments along the straight edge.
- Ensure the height variation of each increment does not exceed that of each relative charts below.

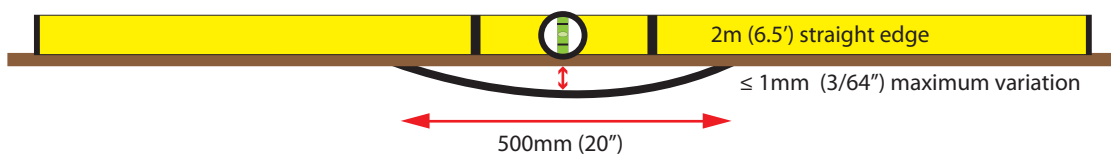
Flatness over 2m



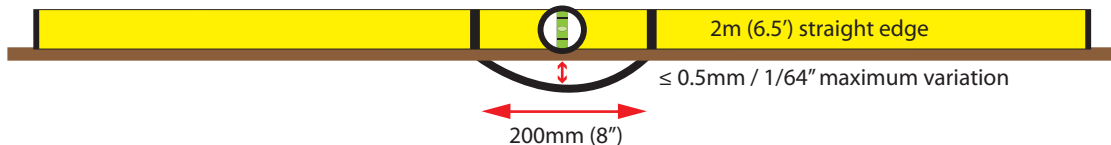
Flatness over 1m



Flatness over 0.5m



Flatness over 0.2m



- 3mm (1/8") maximum variation over 6.5' (2m)
- 1.5mm (1/16") maximum variation over 3.5' (1m)
- 1mm (3/64") maximum variation over 20" (0.5m)
- 0.5mm / 1/64" maximum variation over 8" (0.2m)

Debris can get trapped under the flooring during installation, this will cause a high spot in the floor which could damage the click profile.

Noise is a sign of movement. If the floor clicks or squeaks when walked on, it is only doing so because the flooring is moving. Determine and remedy the source of the movement before installing the flooring.

2.4SPC – General Floating Floor Requirements

Before we get into the meat and potatoes of floating floors, here's a real world example which sums it up:

A boat is either sinking or floating.
This is undeniable and true.



The same principle applies to a floating floor. The floor is either floating, or not floating, there is no in-between. Thus one pinch point, one stair post siliconed to the flooring, etc., it will not allow the floor to float, which will eventually damage the click seams of the flooring, which is not warranted.

The individual pieces of click flooring once connected act as a “system” which must be able to float freely as a single monolithic piece, floating within the expansion joints at the perimeter of the flooring.

A floating floor cannot be affixed, pinched or obstructed at any point, or the click profiles will fail. Like a boat with a leak, there are no exceptions, it will eventually sink (fail).

You must leave a minimum horizontal expansion gap of 8mm (5/16”) at:

- The floorings perimeter
- Walls
- Adjoining floorings
- Where the flooring meets a stationary, permanent, or heavy object such as:
 - Fireplaces
 - Counters, islands, cabinets, lockers, pool tables or billiard tables
 - Millwork gables or millwork supporting elements which contact the floor
 - Stair railings, stair posts
 - Stair nosings
 - Fish tanks in excess of 35 liters
 - Appliances, pianos, furniture over 75lbs in weight on each supporting leg / contact point

In addition to the specified minimum horizontal expansion gap, you must leave a minimum vertical expansion gap of 1.5mm (1/16”):

- Where the flooring meets baseboards / trims / casings / millwork, cabinets, stair railings, door frames, etc.

Floating floor requirements from the [NFCA specification Guide 09 65 00](#):

- “Follow manufacturers installation guide for recommended installation gap, should be left around the perimeter of the floor during the installation. This will allow space for the natural expansion and contraction of the planks.”
- “Do not secure individual planks directly to the subfloor as floating floors are designed to shrink and expand laterally.”
- “All doorjambes should be undercut.”
- “Cabinets should NOT be installed on top of the flooring system.”
- “Wall moldings and transition strips should be installed to hide exposed plank / tile edges but should not be fastened through the flooring.”
- “Always install cabinets and islands prior to installing a floating floor. If cabinets need to be installed after the floor covering is installed, they should be mounted to the wall and in a manner that does not restrict natural movement within the floating floor.”
- “Expansion gaps must be honored throughout the installation at all vertical abutments.”

Do not glue, silicone, caulk other flooring, surfaces or objects to or through the flooring, including:

- Transitions and stair nosings cannot be glued, siliconed or caulked to the flooring.
- Silicones cannot be used to affix the flooring to another surface as it will obstruct the flooring from floating.
- Do not fasten, glue, silicone, caulk or mount closet tracks, shelves mounts or other hardware.

