

BIYORK

HydroGen 5_{mm}

INSTALLATION GUIDE

Always refer to recommended instructions prior to installation.
Any method indifferent from this document may void your warranty.



BY INNOVATION. BY DESIGN. BIYORK.

Every aspect of our floors are designed in pursuit of performance ready for the world.

We believe that everything we do is a movement towards an alluring combination of Dynamic Performance and Modern Craftsmanship.

We do this by making every inch of our floors push the boundaries of Innovation forward with Beautiful Designs, Ease of Installation and Our Obsession for the Next Best Thing.

Together, we deliver the foundation that reflects your Personality and create the Ultimate Statement in any space.

This is BIYORK.

TABLE OF CONTENTS

| | |
|----------------------------------|-------|
| BEFORE YOU START | 3 |
| THE SUBFLOOR | 4-5 |
| COMMERCIAL APPLICATION | 5 |
| INSTALLATION..... | 6 |
| MEASUREMENTS | 7 |
| PROCEDURE..... | 7 |
| INSTALLATION ILLUSTRATIONS | 8-12 |
| RADIANT HEAT | 13 |
| SPC STAIRNOSE INSTALLATION | 14 |
| MAINTENANCE..... | 15-16 |
| HOMEOWNER RESPONSIBILITY | 17 |

- **HYDROGEN 5** has a patented locking system (**i4F**) making it ideal for a floating installation, however this product must be glued down (pressure-sensitive adhesive) when used for limited commercial traffic applications. Please follow adhesive manufacturers recommendations.
- Avoid constant exposure to excessive temperatures or direct sunlight for extended periods of time since this might cause planks to expand/separate or change colour and or fade. Please consider these variables when selecting your flooring product.
- **HYDROGEN 5** is rated for temperature swings of -30°C to +50°C.
- **HYDROGEN 5** does not need to be acclimated if stored and installed in a temperate-controlled environment, maintain between 60°F and 80°F. Additional acclimation must be considered when temperatures mentioned above are not met. Store flat and fully supported during shipping and storage. It is not necessary to remove material from packaging while acclimating. Allow the product to condition in the room where installation is to take place at a constant temperature between 60°F and 80°F or 18°C - 26°C, for a period of 48 hours prior to installation.
- Slight variations in colour and structure are designed to enhance the natural appearance of the product. Work from multiple cartons during installation and mix the planks to create a more uniform appearance. For best practice, working with at least 3 boxes at the same time during installation and mixing the planks up to ensure the best visual quality.
- **PRIOR TO INSTALLTION** please check to verify color, shade, locking system, any obvious or minor defects. **BIYORK CANADA** will not be held responsible for any defective materials installed. Any defective materials found prior to installation should be set aside for assessment.
- Use of walkers, power chairs, caster wheels, wheelchairs in residential, commercial, extended care homes, or in facilities with movement of heavy displays, racks, dentist chairs, etc. may exert extreme stress and compromise the locking system and/or affect the appearance of the flooring. **BIYORK CANADA** will not warrant any claims where rolling loads have damaged the installed flooring.
- Installation Tools must be a light-colored rubber mallet, tape measure, pull bar, tapping block, and cutting saw.
- The use of expansion wedges on all walls is recommended to keep the flooring in place until the room is completely installed.
- Calculate the total square footage required to complete the installation and add 5-10% waste. Unused end cuts, planks cut along the long sides for start and finish of installation, stairs, and damaged planks may require additional flooring that was not calculated. Additional flooring for future repairs would also be important.

