

# FIRMFIT VS. --- STANDARD LVT



# FIRMFIT

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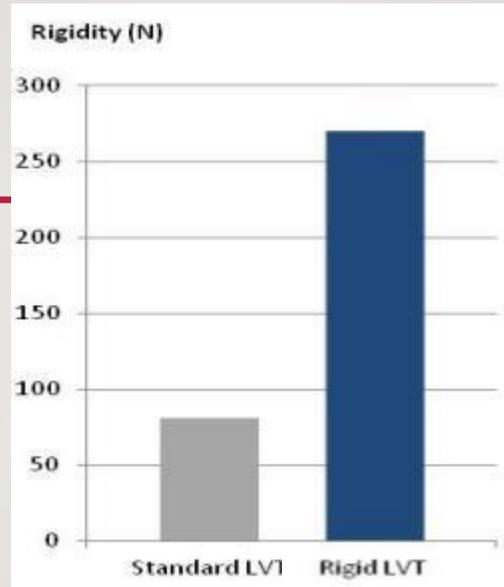
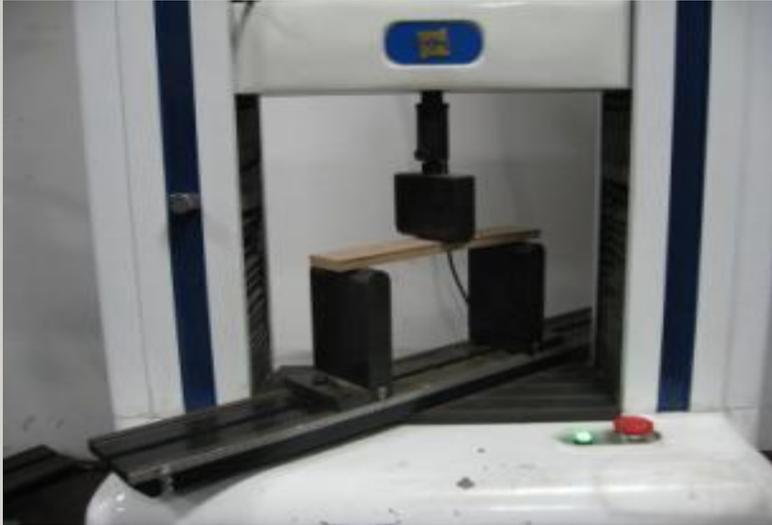
# FIRMFIT IS MORE RIGID THAN STANDARD LVT

Standard Luxury Vinyl

FIRMFIT



# FIRMFIT LVT: LAB DATA

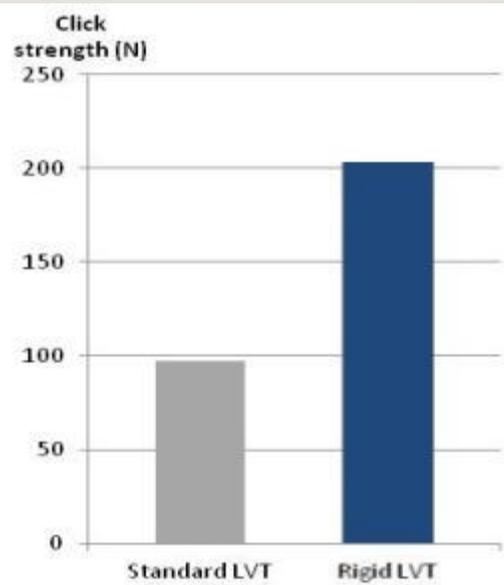


## **Test method:**

The samples are bent as per the picture to the left. The force needed to bend the samples is recorded.

## **Result:**

FirmFit flooring is 3 times more rigid than regular LVT.



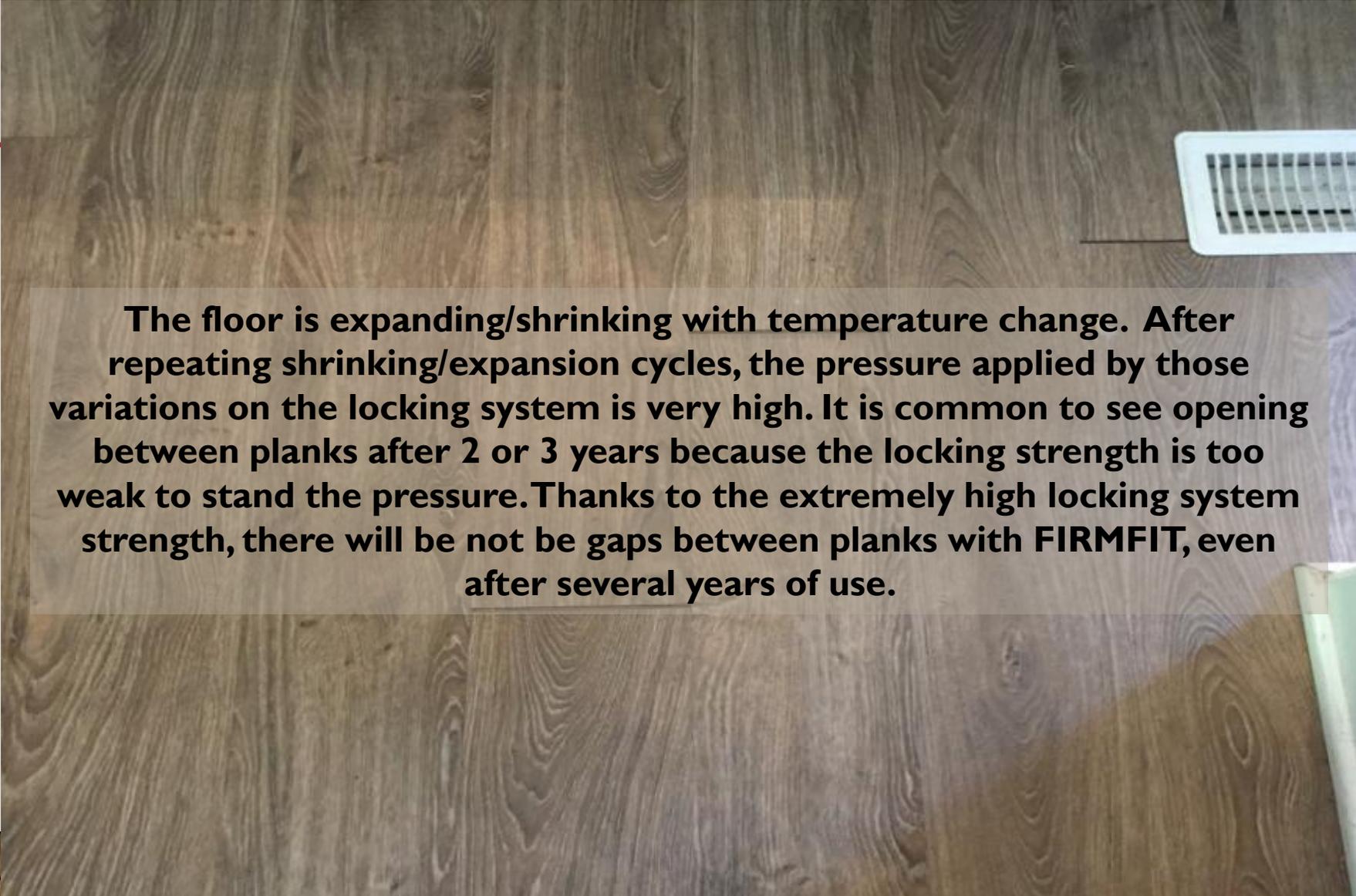
## **Test method:**

Two samples are clicked together, then pulled apart. The click strength is the force needed to separate the two samples.