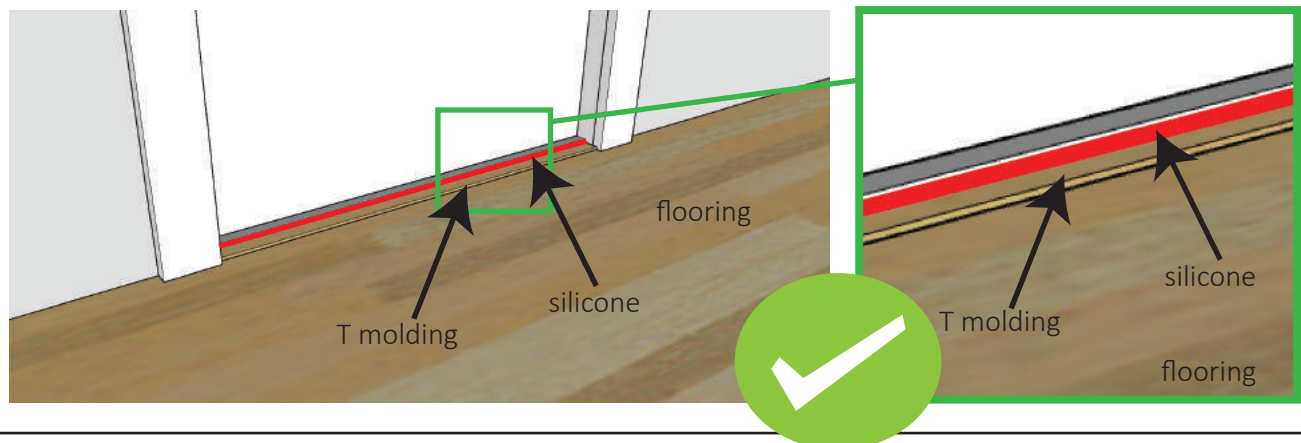
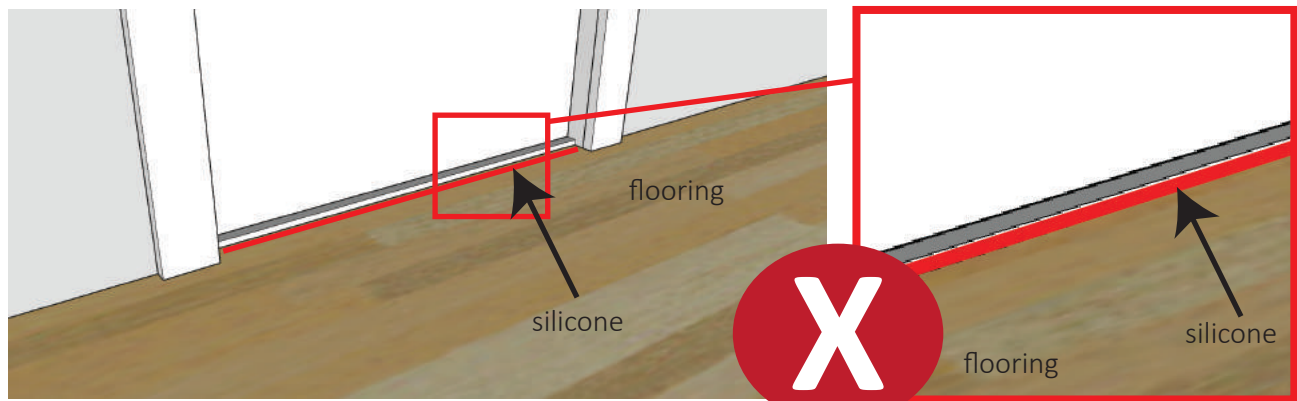
An area often overlooked which obstructs a floating flooring, is where flooring meets an exterior door threshold. For a non-floating floor, silicone sealant is applied to seal the exterior door threshold to the flooring.

However, in the case of a floating floor, silicone should NOT be applied to the flooring, as it will obstruct the floors ability to "float", potentially damaging the flooring click seams.

In this situation, install a color matched T molding which is not affixed to the flooring. Silicone sealant can then be applied where the one side of the door threshold meets the T molding, thereby allowing the floor to float as the T molding is not affixed to the flooring.



A common exterior doorway to flooring transition



2.5SPC – Requirement for Doorway transitions

This point gets a lot of bad press because “transitions” may be viewed by customers and designers as unsightly. The good news is that we produce color matched transitions which help provide a visually appealing transition, so the floating floor can function as intended.

The use of doorway expansion joints with a click flooring is NOT optional, as stated by the **NFCA specification Guide 09 65 00:**

- “...expansion transitions are required in all doorways to separate rooms”

Q: Why is this a mandatory requirement?

A: Each room will undergo different movements caused by this such as different foot traffic, occupants and temperatures. Example: A south facing room will be slightly warmer than a north facing room.

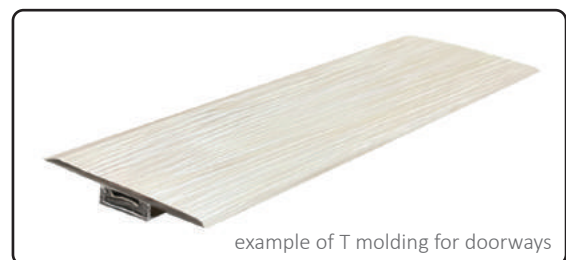
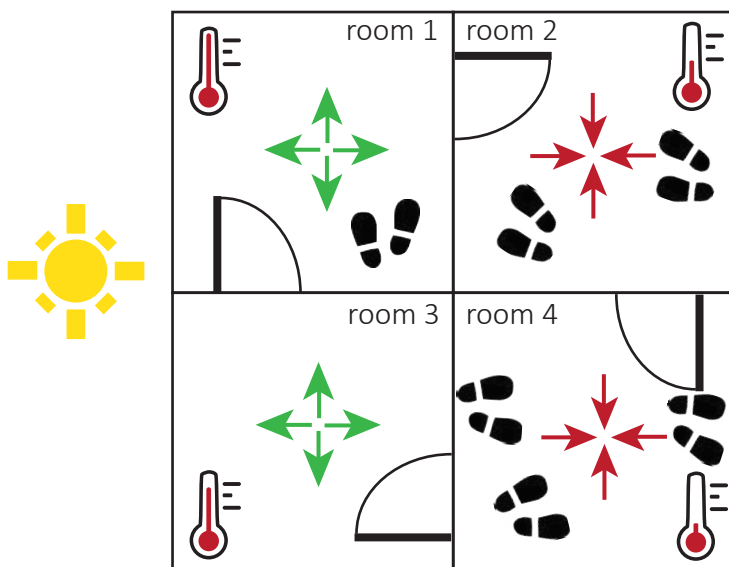
To allow for the different conditions in each room, each room must be isolated (with an expansion joint and corresponding transition), so it can float and move freely, independent of the other rooms.

In this example below, there are 4 separate rooms.
Each room has different traffic and temperatures.

The difference in temperature and traffic will result in different rates of movement of the flooring in each room. It is for this reason doorway transitions are required, to allow each room to “float” independently.

Doorway transitions cover an 8mm (5/16”) wide expansion joint, so the rooms can float independently and freely of each other.

If the rooms were not separated with expansion joints, the compounding movements would cause the click profiles to break. This is a universal floating floor principle, not unique to SPC flooring and required by the NFCA.