- Although **HYDROGEN 5** planks are water/moisture proof, they are not to be used as a moisture barrier. Your subfloor should be completely dry prior to installation. Keep in mind that constant moisture coming from the subfloor or topically, will cause mold/mildew to be trapped underneath the product, contributing to an unhealthy environment. **BIYORK CANADA** will not warrant any flooring product based on damages created by excessive moisture.
- A 6mil Poly vapour barrier is recommended to mitigate excessive moisture.
- Subfloors must be clean, structurally sound, and flat within 3/16" in 10 feet (4.7mm in 4m) radius or 1/8" in 6' radius (3.3mm in 1.8mm). The subfloor should not slope more than 1" per 6 feet in any direction. Cracks or holes must be filled with a fast-drying setting cement-based polymer modified patching compound or equivalent. Any unevenness over 3/16" (4.7mm) the high spots must be sanded down, low areas filled with patching compound to create a flat surface. Voids or humps in the subfloor will prevent the planks from locking properly. The subfloor must be clean of dirt, oil, glue residue, carpet tacks/staples or adhesive residue should be removed prior to installation. Some types of nails, such as common steel nails, may cause discoloration of the vinyl floor covering. Solvent based construction adhesives are known to stain vinyl floor coverings. All responsibility for discoloration problems caused by above mentioned products is not the responsibility of **BIYORK CANADA**.
- Subfloor requirements: solid surface no cracks, dry, clean, smooth. The surface hardness strength is required to be $\geq 20\text{MPa}$, without sand and dust.
- Moisture requirements of the Subfloor: Moisture of the base subfloor (e.g., concrete) must be measured according to the relevant local standard:
- Where the hygrometer test is specified the moisture of the subfloor must be less than 95% RH.
- Where the calcium carbide test is specified construction moisture must be no more than 3% for cementitious screeds and no more than 1.4% for calcium sulphate screeds.
- Where the calcium chloride test is specified, the moisture of the subfloor should be no more than 8 lbs. moisture/1000 sqft per 24 hours. For any subfloor showing a moisture value above these limits, then a suitable damp-proof membrane/moisture suppression system must be used. Note: some National Standards require the pH of the concrete slab to be controlled.
- Sub-floors/Screeds: any cracks and joints must be checked and repaired using a suitable repair system and the floor needs to be level in accordance with the applicable standard. All Gypsum (anhydrite) based floors must be sealed with a compatible sealing compound.

- If there are cracks in the concrete, there may be moisture escaping it, especially in the basement. That will cause the glue to lose the adhesive function if you use a glue down installation method.
- It is the installer's responsibility to determine if the subfloor is dry and flat within standards to begin with the installation.
- **HYDROGEN 5** have an attached IXPE 1mm underlayment. The flooring must be glued down with a pressure sensitive adhesive when used for traffic limited commercial applications.
- We recognize that some subfloor constructions are more “bouncy or springy” than others. Therefore, by adding or increasing subfloor thickness it will help strengthen and limit vibration. By doing so, joist spans may be increased.
- **BIYORK CANADA** requires subflooring 3/4" (23/32", 18.3 mm) CDX grade plywood subfloor / underlayment (Exposure 1), 4'x8' sheets or 3/4" (23/32", 18.3mm) OBS subfloor / underlayment grade PS2 rated, sealed side down with joist spacing of 16" on center or less.
- When joist spans exceed 16" on center, we advise an additional sheet of 1/2" CDX grade plywood be added to limit potential deflection.
- Recommend if joists are over 19.2", add an additional 1" plywood or OSB for any SPC product with a total overall thickness of 5mm or less.

COMMERCIAL APPLICATION

- **HYDROGEN 5** have an attached IXPE 1mm underlayment. The flooring must be glued down with a pressure sensitive adhesive when used for traffic limited commercial applications.
- The adhesive should be given sufficient time to cure and establish a bond between the substrate and the Hydrogen flooring. Before walking or placing furniture and appliances on a new floor, be sure to set the room temperature after installation and leave the appropriate drying time according to the adhesive manufacturer's instructions.
- Be sure to remove any residual glue from the surface in a promptly manner if noticed (mineral spirits can be used for this process). Wipe off with a damp cloth, then dry off when adhesive is removed.

Different Production Runs:

- **HYDROGEN 5** can have slight colour variations in between production runs. Before starting the installation, it is best to check the production run # which is indicated on the label on the carton. If you find that you have cartons from different production runs, it is highly recommended to open cartons and mix of planks from each different production run on your floor. This will result in a more natural-looking floor.

DO NOT install **HYDROGEN 5** over soft subfloors such as carpet, floating floors, cork, or any foam underlayment.