## **Result:**

FirmFit click is 2 times stronger than standard LVT.

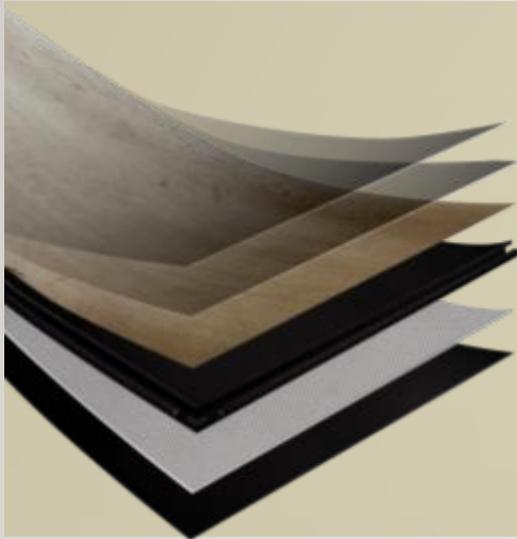
# CLICK STRENGTH: FAILURE



**The floor is expanding/shrinking with temperature change. After repeating shrinking/expansion cycles, the pressure applied by those variations on the locking system is very high. It is common to see opening between planks after 2 or 3 years because the locking strength is too weak to stand the pressure. Thanks to the extremely high locking system strength, there will be not be gaps between planks with FIRMFIT, even after several years of use.**

# WHY IS FIRMFIT MORE RIGID THAN STANDARD LVT

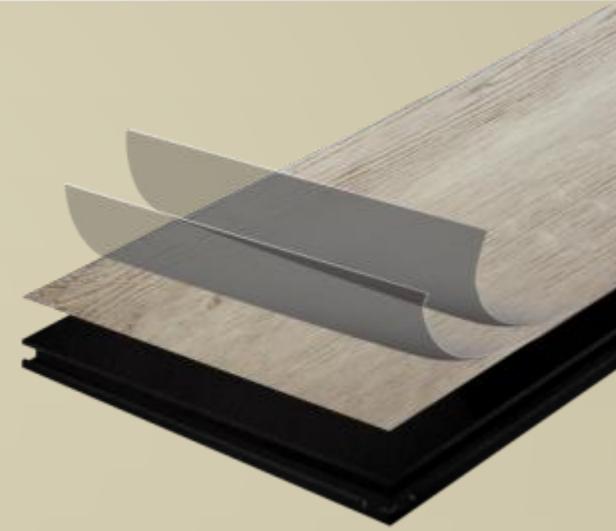
Standard Luxury Vinyl



100%  
Waterproof!

Core with **NO** plasticizers  
and > 50% Limestone  
= **Extra RIGID**

FIRMFIT



The manufacturers of FirmFit have developed a process for extruding the core used in LVT that allows;

1. To take out plasticizers\* entirely from the process
2. To have a higher ratio of limestone in the composition of the core

**Both making the core much stronger and rigid than LVT and WPC!**

FirmFit's Rigid Core is patent pending

\* Plasticizers are additives that increase the plasticity or fluidity of a material, mostly used in PVC to make it flexible



# FIRMFIT: SUBFLOOR REQUIREMENT

**Install Directly Over Most Existing Hard Surface Floors !**



**Ceramic**



**Concrete**



**Wood flooring**



# FIRMFIT: NO TELEGRAPHING



Standard Luxury Vinyl

No more  
Telegraphing

FirmFit

# FIRMFIT: EASY TO INSTALL

Available with an  
easy fall down lock!

Cut with a simple  
utility knife!

Standard Luxury Vinyl



FirmFit



## FIRMFIT: PRE-ATTACHED UNDERLAY



**Pre-attached underlay!**

While normal LVT is too flexible to pre-attach a backing, FirmFit's rigid core comes with the EVA pad pre-attached.  
Less installation costs - No underlay or expensive leveling compounds required!

**The easiest floor you will ever install**

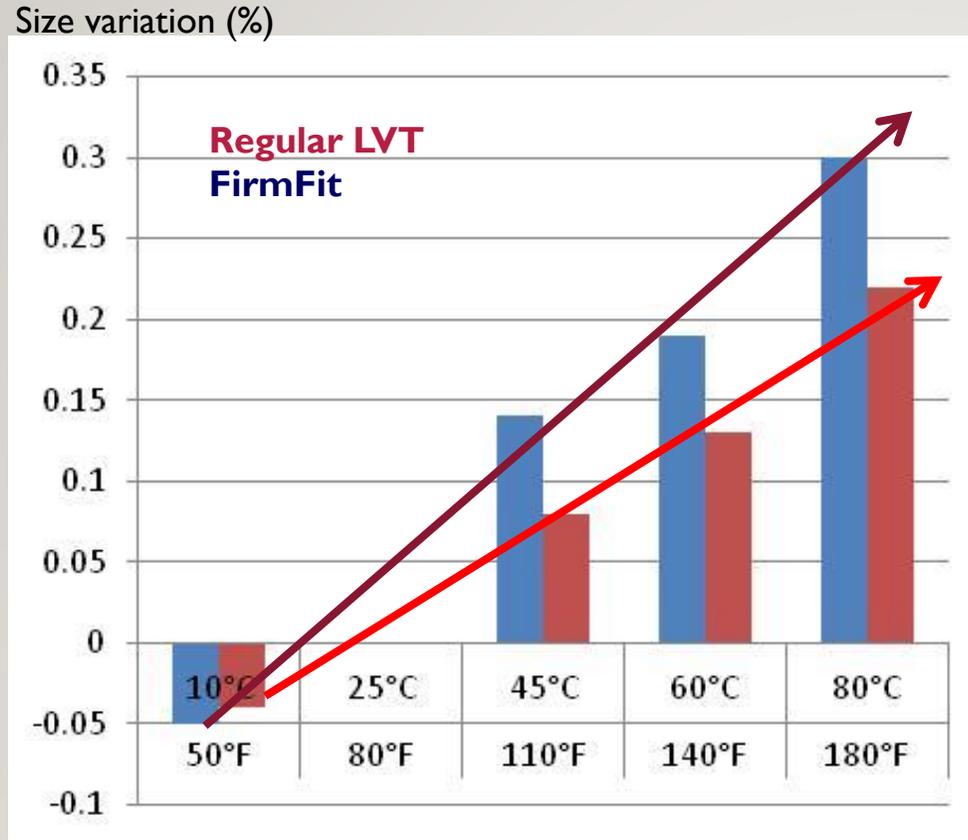


# HIGH TEMPERATURE RESISTANCE

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Lab Data

# LAB DATA: EXPANSION DATA



## **Test method:**

The samples are placed in oven for 6 hours at different temperature. After 6 hours the samples size variation is measured. The value shown in the graph is the difference in percentage of the original size versus the size after 6 hours in the oven.