2.6SPC – Allowances for inherent expansion and contraction of building materials

Fun Fact: All flooring expands and contracts, especially vinyl flooring which is a thermoplastic. SPC is a class of vinyl flooring, thus it will expand and contract with temperature changes.

Don't believe us? Read this statement from the [NFCA specification Guide 09 65 00](#):

• “Caution: Vinyl expands and contracts based on changes in temperature and can buckle when exposed to direct and extreme sunlight.”

Still don't believe us? We have a good example for you:

Is your house made of wood? (wood framing, wood subfloor, etc.) The house itself is expanding and contracting (wood is organic and expands and contracts with changes in humidity and temperature).

Thus the need for expansion joints, including in doorways is necessary, not optional, as the house itself is expanding and contracting and has to be accommodated for.

Want even more proof? Sure, our pleasure:

Porcelain tile, one of the most temperature stable flooring products on the market, requires by industry standard a movement joint to relieve interior thermal changes at a minimum 16' (4800mm) to 20' (6100mm) in each direction, including at the perimeter of floors. It is thereby only logical that even the best SPC vinyl floorings will also expand and contract, thereby needing expansion gaps also.

- Expansion and contraction (dimensional change) is an inherent characteristic of thermoplastic and to be expected. Exposure to temperature and humidity beyond the “service condition” defined in the installation manual may result in click profiles separating or gapping, which is not warranted.
- Darker color floorings require more frequent and larger expansion joints as darker colors will heat greater when exposed to sunlight than lighter colors. To determine what size of expansion joint is required based on your flooring color, consult an engineer.
- If you have in floor heating, follow the requirement in this manual under the section "Subfloor Requirements - In-floor Heating" as heating or cooling the flooring too quickly can damage it.
- If you can't regulate the temperature or humidity (example because of extreme climate, very hot summers with no air conditioning), use a different flooring.

Per the [NFCA specification Guide 09 65 00](#):

- “Rooms over 1000sqft in size or with a single length of over 35ft (13.5m) in any direction require an 8mm (5/16”) expansion joint installed”.
- “In rooms with direct sunlight, use adequate blinds or window coverings”.
- “check ambient room temperature is at service condition and meets manufacturers requirements.”
- “check that floor covering and related products are within a temperature range recommended by the manufacturer prior to application”.

2.7SPC – Acclimation

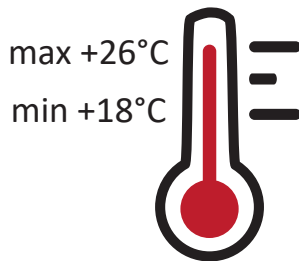
The goal & purpose of acclimation is to allow the flooring to acclimatize to the “service conditions” where the flooring will be installed. The **NFCA specification Guide 09 65 00** states: “Check ambient room temperature is at 'service' conditions and meet manufacturer's requirements.”

What is the “service condition”?

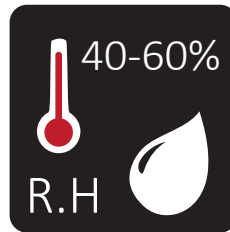
The “service condition” is the environmental conditions (temperature, humidity, etc.) the flooring will be subjected to its entire life, including floor, ambient, substrate and surface temperatures.

The **NFCA specification Guide 09 65 00** states: “Check ambient room relative humidity and ambient room temperature are between 40 - 60%”.

The “service condition” range is between +18°C to +26°C with humidity of 40-60% relative humidity for the life of the product, including during installation & acclimation.



service temperature



relative humidity



acclimation

Is acclimation really necessary? Yes, according to the **NFCA specification Guide 09 65 00**:

- “failure to acclimatize resilient flooring may result in dimensional changes...”
- “deliver all materials to work areas when required and a minimum of 48 hours before installation to condition materials to site temperature and humidity conditions.”
- “The heating and air conditioning systems in these areas shall be carefully controlled during and after installation so as to maintain the heat and humidity levels at a constant level with the ranges noted.”

The temperature and humidity must remain constant during the entire life of the flooring, including:

• acclimation period, installation period and service life, never exceeding +18°C and +26°C, with relative humidity (RH) of 40 - 60%.

- Consider the temperature of a slab prior to installing, as it may be colder than the environment and change during the service life of the flooring which will cause the flooring to expand and contract.
- The boxes must be stored flat and level at all times.
- Never store the boxes on their sides.
- Do not stack the boxes over 4 high.

2.8SPC - Operating Ranges & General Limitations

- The product is rated for INTERIOR use only.
- The floor must always be able to “float” / move. If you restrict the floors ability to float, the flooring seams may fail which is not warrantied.
- Allow an 8mm expansion gap at the perimeter of the flooring.
- The flooring must never contact a permanent object or surface which will restrict the floor from floating. If you restrict the floors ability to float, the flooring seams will fail which is not warrantied.
- Never place cabinets, millwork, or stationary objects over 75lbs weight onto the flooring, otherwise you must install an expansion joint around the cabinet, millwork, or stationary object so the floor can float.

Per NFCA specification Guide 09 65 00

- “Check ambient room relative humidity and ambient room temperature are between 40 - 60%”.
- The temperature must not change more than 2°C per 24 hour period, never exceeding +18°C and +26°C.
- Heat must be evenly distributed to all rooms, thus isolated heat sources such as space heaters or fireplaces require an expansion joint of 8mm to separate the flooring near the heating source from the rest of the flooring.