- **HYDROGEN 5** can be installed over the following:
 - **Whisper Step** (Sold exclusively by BIYORK CANADA. Please visit our store locator to find a store near you).
 - Fastened wood flooring (must be sound, dry, clean, and flat).
 - Ceramic or porcelain tile (grout lines must be leveled, tile will need to be sanded or grinded 3-4 inches around grout line perimeters to ensure proper leveling compounded adhesion (especially over glossy tile).
 - When laying the floor over existing ceramic tiles first level with fast setting cement-based polymer modified patching compound to fill in low areas such as grout joints.
 - Linoleum, PVC (must be sound, dry, clean, and flat).
- **Kitchen Cabinets and Islands:** Kitchen Cabinets & heavy islands must NOT be installed directly on top of the flooring. (They should be installed prior to the installation of the flooring). A floating floor system should never be pinned down by heavy objects as this will limit the flooring's ability to expand and contract during seasonal change.
- The use of pull bar and tapping block is recommended to ensure a successful installation. For the use of pull bar on the last piece of flooring in the row and during row installation, hold the tapping block firmly in place and gently tap the plank into place.
- **HYDROGEN 5** provides a very tight fit. Proper care must be used to ensure all seams are tight at the end of installation. An unprofessional installation or use of improper tools can result in damage to the click-lock profiles.
- **HYDROGEN 5** must be staggered to a minimum of the plank width from the closest seam on the adjacent row.
- **VIDEO REFERENCE** available on our website www.biyorkcanada.com/pages/resource-library

MEASUREMENTS

7

- Arrange with the Owner/Client on which direction the flooring should run since this influences the visual size ratio of the space. Installing parallel to the longest wall or the main light-source is recommended for the best visual effect.
- Pre-plan the floor by measuring the room first. If the width of the last row is less than 2" (5cm) saw the first and the last plank in equal width.
- Snap the lines on the substrate to identify the layout reference points. Planks should be set using this reference to ensure boards are aligned and will lock together correctly.
- While **HYDROGEN 5** is waterproof, it will still contract or expand according to extreme weather conditions, therefore appropriate expansion gap must be kept. Perimeter expansion gap and at all vertical obstructions must be minimum 5/16" (8mm). Cover the expansion gap with suitable moldings.
- **MAXIMUM RUN** before transitions are required is 80 ft x 80 ft.
- We do recommend the use of transitions between doorways or bedrooms, or between different floor coverings where they meet. Use a piece of flooring to set correct height to cut bottoms of door frames. An expansion gap will still need to be present when the flooring is installed under all door frames.

PROCEDURE

- **HYDROGEN 5** are designed to be installed utilizing the floating installation method (i4F). Never secure the planks to the subfloor when using the floating installation method.
- **DO NOT install cabinets or other fixed objects** on top of the flooring. Undercut all doorjambs and make sure to provide proper expansion space 5/16" (8mm) around all vertical obstructions. Do not fasten base moldings and or transition strips to the planks.
- **HYDROGEN 5** (limited commercial recommendation) is approved for glue down installation over approved wood and concrete substrates and may be installed on, above and below grade. Please refer to the adhesive manufacturer's installation guidelines. Always follow adhesive manufacturer's recommendation for correct trowel notch, open time and spread rates.
- The adhesive should be given sufficient time to cure and establish a bond between the substrate and the **HYDROGEN 5**. Before walking or placing furniture and appliances on a new floor, be sure to set the room temperature after installation and leave the appropriate drying time according to the adhesive manufacturer's instructions.

Always refer to recommended instructions prior to installation.
Any method indifferent from this document may void your warranty.
<https://www.biyorkcanada.com/pages/resource-library>

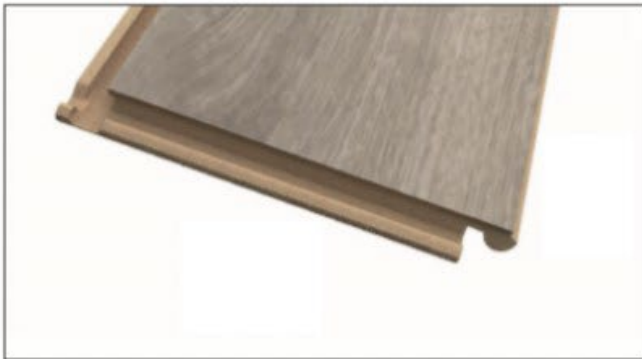
First row:

- Use spacers along the walls to maintain proper expansion gap (5/16", 8mm) and align the first plank. Start with the first plank in the left corner of the room, male tongue side facing out from the wall to the length and to the right on the width. Work from left to right. The female groove sides of the planks will now accept the next plank to be installed.
- Position the following planks as an extension of the first plank.
- Cut to fit the last plank of the row. To do this you can use a utility knife to score the surface at the appropriate point and then break the tile over an edge. A laminate cutter, miter saw, or guillotine cutter can be used as well to make the cuts.