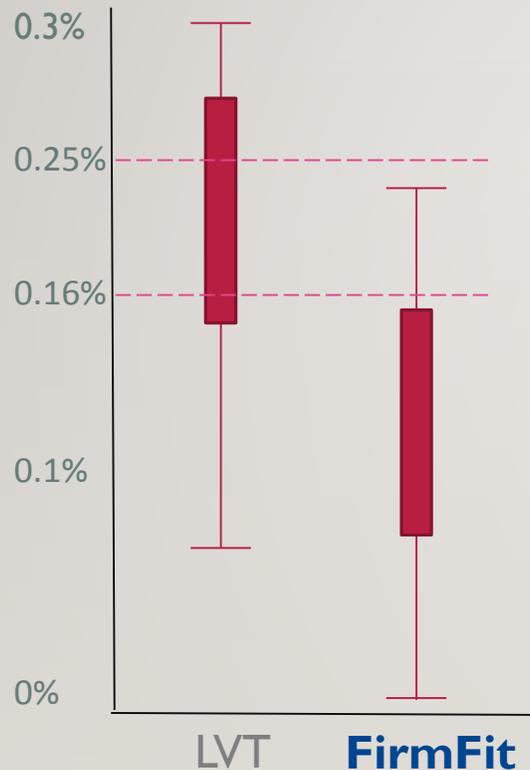
## **Results:**

At 45°C/110°F, Rigid LVT is 2 times more stable than regular LVT. But at low temperature there is no major difference between Rigid LVT and regular LVT.

**2 times more stable**

# LAB DATA: SHRINKING DATA

## Shrinking (%)



### Test method:

According to ASTM 1700, EN 649 and EN 16511, the flooring should be tested against heat resistance. The test consists in putting the samples in oven at 80°C/180°F for 6 hours. When submitted to such high temperature the samples expand. After 6 hours the samples are taken out of the oven and cooled down at 23°C/75°C for 24 hours. During this cooling phase the samples shrink back. After 24 hours, the samples size is measured and compared to the original size.

### Results:

Many tests have been performed. The rectangle shows the average of the results. The line shows the total range of the measures.

1. FirmFit samples shrink in average 2 times less than LVT
2. Regular LVT sometimes failed to meet the norms requirement

This test is important for commercial project because ASTM 1700/EN 649/EN 16511 are legal requirement.

**2 times more stable**

# REAL LIFE TEST: SUNLIGHT RESISTANCE



**Standard LVT vs.  
FirmFit put to the  
sunlight test at 50°C**

## Standard LVT

**After 2 hours** of direct light exposure at 50°C the short sides are lifting up and gaps are visible



## FirmFit

**After 6 hours**, there is no deformation visible: no lifting up, no gap.

# REAL LIFE TEST: CLIMATE CHAMBER



## **Test method:**

The flooring is installed in a dimensional stability chamber (up to 10m<sup>2</sup>) with 6mm expansion gap on the perimeter. Heavy weights are placed on each side of the flooring to simulate furniture.

Chamber temperature is gradually changed from 5°C to 60°C, and then from 60°C to 5°C.

Flooring is inspected for gapping, height difference, squeaking, lifting up, cupping.



# REAL LIFE TEST: HOT/COLD ROOM

Standard LVT

**FirmFit**

Standard LVT



**Standard LVT  
vs. FirmFit  
put in a room  
at 60°C.**

(5mm expansion gap, 100kg on  
each side of the floor to  
simulate furniture)

**Standard LVT**

**After 2 hours** of in a room at 60°C the short sides are lifting up. The flooring is waving.

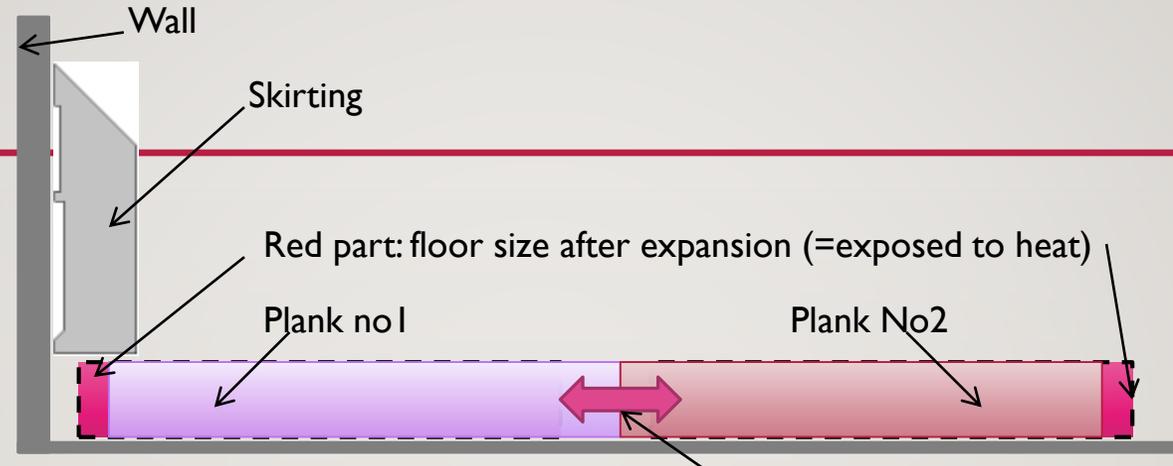
**FirmFit**

**After 6 hours**, there is no deformation visible. The flooring is flat.

# Why FirmFit is not lifting up?

## FirmFit:

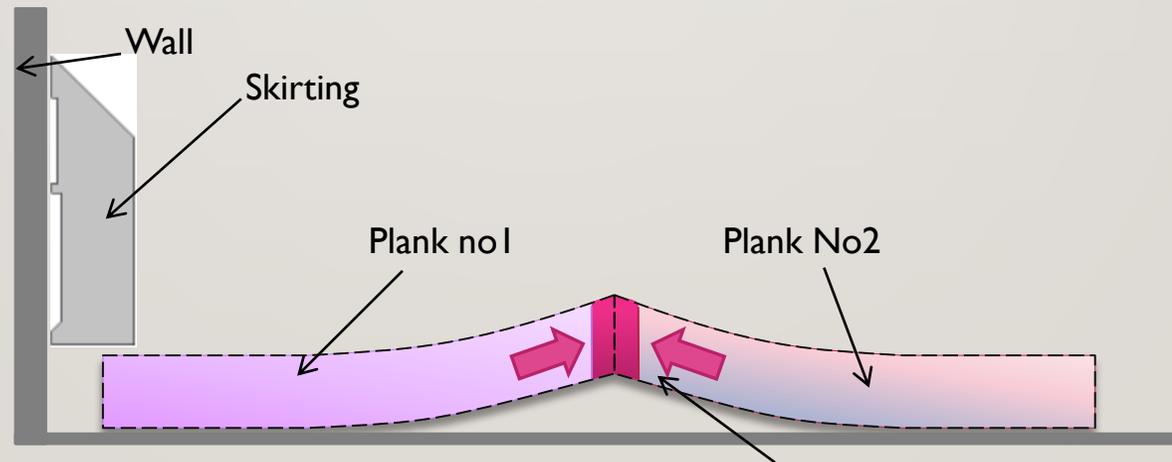
BEHAVIOUR  
UNDER 50°C  
HEAT  
EXPOSURE