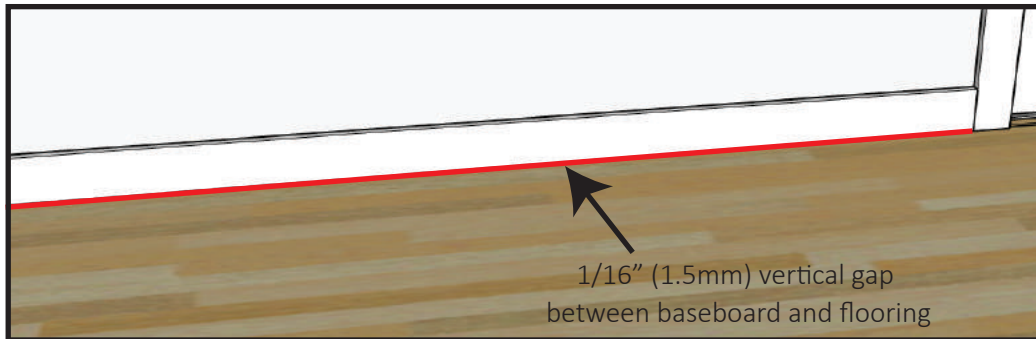
Per NFCA specification Guide 09 65 00:

- “heating, air conditioning and humidity control facilities (must be) in operation”
- Never glue, nail, screw, glue, caulk or silicone the flooring into position as it will restrict the floor from floating.
- Do not silicone, glue, caulk or adhere the flooring to other surfaces, as it will restrict the floor from floating.
- Never fasten through the flooring (ie: closet tracks, cabinet gables, etc.) as it will restrict the floor from floating.
- In rooms with direct sunlight, use adequate blinds or window coverings, including temporary window coverings during construction.

Per NFCA specification Guide 09 65 00:

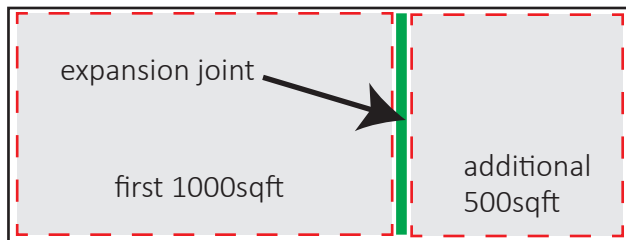
- “Exposure to direct sunlight can result in product fading and creates excessive heat directly on the finished flooring and surround structure, which may result in movement. During peak sunlight exposure, the use of drapes or other window treatments are required.”
- Product expansion and contraction (dimensional changes) are an inherent property of thermoplastic (vinyl) and to be expected. Exposure to temperatures & humidity beyond the allowable range will result in gapping, peaking or the connection profiles dislodging / breaking in an installed / finished floor which is not warrantied.
- Expansion joints and transitions within doorways are required.
- Edge protection and or reducers must be incorporated to protect the exposed edges of flooring from damage.

- Wall trim & moldings must be sufficiently wide to cover the 8mm (5/16") perimeter expansion joint, including its movement path. Thus a minimum 16mm wide baseboard is required to cover the expansion joint in its movement path.
- Door Casings must be undercut at 1/16" (1.5mm) higher than the thickness of the flooring being installed to ensure the flooring is not pinched or restricted from floating.
- Wall trim & moldings must not pinch the flooring and be spaced with a vertical gap of a minimum 1/16 (1.5mm) above the finished height of the flooring.



Per NFCA specification Guide 09 65 00:

- "...maximum square feet area without using transitions is 1000sqft, roughly a 32LF x 32LF room, the maximum unbroken run in any direction is 35LF and expansions and transitions are required in all doorways to separate rooms."



example of 1500sqft single room with an expansion joint installed at a 1000sqft interval.

- Never install the flooring with an offset smaller than an uncut board width.



offset must be greater than the uncut board width

- The flooring must be laid out in the room in a way that perimeter pieces of flooring have a width of no less than 3". If this cannot be avoided, apply Cyanoacrylate (super glue) to the butt click seams of the perimeter pieces of flooring, gluing the perimeter butt seams together. Take care to not glue to the subfloor, so the flooring can float.
- Change in gloss level, dulling, scratching, scuffing, and chipping, are considered normal wear with the intended use over time as the floor ages.
- Installing the flooring over unapproved substrates can cause plasticizer migration in the flooring, which will damage the flooring.
- If flooring is installed into a modular home or ready to move home, the flooring must be installed AFTER the home has been moved into its final position and not prior to being moved.

3.1SPC - Subfloor Requirements – General / All Subfloors

Subfloor must be:

- Clean
- Level
- Smooth
- Flat, not to exceed a variation in plane as defined in 2.3SPC - Floor Flatness Measurement
- Deflection does not exceed L/480
- Structurally sound and able to support the load of the finished flooring

- The flooring has a pre-attached foam underlay. Use of additional underlay may cause the click profiles to break and is not covered under warranty. If you use an additional cushion underlayment, verify with the underlay manufacturer that it is suitable for use with the flooring.

- No claims will be honored if the substrate telegraphs through the flooring.

- Never install directly over residual asphalt-type (cut back) adhesive. Residual cut back adhesive must be completely removed and covered with proper latex coating as per latex coating manufacturer's guidelines.

Follow the requirements of [NFCA specification Guide 09 65 00](#) regarding surface preparation, including but not limited to:

- “any patching, filling or levelling compound used must be specifically manufactured for this purpose, be suitable for substrate surfaces that are to be adjusted, and be of a type recommended by the compound manufacturer for coverings to be installed”.
- “Fill substrate low spots, minor cracks, joints and holes with substrate filler... ensure substrates are free from all bumps, ridges and other imperfections....Sand smooth to eliminate all irregularities, bumps, ridges and other imperfections and vacuum clean to provide a surface that will not telegraph imperfections”

3.2SPC - Subfloor Requirements - Renovation over existing flooring

The flooring can be installed over many existing hard surface floors, providing the existing flooring:

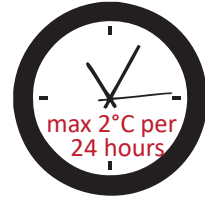
- Does not compress or deflect.
- Is completely flat not to exceed a variation in plane as defined in section 2.3SPC - Floor Flatness Measurement.
- Is without gaps or depressions.
- If installing over existing ceramic tile, the grout joints must be flush with the surface of the tile. Fill the grout joints using a suitable patching compound as specified by the patching compound manufacturer.
- Is clean, dry, non-adhesive, fully bonded without any movement or deflection.
- Do NOT install over hardwood floors. Doing so can be problematic due to a variety of factors including the tendency for hardwood to expand or contract from humidity changes (or moisture from spills), and the resulting movement can damage the click profile which is not warranted.
- Do NOT install over cushion vinyl or vinyl floors of multiple layers.
- Do NOT install over carpet.