**The 2 planks are rigid enough to push each other away and do not deform**

## STANDARD LVT:

BEHAVIOUR  
UNDER 50°C  
HEAT  
EXPOSURE



**At 50°C , the planks are extremely flexible. The planks aren't rigid enough to resist to the force created by the expansion and cannot push each other away. Thus the planks start to curl as expansion increases**

# SUMMARY

It is the **COMBINATION** of the following factors gives FirmFit high dimensional stability after installation.

- 1) Low shrinking after exposure to high temperature
- 2) Slow expansion rate when exposed to high temperature
- 3) High rigidity of the planks even when exposed to high temperature
- 4) High click strength even when exposed to high temperature

**2 times more stable**

# ADVANTAGE: EXPOSURE TO DIRECT SUNLIGHT



## Standard LVT

In front of windows, standard LVT becomes very flexible and the planks do not have enough strength to push each other away. The expansion results in planks lifting up and planks' irreversible deformation.



Stable in rooms with many windows!

## FirmFit

The planks are rigid even at high temperatures. When the planks expand they have enough strength to push each other away. A perimeter expansion gap is important to enable the planks to move freely. FirmFit flooring stays flat - even in high temperature conditions.

# ADVANTAGE: EXPOSURE TO DIRECT SUNLIGHT

## Heat Resistance Sunlight Test

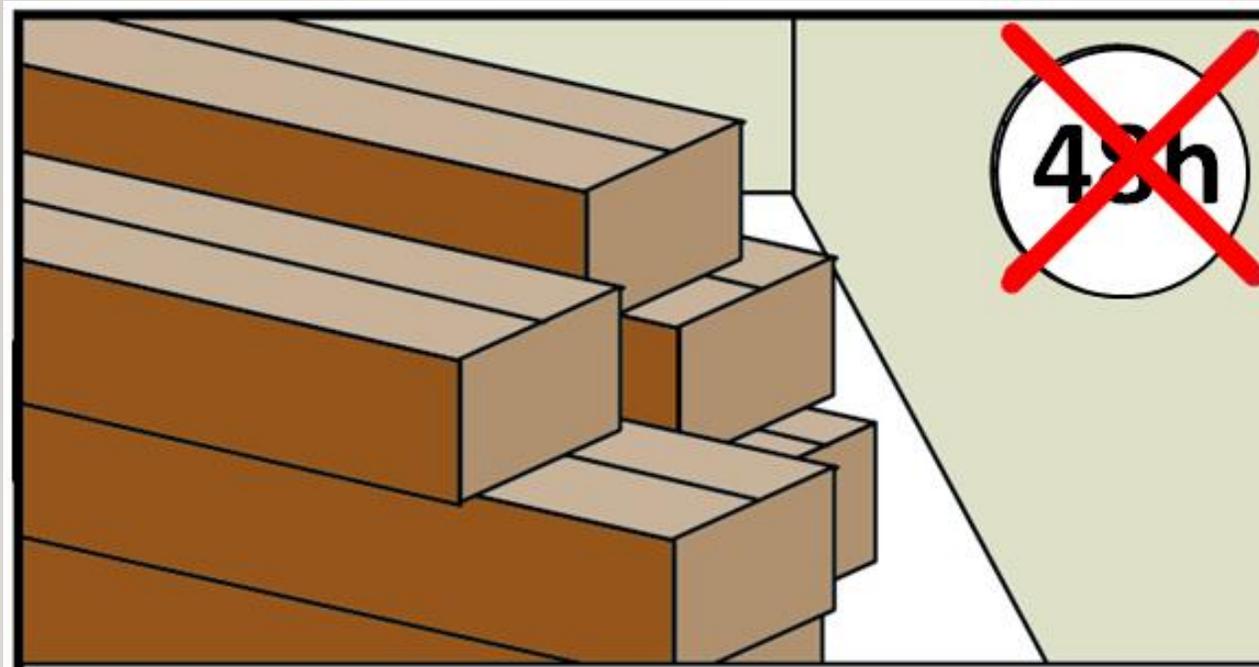
[Click to watch a video testing FirmFit in direct sunlight](#)



0:02 / 2:31



# ADVANTAGE: NO ACCLIMATION



No acclimation is required if not exposed to extreme temperatures in the 12 hours before installation

(under 5°C – 40°F or over 40°C - 100°F)

# ADVANTAGE: LARGE ROOMS & COMMERCIAL AREAS



Install over **4,000 SQFT** without any transition moldings, even between rooms!