3.3SPC - Subfloor Requirements – In floor Heating

Per NFCA specification Guide 09 65 00:

- “The in floor heating system must be turned off 24 hours prior to the flooring installation and must remain off for 12 hours after the flooring installation.”
- “Starting 12 hours after the completion of the flooring installation, gradually increase the temperature over a 7 day period at 2°C increments to the normal operating level”

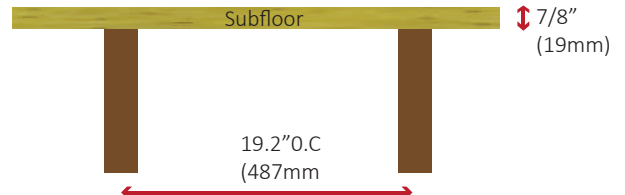
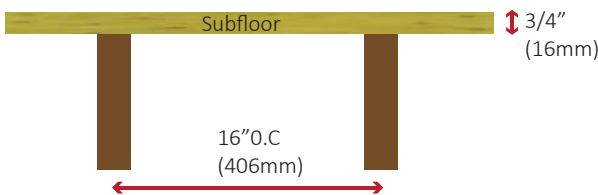
The service condition temperature of the air temperature and floor temperature may not exceed the range of +18°C to +26°C, with temperatures never exceeding 2°C per 24 hour period until the operating temperature is achieved.



3.4SPC - Subfloor Requirements – Wood

At a minimum the wood subfloor must be:

- 3/4” (19mm) thick for joists spaced up to 16” OC
- or
- 7/8” (22mm) thick for joists spaced up to 19” OC.



- Sheeted with exterior grade APA rated T&G plywood or flooring grade T&G OSB, installed to comply with local building codes.
- Sheet seams sanded flush with adjacent panels to meet the requirements of section 2.3SPC - Floor Flatness Measurement.
- Gaps / seams / indents and fastener penetrations must be filled with a suitable portland patching cement to create a flat surface which meets the requirements of our section 2.3SPC - Floor Flatness Measurement.
- Patching or leveling of the sub-floor must be done according to patching manufacturers requirements.
- Fastened to a joist system designed to support the weight of the flooring being installed, with deflection no more than L/480.
- Subfloor has a moisture content less than 12%.
- Do not install over particle board, as particle boards will swell excessively with moisture.
- Fix floor squeaks PRIOR to installing flooring.
- A wood floor must be suspended at least 18” (457mm) above the ground. Adequate cross-ventilation is required.
- Wood subfloor installed directly over top of concrete (or on sleepers over concrete) is not permitted.
- In wet areas, it is recommended to waterproof the subfloor prior to installing flooring.

3.5SPC - Subfloor Requirements – Concrete

Per NFCA specification Guide 09 65 00:

• “If vinyl... is installed over slab on grade, a Class 1 perm rated (6mil 0.2mm polyethylene) vapor barrier must be installed over it. Overlap vapor barrier edges by 8” (20cm) and seal with moisture resistant adhesive tape. Run vapor barrier 3/4” (2cm) up wall and install wall base trim over it.”

The exceptions to the above NFCA requirement are as follows:

You do NOT need to install a vapor barrier IF your slab meets ALL of the below conditions:

- Concrete is completely insulated from below the slab with foam greater than 2” thick;
- Concrete has a Class 1 perm rated vapor barrier below the slab;
- Concrete when tested to ASTM F2170 has a relative humidity less than 75% at all times;
- When tested to ASTM F1869 concrete Moisture Vapor Emission Rate is less than 3lbs/1000sqft/24 hours at all times.

Concrete at minimum must be:

- Prepared to ASTM F710 (standard for preparing concrete floors to receive resilient flooring).
- Free of sealers, coatings, curing or parting compounds, bond breakers, dust, oils, debris, etc.
- Minimum 90 days old.
- Minimum compressive strength of 3500 psi.
- ASTM F2170 and ASTM F1869 moisture tests must be performed.
- When tested according to the most current version of ASTM F2170, relative humidity in concrete not to exceed 75% .
- When tested according to the most current version of ASTM F1869, Moisture Vapor Emission Rate (MVER) level to not exceed 3lbs / 1000sqft / 24 hours.

Note regarding ASTM F1869, ASTM F2170 and pH tests:

- i) For installations under 1000sqft, 3 tests are required. For each additional 1000sqft, one additional test is required.
- ii) A single test indicates the conditions only at the time the test is performed. You must take into consideration for change in season or environmental conditions, as this will change the results which could exceed the allowable moisture or alkaline levels.
- iii) The tests must be recorded and documented.

- pH level no less than 7 and no greater than 9.
- Prepare and repair all cracks and imperfections prior to installation.
- Saw cuts / expansion joints in the concrete must be honored through up into the flooring.

4.1SPC - Basic Tools Required



Tape Measure



Marker / Pencil



Rubber Mallet



Square

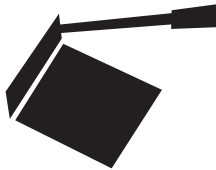


Tapping Block



Pull Bar

SPC flooring can be cut using multiple methods:



Guillotine hardwood
or laminate shear

- Guillotine flooring shear.



Powered Mitre
Chop Saw or
Table Saw

- A powered mitre chop saw or table saw with a blade intended for cutting hardwoods.



Utility Knife

- Scoring and snapping with a utility knife.
Score the surface firmly multiple times, fold the plank to break it and finish the cut on the backside.

5.0SPC – Click Profile Identification

This flooring is available in different click profile formats depending on the series.

Before installing the flooring, identify which click profile you have. The click profile is identified by a “hologram” label on the front box flap. Identify the relevant installation manual and installation method for your specific click profile, otherwise you will damage the flooring.

If you are unsure which click profile you have, contact Boden Surfaces, so we can advise you.



5.1SPC – Installation Basics

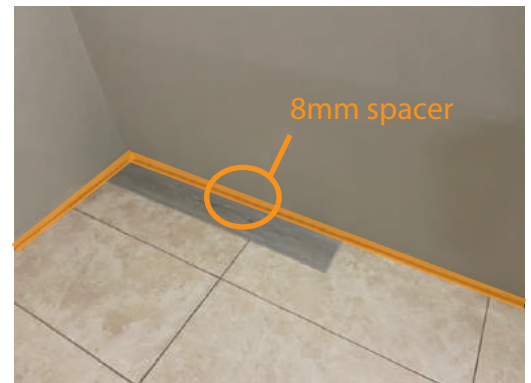
Caution:

- Do not disengage the click seams once the flooring has been installed, as the click seams will be damaged during disassembly, which is not warranted.
- Do not apply excessive force when joining the pieces, this will damage the flooring, which is not warranted.
- Do not use an inappropriate tapping block or you will damage the click profile, which is not warranted.
- Use of an inappropriate hammer, or excessive force will damage the click seam, which is not warranted.

1. Use a minimum 8mm (5/16”) spacer to create an expansion gap at all walls and perimeters.

This 8mm gap must be maintained the entire installation.

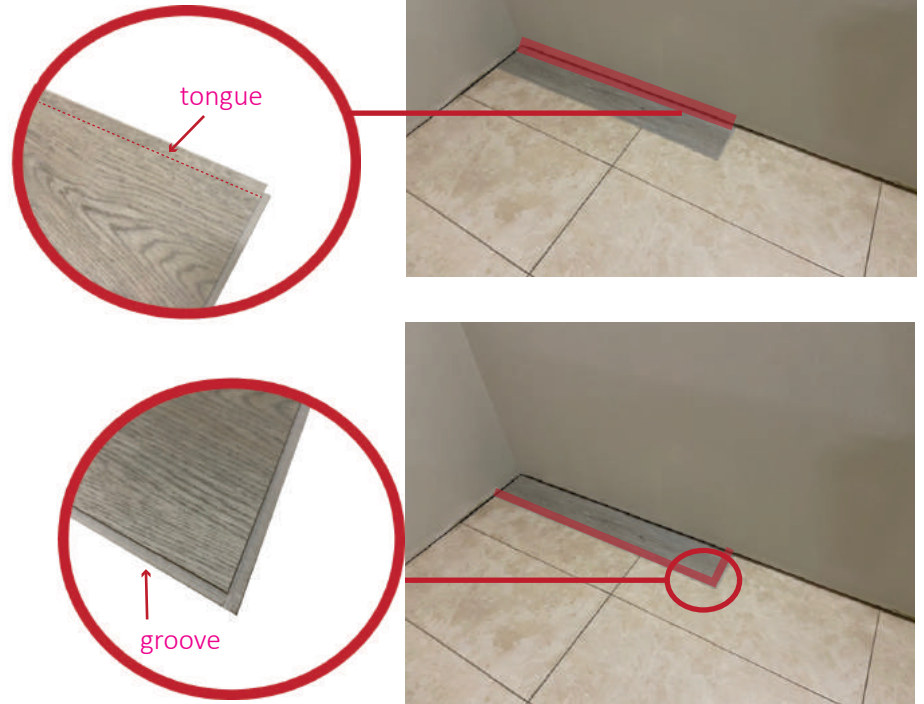
The spacers must be removed when the installation is complete.



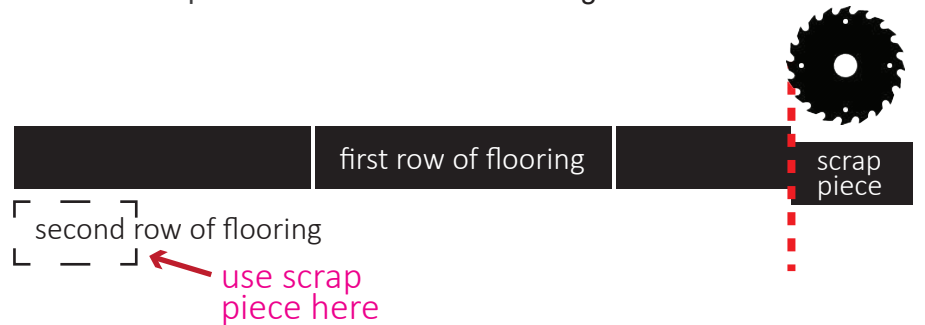
2. The flooring is installed left to right.



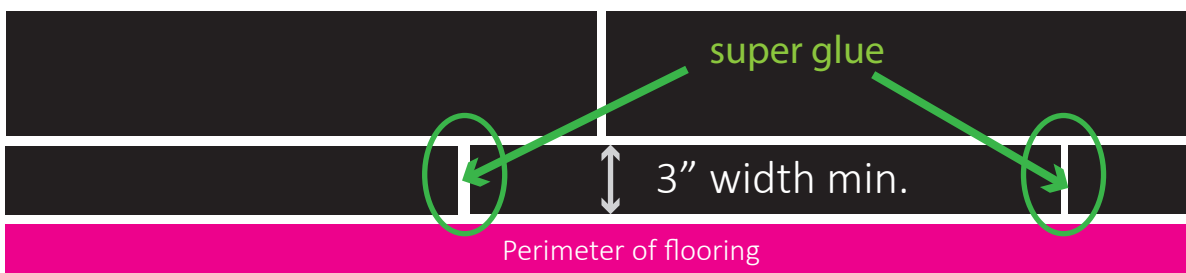
3. Begin by laying the first piece on the left side, with the tongue facing away from you and the groove of the long edge facing towards you.



4. The waste piece from the first row is used to start the second row of flooring, at minimum the scrap piece must be longer than the width of the plank. Never install the flooring with an offset smaller than the board width.