# FIRMFIT VS. STANDARD W.P.C.

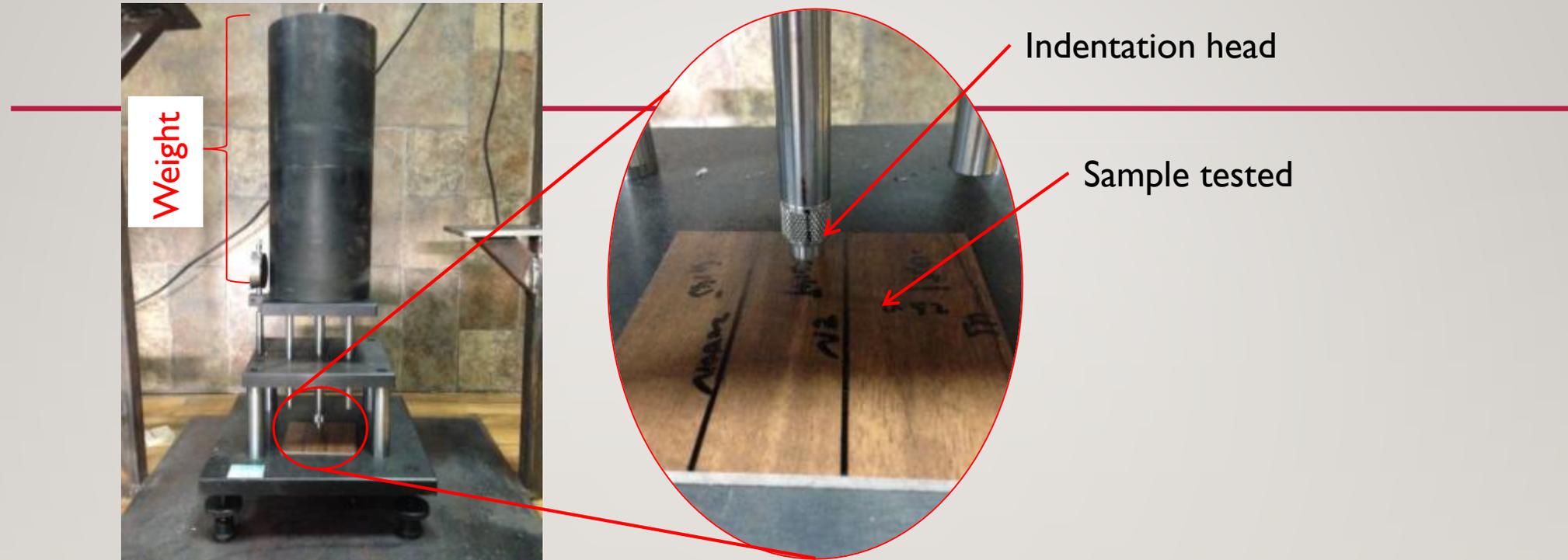


# SUPERIOR INDENTATION RESISTANCE

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# INDENTATION RESISTANCE



**Test method: ATSM F1914/ASTM 970/ EN 433/ ISO 24343-1**

An indentation head is placed on top of the sample to be tested. The weights (steel cylinders) are placed above the indentation head. The total weight and indentation head shape can be changed as desired in order to reproduce different situations (chair feet, high heel shoes, furniture legs, etc). The load time can also be adjusted. (high heel shoes test will last only a minute and a furniture legs can last if needed several days.)

# INDENTATION RESISTANCE

|   | Requirement | Standard WPC               | Rigid LVT                  |   |
|---|-------------|----------------------------|----------------------------|---|
| <b>Density</b>  | -           | 1000-1200kg/m <sup>3</sup> | 1800-2000kg/m <sup>2</sup> | <b>50%</b><br>more dense                          |
| <b>Indentation<br/>ATSM F1914</b><br>the depth of the indentation compared to the thickness | <10%        | 10 to 25%<br><b>FAILED</b> | 2 to 8%<br><b>PASS</b>     | <b>10 times</b><br>more Indentation resistant     |
| <b>Static load<br/>ASTM F970</b><br>The depth of the indentation                            | -           | 0.015 to 0.03mm            | 0.005 to 0.01mm            | <b>3 times</b><br>more resistance to static loads |

**FIRST RIGID VINYL PRODUCT THAT MEETS THE INDENTATION STANDARD**

# RESIDUAL INDENTATION TEST VIDEO

According to American standard ASTM F1914

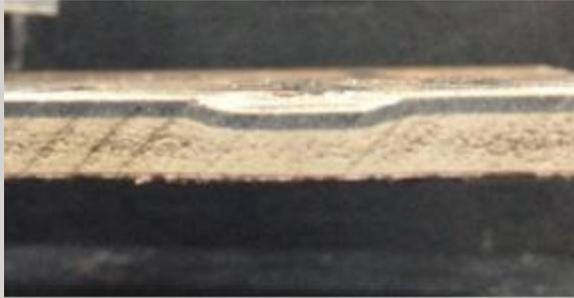


# BETTER IMPACT

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# RESISTANCE

# IMPACT RESISTANCE



Regular WPC flooring has a **low density, open cell core.**

Heavy furniture or high heel shoes can leave a mark on the floor because the WPC core gets compressed (the LVT top layer is not compressed at all)

FirmFit has an extremely dense core with closed cells. The floor is extremely resistant to indentation and impact.



**Regular WPC flooring**

**FirmFit**

**SAFE & SUSTAINABLE**

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# SAFE & SUSTAINABLE



0% wood elements are used in the production process of the **Rigid LVT**



**Rigid LVT** is 100% recyclable from top to bottom 100



**Prop 65 compliant 100% Free of orthophthalates 100% Free of others harmful substances (like Lead, Mercury, Cadmium, Chromium, Arsenic, SCCPs, fire retardant)**



by **SCS**certified.



**Safe & Environmentally Friendly!  
EO Compliant! Better than CARB 2!**

Anthropogenic VOCs , which can be harmful to the environment, are contained in numerous household products, the most famous being formaldehyde because its present in most adhesives.

# COMPARISON CHART



|  | FirmFit | Standard LVT | Standard WPC | Standard Laminate |
|--|---------|--------------|--------------|-------------------|
| Rigid Planks with click for a fast and easy installation | ✓       | ✗            | ✓            | ✓                 |
| Easy to install drop lock                                | ✓       | ✗            | ✓            | ✓                 |
| Pre-attached underlay possible                           | ✓       | ✗            | ✓            | ✓                 |
| Resistant to small under floor imperfections             | ✓       | ✗            | ✓            | ✓                 |
| Little under floor Preparation                           | ✓       | ✗            | ✓            | ✓                 |
| Stable to temperature (pass 80 degree test)              | ✓       | ✗            | ✗            | ✓                 |
| NO acclimation necessary                                 | ✓       | ✗            | ✓            | ✗                 |
| Install on areas >400m2 without transition moldings      | ✓       | ✓            | ✓            | ✗                 |
| Stable in rooms with many windows                        | ✓       | ✗            | ✓            | ✓                 |
| Suitable for water-based floor heating systems           | ✓       | ✓            | ✓            | ✓                 |

# COMPARISON CHART



|  | FirmFit | Standard LVT | Standard WPC | Standard Laminate |
|--|---------|--------------|--------------|-------------------|
| Extra sound absorbent  | ✓       | ✓            | ✓            | ✗                 |
| Core Free of plasticizers (incl. Ortho phthalates - Prop 65 compliant) | ✓       | ✗            | ✗            | ✓                 |
| No Lacey act headache using 0% wood composites                         | ✓       | ✓            | ✗            | ✗                 |
| Very Low VOC   | ✓       | ✓            | ✓            | ✗                 |
| Resistant to impacts and heavy static loads                            | ✓       | ✓            | ✗            | ✓                 |
| Full bathroom and laundry room installation                            | ✓       | ✓            | ✓            | ✗                 |