- The flooring must be laid out in the room in a way that perimeter pieces of flooring have a width of no less than 3". If this cannot be avoided, apply Cyanoacrylate (super glue) to the butt click seams of the perimeter pieces of flooring, gluing the perimeter butt seams together. Take care to not glue to the subfloor, so the flooring can float.



5.2SPC – Engaging Unilin® Uniclic® Profiles

To join a Butt Seam OR Long Seam:

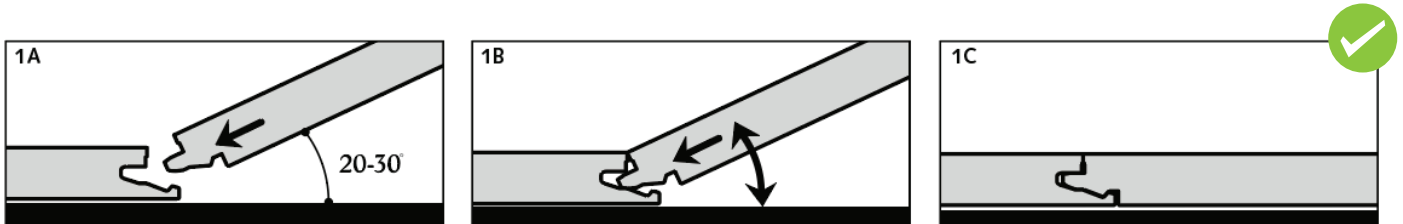
The Unilin® Uniclic® profile can be joined 2 different ways:

- Angle - Angle
- Horizontal Engagement

How to use Angle - Angle

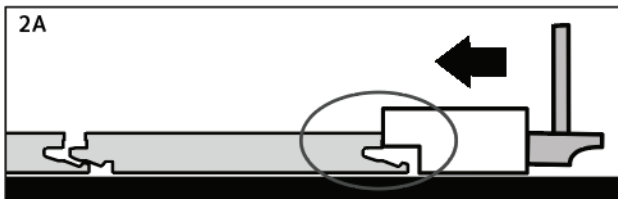
The flooring tongue is inserted into the flooring groove at an angle. (1A)

Then apply forwards pressure while laying down the panel to engage it. (1B)

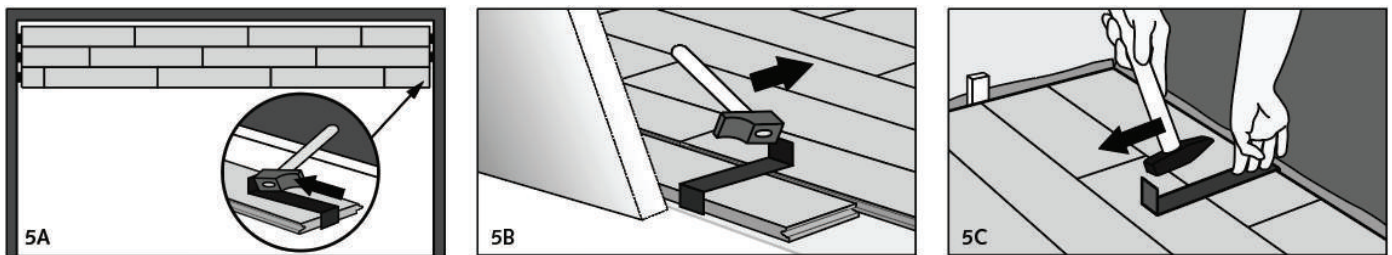


How to use Horizontal Engagement

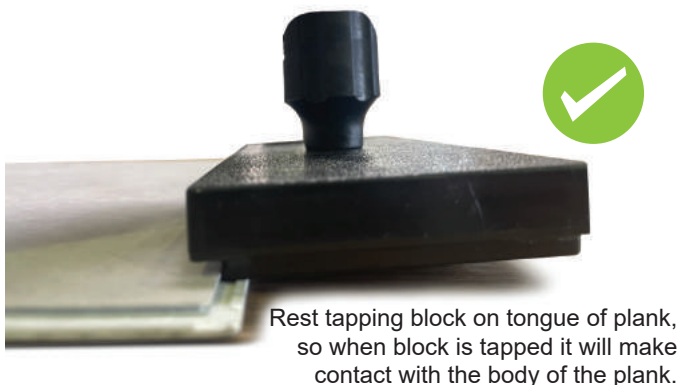
The long edge of the flooring is inserted at an angle per the above step, WITHOUT the butt seam touching. The butt seam is then joined horizontally using a tapping block, to tap the butt seam together. (2A)



A “pull bar” is used in-place of a tapping block when installing flooring against a wall. (5A, 5B, 5C)



- Do not apply excessive force when joining the pieces, this will damage the flooring.
- Do not use an inappropriate tapping block or you will damage the click profile which is not warranted.



5.3SPC – Engaging i4f® TripleLock® & Click4U® Profiles

To join a Long Seam with i4f®:

Insert the long side tongue into the long side groove, holding the plank at an angle.

Apply slight forwards pressure while laying down the panel to engage it into the long seam.

If the flooring does not lay flat use a scrap piece of flooring (as a tapping block), inserted into the long groove, then gently tap the tapping block horizontally using a rubber mallet to join the flooring together until it lays flat.

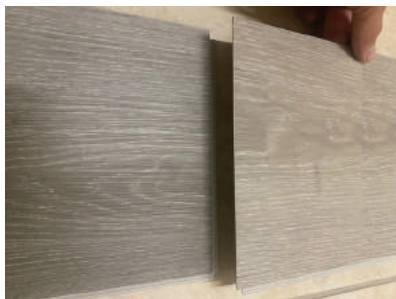


To join a Butt Seam i4f®:

Set the butt end tongue onto the butt end groove of piece on the left, pressing downwards.

Then use a soft rubber mallet to gently tap seam to fully engage.