# SPEC SHEET

|                                | Norm             | Test method                 | Requirement                             | Test results                            | Conclusion                      |
|--------------------------------|------------------|-----------------------------|---|---|---------------------------------|
| <b>SURFACE PROPERTIES</b>      |                  |                             |   |   |                                 |
| Wear resistance                | -                | ISO 1518-1                  | ≤0.015g/1000 rev                        | 0.01                                    | Pass                            |
|                                | EN 16511         | EN 13329                    | ≥4000 cycles                            |   | Class 34, Heavy commercial      |
|                                | NALFA LF 01-2011 | NALFA LF 01-2011            | ≥6000 cycles                            |   | Class 4, Heavy commercial       |
| Scratch                        | -                | ISO 1518-1                  | ≥2500g                                  | 3200g                                   | Pass                            |
| Surface bonding                | NALFA LF 01-2011 | EN311/NALFA LF 01-2011      | ≥1.25 N/mm2                             | 1.56 N/mm2                              | Class 4, Heavy commercial       |
| Static load (250LBS/115KG)     | NALFA LF 01-2011 | ASTM F970                   | ≥8Mpa                                   | 15                                      | Class 4, Heavy commercial       |
| Residual indentation           | ASTM F1700       | ASTM F1914                  | ≤8% (140 lbs/63kg)                      | 1.70%                                   | Pass                            |
|                                | EN 16511         | EN 433/ISO 24343-1          | ≤0.15mm                                 | 0.03                                    | Class 34, Heavy commercial      |
| Impact resistance (big ball)   | EN 16511         | EN 13329                    | ≥1800mm                                 | >1800                                   | IC3, Class 34, Heavy commercial |
|                                | NALFA LF 01-2011 | NALFA LF 01-2011            | ≥1400mm                                 | >1400                                   | Class 4, Heavy commercial       |
| Impact resistance (small ball) | EN 13329         | EN438                       | ≥15 N                                   | 23                                      | IC3, Class 34, Heavy commercial |
|                                | NALFA LF 01-2011 | NALFA LF 01-2011            | ≥500mm (19.7 in)                        | 900                                     | Class 4, Heavy commercial       |
| Slipperiness                   | EN 14041         | EN 13893                    | DryCOF ≥0.3                             | 0.51                                    | Class DS                        |
|                                | -                | ASTM C1028                  | ≥0.5                                    | 0.62                                    | Meet ADA recommendation         |
|                                | -                | D 51130                     | ≥R9                                     | R9                                      | Anti-spli resistance R9         |
| Color fastness to light        | EN 13329         | ISO 105-B02:1994, Method 3a | ≥Grade 6                                | > 6                                     | Pass                            |
|                                | NALFA LF 01-2011 | NALFA LF 01-2011            | Slight change only                      | Slight change only                      | Class 4, Heavy commercial       |
| Resistance to staining         | EN 16511         | EN 438-2                    | Group 1 and 2: grade 5, group3: grade 4 | Group 1 and 2: grade 5, group3: grade 4 | Class 34, Heavy commercial      |
|                                | ASTM F1700       | ASTM F925                   | Slight change only                      | No change                               | Pass                            |
|                                | NALFA LF 01-2011 | NALFA LF 01-2011            | Slight change only                      | No change                               | Class 4, Heavy commercial       |

# SPEC SHEET

|  | Norm             | Test method      | Requirement   | Test results  | Conclusion                                |
|--|------------------|------------------|---|---|---|
| <b>PHYSICAL PROPERTIES</b>                 |                  |                  |   |   |   |
| Heat exposure resistance<br>80°C/180°F     | EN 16511         | ISO 23999        | $\Delta W/\Delta L \leq 0.25\%$                                     | 0.03%   | Class 34, heavy commercial                |
|  | ASTM 1700        | ASTM F2199       | $\Delta W/\Delta L \leq 0.16\%$                                     | 0.03%   | Pass                                      |
| Dimensional variation<br>(humidity change) | EN 16511         | ISO 24339        | $\Delta W/\Delta L \leq 0.15\%$                                     | $\Delta W/\Delta L \leq 0.01\%$                                       | Class 34, heavy commercial                |
| Swelling after submersion in<br>water      | EN 16511         | ISO 24336        | $\leq 12\%$   | 0%  | Class 34, heavy commercial                |
|  | NALFA LF 01-2011 | NALFA LF 01-2011 | $\leq 12\%$   | 0%  | Class 4, Heavy commercial                 |
| Impact sound reduction (IIC)               | -                | ASTM E492-09     | -   | IIC=71  | IIC=71                                    |
| Sound transmission reduction<br>(STC)      | -                | ASTM E90-09      | -   | STC=75  | STC=75                                    |
| Locking strength (23°C)                    | EN 16511         | ISO 24334        | Long side $\geq 2.0\text{KN/m}$<br>Short side $\geq 3.5\text{KN/m}$ | Long side $\geq 6.3\text{KN/m}$ ,<br>Short side $\geq 5.4\text{KN/m}$ | Class 34, heavy commercial                |
| Thermal conductivity                       | EN 14041         | EN 12667         | -   | 0.173 W/(m.k)   | Suitable for underfloor heating<br>system |
| Thermal resistance (R value)               | -                | ASTM C518        | -   | 0.58 m <sup>2</sup> K/W   | Suitable for underfloor heating<br>system |
| Reaction to fire                           | EN 14041         | EN 13051-1       | -   | CHF=9.4kW/m <sup>2</sup>  | Class Bfl -S1                             |
| Fire resistance (CHF)                      | -                | ASTM E648/662    | -   | 0.94 W/cm <sup>2</sup>  | Class I                                   |

# SPEC SHEET

|   | Norm                              | Test method                                   | Requirement                            | Test results | Conclusion   |
|---|-----------------------------------|---|--|--------------|--|
| <b>CHEMICAL COMPOSITION</b>   |                                   |   |  |              |  |
| Formaldehyde emission   | EN 14041                          | EN 717-1                                      | Release $\leq 0.124$ mg/m <sup>3</sup> | 0.01         | E0   |
| VOC   | Decret No2011-321                 | ISO 16000                                     | TVOC<1000 $\mu$ g/m <sup>3</sup>       | 31           | VOCA+  |
|   | DIBT                              | ISO 16000                                     | TVOC<1000 $\mu$ g/m <sup>3</sup>       | 29           | Meet AgBB requirement - U mark certified             |
|   | Floorscore                        | Californian 01350                             | Within CREL/TAC                        | 26           | Floorscore certified                                 |
| Ortho-phthalates  | Prop 65                           | Spectrometry                                  | Ortho-phthalate free                   | Not detected | Ortho-phthalate free, Comply with Prop 65            |
| Lead  | CPSIA                             | CPSC-CH-E-1002-08                             | $\leq 90$ ppm                          | Not detected | Meet children toy regulation                         |
| PAHs  | EU REACH regulation No. 1907/2006 | Spectrometry and chromatography               | <1mg/kg                                | 0.7          | Meet requirement of product that can be put in mouth |
| PCP   | EN 14041                          | EN 12673                                      | <1ppm                                  | Not detected | Pass   |
| Substances of Very High Concern (SVHC) (mercury, chromium VI, Cadmium, SCCp, benzene, Xylene, tributyltin, etc) | EU REACH regulation No. 1907/2006 | Spectrometry and chromatography               | $\leq 0.1\%$ (w/w)                     | Not detected | REACH compliant                                      |
| <b>SURFACE ANTIBACTERIAL PROPRIETY</b>  |                                   |   |  |              |  |
| MRSA  | -                                 | ISO 27447/ISO 22196 /ASTM E 2180-07/ JIS 2801 | -                                      | >99%         | More than 99% bacteria reduction                     |
| ESBL  | -                                 |   | -                                      | >99%         | More than 99% bacteria reduction                     |
| E.Coli (Escherichia Coli)   | -                                 |   | -                                      | >99%         | More than 99% bacteria reduction                     |
| S.Aureus (Staphylococcus aureus)  | -                                 |   | -                                      | >99%         | More than 99% bacteria reduction                     |
| ATCC 9642/11797/15233 /6205/9645  | -                                 |   | Grade 0                                | No spores    | No mold detected                                     |

# FIRMFIT FAQ ABOUT FIRMFIT™

## What is FirmFit™?

FirmFit™ is a premium rigid vinyl floor composed of premium product visuals, and allowing installation options that cannot be found in standard WPC flooring or luxury vinyl (LVT).

Its structure is close to LVT, although 2 aspects make FirmFit™'s core very different:

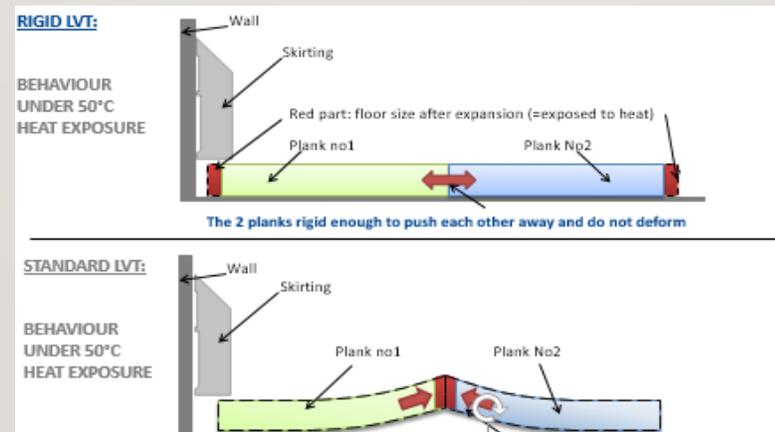
—It contains 0% plasticizers, which are chemical additives which make PVC soft and flexible

— Contains over 50% limestone

Both benefits make FirmFit™ rigid and much more stable to temperature variations and sunlight. The pre-attached backing (EVA sound absorbing pad) offer extra noise resistance attributes versus traditional laminates or click vinyl planks.

## Why is FirmFit™ better for sunrooms or rooms with large windows than standard luxury vinyl or (WPC) engineered vinyl?

At high temperatures (>105°F, 40°C) PVC, like most plastic based materials, becomes much more flexible and starts to expand. Because of LVT's high **plasticizer and PVC** content, standard vinyl or engineered vinyl planks start expanding and are not rigid enough to resist to the force created by the expansion. The planks cannot push each other away and can start to curl as expansion increases.



FirmFit™, thanks to its very high limestone content, is not only rigid but extremely stable. If certain areas reach such high temperatures (which they rarely don't) FirmFit™ can naturally expand a little, and will expand smoothly within the recommended expansion gap (1/4", 6mm). This is why the recommended 1/4" (6mm) perimeters expansion space must be respected.

# FIRMFIT FAQ ABOUT FIRMFIT™

## What's the difference between Resilient and Vinyl flooring?

Resilient flooring refers to flexible flooring made out of vinyl material such as PVC (for example sheet vinyl or LVT are resilient flooring). FirmFit™ is a vinyl product but **is not** considered a resilient floor.

## Does FirmFit™ look realistic to real hardwood?

FirmFit™ plank flooring features an embossed texture, which mimics the grain of real wood flooring.

## How well does FirmFit™ hold up against bangs/drops, for example if a hammer was dropped?

Rarely do we see indentation issues with FirmFit™ products, but it can happen and they are warranted against indentations. Most indentations can be avoided by ensuring there are no heavy rolling loads over the floor, and using traditional installation methods when moving heavy items (e.g. use a smooth plywood panel when rolling in refrigerators, etc.).

Also common-sense use of floor protectors under furniture legs, mats under rolling chairs, etc. are also recommended.

## How durable is FirmFit™ flooring with pets?

While no similar flooring is guaranteed against scratching or loss of gloss, the surface of FirmFit™ is textured with a medium graining and a tough wear layer for durability. We warrant that FirmFit™ will not stain from pet (domestic cat or dog) stains, including urine, feces and vomit, providing it is cleaned within 24 hours!

## Is FirmFit™ safe?

FirmFit™ is safe for you and your loved ones. All FirmFit™ floors are subjected to rigorous tests by Third Party Laboratories that are designed to ensure all FirmFit™ products meet the highest standards and do not harm interior air quality. These rigorous tests have resulted in FirmFit™ floors receiving FloorScore® certification. This means our products do not release harmful VOCs (Volatile Organic Compounds) into living environments. (link to certificate). FirmFit™ is also 100% free of harmful plasticizers such as ortho phthalates.

## How much will FirmFit™ move with humidity changes?

FirmFit™ is extremely stable. The planks are not affected by humidity or other types of moisture, to provide you with superior stability.



# FIRMFIT FAQ ABOUT FIRMFIT™

## **Is FirmFit™ sound absorbent?**

Yes, FirmFit™'s Sound Insulation Class is very good with an IIC rating of 66dB (ASTM E492-09). FirmFit™'s walking sound is a lot softer and quieter compared with most hard surface floor coverings such as ceramic, wood or laminate flooring.

## **Are FirmFit™ floors suitable for wheel chairs or motorized chairs?**

FirmFit™ floors can be used in homes where wheel chairs are needed, but FirmFit™ should not be applied to ramps. We recommend that you glue the joints when motorized chairs will be used.

## **Why add foam pad or cork to the back?**

A pre-attached backing will provide a natural sound barrier and extra joint support for extra noise resistance attributes versus traditional laminates or click vinyl planks.

## **FirmFit™ planks are 100% waterproof. Is the cork backing or sound absorbing pad also waterproof?**

Yes, the entire plank, including the backing, is 100% waterproof, whether cork or padding.

## **Is FirmFit™ recyclable?**

FirmFit can be recycled by companies with adequate equipment including flooring manufacturers which can recycle its material for new flooring.

## **Can FirmFit™ be installed over existing flooring?**

Yes, FirmFit™ can be installed over most existing hard surface flooring. The exceptions are laminate or other floating floors of any type, loose lay, and perimeter fastened sheet vinyl. These types of flooring should be removed prior to installing FirmFit™. Existing floors still have to meet the levelness requirements, which is no more than a 3/16" (5mm) difference in a 10 foot (3m) span. Please see FirmFit™ installation instructions for further details. Never install FirmFit™ over carpet



# FIRMFIT FAQ ABOUT INSTALLATION

## Where can I install my FirmFit™ Floor?

FirmFit™ can be installed on all levels of the home including wet rooms and directly over most hard surface subfloors.