Do not hit with excessive force, this will damage the flooring



6.1SPC - Care, Maintenance & Use:

- Only use cleaners with a pH neutral formula, which are specifically designed for vinyl floorings.
- Never apply polishes or waxes.
- Never use steam mops or hot water to clean the floor, as vinyl is a Thermoplastic which expands with heat exposure. Do not wet mop, damp mop only.
- Never use abrasive chemicals or abrasive pads to clean the flooring.
- Remove spills immediately.
- Chairs, stools, furniture, etc. must have protective pads at their contact point with the floor, to ensure the flooring is not damaged.
- Chairs, stools, furniture must have legs which evenly distribute the weight over a minimum 12"x12" surface area to prevent damaging the click profile. Failure to do so will result in high point load weight which will damage the click profile or the flooring.
- If a chair has wheels / castors, the wheels must be soft and tested to ensure they do not damage the flooring, otherwise a protective matting must be laid on top of the flooring to prevent the flooring from being damaged.
- Wheelchairs are not recommended on a floating type click flooring for 2 main reasons:
 - i) Wheel(s) create high point-load forces on the individual click seams, potentially damaging them, which is not warranted.
 - ii) When the driven wheel contacts the flooring, the torque from the driven wheel(s) pushes and/or pulls individual flooring boards, stressing and potentially damaging the click profiles. This is exaggerated further when using powered wheel chairs.
- The flooring must be protected with appropriate temporary jobsite protective coverings during construction to prevent damage.
- Protect the flooring when moving appliances or furniture, to prevent damaging the flooring.
- Use vinyl compatible doormats at entrances to prevent unnecessary wear from abrasives like sand, mud, etc. Trapped sand or abrasives under the rug can scratch the floor.
- Mats & rugs must be confirmed to be compatible with vinyl flooring. Rugs/mats with rubber (synthetic or natural rubber) backings can leave permanent stains, residual or markings on vinyl.
- Do not place insulators such as rugs, dog beds, etc. on top of flooring with electric in floor radiant heating, as it can overheat the section of the floor, causing damage to the flooring.
- Follow the requirements of **NFCA Specification Guide 09 65 00**: "at project completion, provide a minimum of one box of each type and pattern / color of resilient flooring used, or the amount required to meet 2% of the total area for each product installed or minimum 5m² from the same production run for each type, pattern / color of flooring installed."
- To replace damaged flooring planks, consult our repair manual available at www.bodensurfaces.com

7.1SPC - Sound Ratings

Tested with a 5mm SPC body and attached 1mm foam underlayment (6mm total thickness) achieved the following laboratory sound test results (sound ratings) via SGS Test Report XMIN2403000359CM01_EN

- **IIC 73** Impact Sound Insulation Class via test methods ASTM E492-22 / ASTM E989-21
- **STC 72** Airborne Sound Transmission Loss via test methods ASTM E90-23 / ASTM E413-22

Flooring acoustics is an overwhelmingly misunderstood subject by the general public, for this reason we strongly encourage you to contact the NFCA to view their educational resources on flooring acoustics.

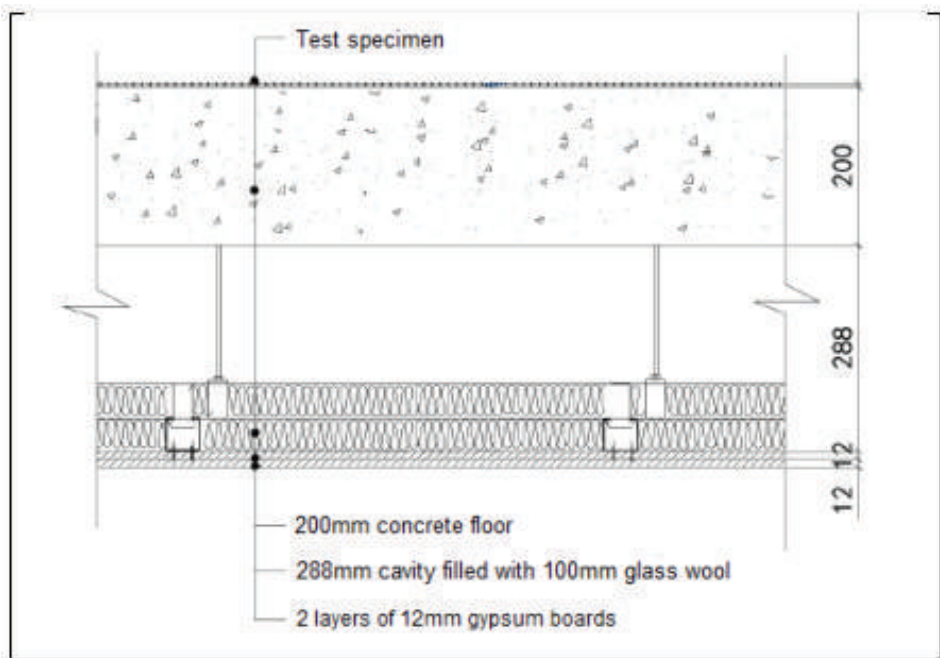
www.nfca.ca

Simply stated, the “sound rating” of your flooring & flooring underlayment make up only a small percentage of the total “sound rating” of the entire flooring assembly; The buildings construction assembly is one of the largest contributors to the majority of the “sound rating”. This includes components such as:

- Joist construction (size, span, material, etc)
- Subfloor construction (thickness, material ie wood / suspended concrete, etc)
- Ceiling construction (insulation thickness, insulation type, cavity volume, vibration suppressions such as resilient channel, multiple layers of drywall, etc)

Here are some important factors to consider when viewing “sound ratings” / IIC & STC test results:

- Each building has a unique construction with unique inherent acoustics, thus laboratory sound test results must not be universally applied to each jobsite.
- You must consult with an acoustic engineer trained and well versed in building acoustics prior to installation to determine whether the product you are installing is compliant with the acoustical requirements of your jobsite.
- The “sound rating” does not factor in wear over time, or flooring traffic.



Excerpt from SGS Test Report XMIN2403000359CM01_EN
Contact your sales rep if you require a copy of the test report.