## Are there rooms that are inappropriate for my FirmFit™ floor?

Very few: a room with a floor drain, sump pump or one that is exposed to the elements (like outdoors or in saunas). Although is it 100% waterproof, FirmFit™ should also not be installed in areas prone to flooding as water might seep through the bevels.

## Can FirmFit™ be installed in 3 season homes, where the home will not be climate controlled in the winter?

FirmFit™ can be installed in homes without climate control when proper installation precautions are taken. FirmFit™ can be installed in cottages or rooms without climate control with the following conditions:

1. FirmFit™ installation essentials must be met.
2. The crawl spaces must be enclosed and vented and meet all requirements and the job site conditions must be correct.
3. Insulation of the floor in the crawl space is recommended.
4. Temperatures must stay above 50°F (10°C)

## Can I install my FirmFit™ floor over in floor radiant heating?

Yes, FirmFit™ is compatible with water based floor heating systems. You should ensure the radiant heat surface temperature doesn't exceed 81°F (27°C).

## How large is the area that FirmFit™ can be installed over before having to use transition strips?

FirmFit™ installation allows up to 60 lineal feet (20m), in either direction, with no unsightly transition moldings needed as long as the flooring can freely move. That's 4,000sqft! Make sure to respect the 1/4" (6mm) expansion space around the perimeters of the room.



# FIRMFIT FAQ ABOUT INSTALLATION

## **Do I need to install a molding for each door opening?**

As long as you are within the 20m limit that does not require transition strips, door transitions are not required either! FirmFit™ installation allows up to 60 lineal feet (20m), in either direction, with no transition moldings needed. Make sure to respect the 1/4" (6mm) expansion space around the perimeters of the room.

## **Does the subfloor need to be leveled prior to installing FirmFit™?**

Although FirmFit™, thanks to its rigidity, hides minor subfloor imperfections, the subfloor must be clean and level to 3/16" (5mm) within a 10 foot (3m) span.

## **Do the grout lines on my existing flooring need to be leveled before installing FirmFit™?**

For installation over existing tile, you would need a self-leveling compound to fill in low grouted joint areas.

## **Does FirmFit™ require an underlayment?**

When installing FirmFit™, underlayment is not required because FirmFit™ has an attached backer, and its Sound Insulation Class is already very good with an IIC rating of 66dB (ASTM E492-09)

## **Does FirmFit™ require a moisture barrier?**

No moisture barrier is required.

Although FirmFit is waterproof, it is not designed to be used as a moisture barrier. The subfloor must be dry (max 2.5% moisture content – CM method). FirmFit is also not to be installed in areas that have a risk of flooding such as saunas or outdoor areas.



# FIRMFIT FAQ ABOUT INSTALLATION

**For bathroom installations, how should FirmFit™ be installed around the toilet? Are there any caulking specifications for areas you can't cover with a trim piece, like around showers and tubs?**

Depending on the project, you can allow the toilet to be placed directly on top of FirmFit™. Otherwise, you can trim/cut it tight to the toilet as well. For caulking, please use a silicone caulk.

**Do I need to acclimate my FirmFit™ floor before installation?**

FirmFit™ is extremely stable to temperature variations. It is generally not necessary to acclimate, unlike standard laminate or LVT, which requires acclimation in open boxes 24 to 48h prior to installation.

If, however, FirmFit boxes are exposed over 2 hours to extreme temperatures (under 10°C / 50°F or over 40°C / 100°F) within the 12 hours before the installation, acclimation is required. In this case, keep the unopened cartons at room temperature for at least 12 hours before you start the installation. The room temperature must be maintained consistent between 15° to 35°C (60° to 95°F) before and during installation.

**Can I install kitchen cabinets directly over my FirmFit™ floor?**

We do not recommend to install your kitchen cabinets directly over your FirmFit™ floor. FirmFit™ quality can be guaranteed as long as the floor can move freely. If your kitchen cabinets are installed directly over your floor, you will need to ensure that there is no heavy furniture on the opposite side so the floor can move freely.

**Can I install Firmfit™ on a wall or ceiling?**

Yes, you can. For wall and ceiling installation the planks need to be fully glued to the substrate.

Many designers use FirmFit™ for partial wall installation because of the unique and highly realistic colours available in the FirmFit™. However, the Firmfit™ warranty do not cover wall installation.



# FIRMFIT FAQ AFTER INSTALLATION

## Is there a recommended cleaner?

Bona Floor Care System. Includes floor cleaner solution, mop, microfiber cleaning & dusting pad.

## Can I use rugs or mats on my FirmFit™ floor?

Yes. We recommend non-staining vinyl-backed mats or woven rugs. We do not recommend the use of rubber- or latex-backed mats because the chemical (antioxidant) used to keep the backing from becoming brittle can permanently stain your floor.

## If water seeps through the bevels, can it damage the subfloor?

The planks themselves are waterproof, but once installed they do not provide a fully airtight surface. Water can still seep through the bevels if left over 24 hours. Water spillage as is the case in bathrooms and kitchens won't damage the floor but standing water must be avoided at all times. We recommend cleaning up water spillage as soon as possible, before 24 hours pass.

## Do I need to wax my FirmFit™ floor?

No, it resists staining, is easy to clean and requires no waxing. Waxing is not compatible with this product and using wax will void warranty.

## How do I replace a damaged flooring panel?

We recommend ensuring that your initial flooring purchase includes several extra FirmFit™ planks in case you have one that needs replacement. Follow these steps to remove and replace a damaged plank:

Use a circular saw to make several cuts in the board to be removed. Make sure to use the correct depth of the saw blade and protect the surrounding planks.

Use a chisel to carefully break and remove the part of the plank to be removed. Clean all the debris and dust

Cut off the groove on the long side and short side of the new plank to be installed. Apply one beam of adhesive on the long side and short side tongue of the existing planks that will receive the new planks. Then carefully place the new planks in position and remove the excess of glue immediately with a damp cloth.



# FIRMFIT FAQ AFTER INSTALLATION

## **What type of chair protectors can I use on a FirmFit™ floor?**

Support furniture with wide-bearing, non-staining floor protectors. Ideally, the protectors should be at least one inch in diameter, made of non-pigmented, hard plastic and rest flat on the floor. Non-staining felt protectors are also acceptable. Casters with a minimum 3/4" flat surface width or floor protectors are recommended for all moveable furniture. Make sure any metal protectors are rustproof. Replace your narrow-dome furniture rests with wide-bearing ones.

## **How do I remove challenging stains?**

For chocolate, grease, juice and wine stains, use lukewarm water and a non-abrasive cleaner. Nail polish, tar, markers, crayon, lipstick, ink and cigarette burns can be removed using nail polish remover or denatured alcohol.

## **Can I use a steam mop on my FirmFit™ floor?**

We do not recommend the use of steam mops.

## **In the event of a flood, will FirmFit™ dry?**

Yes, we recommend that FirmFit™ is promptly uninstalled, sorted separately, and placed in a dry environment. Please allow 48-72 hours to dry. Once both your subfloor and FirmFit™ panels have dried completely you may reinstall.