Engaging & Disengaging

- Do not try to tap the plank into place with one tap. Using a tapping block or board puller, a few smaller taps will lock the plank into place.

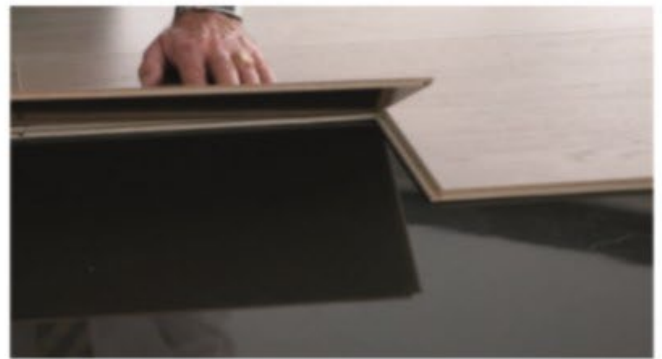
The **easiest and fastest one piece drop-lock system** for the short side on the market!



1

LONG SIDE

Start by engaging the plank on the long side (angle-system)



INSTALLATION ILLUSTRATIONS

9

2

SHORT SIDE

To engage on the short side, let the plank drop easily.



3

LOCKING SYSTEM

Push with your thumb on both ends of the short side until you hear the "Click" sound of the one piece drop-lock system.



4

DISENGAGE - long side

Start disengaging on the long side by lifting the plank in angle position.



5

DISENGAGE - short side

To disengage on the short side, softly slide the planks in opposite directions.



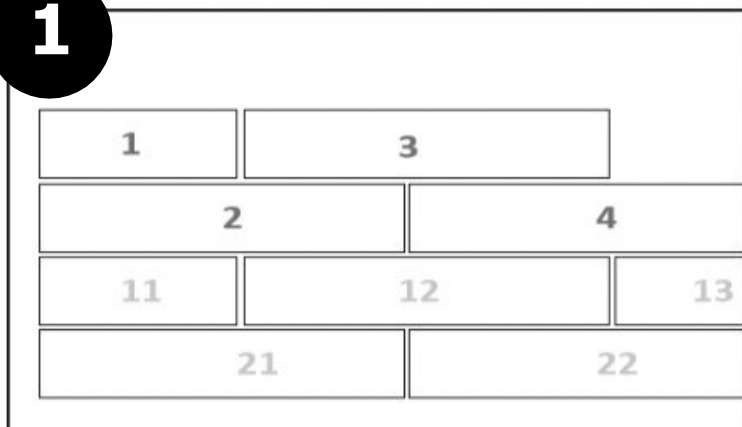
INSTALLATION ILLUSTRATIONS

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Installation

- Do not try to tap the plank into place with one tap. Using a tapping block or board puller, a few smaller taps will lock the plank into place.

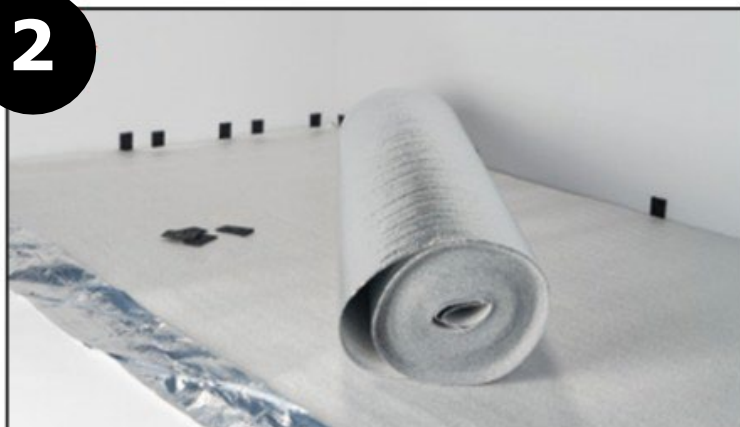
1



ESTABLISH STAGGER AND ALIGN TOOLS

Products should be staggered in bricklaid pattern, stagger equal to half of a plank. Tools needed: planks, underlayment, spacers, soft-faced hammer.

2



PREPARE FLOOR

In case of an uneven floor, place underlayment. Set spacers of equal thickness, appropriately distanced, for the required expansion gap.

3



INSTALL 1ST PLANK

It is very important that the first row is installed straightly. To realize this, installation alternates back and forth between rows one and two, for the first two rows only. Start with a small plank [1] and position this plank close to the wall.

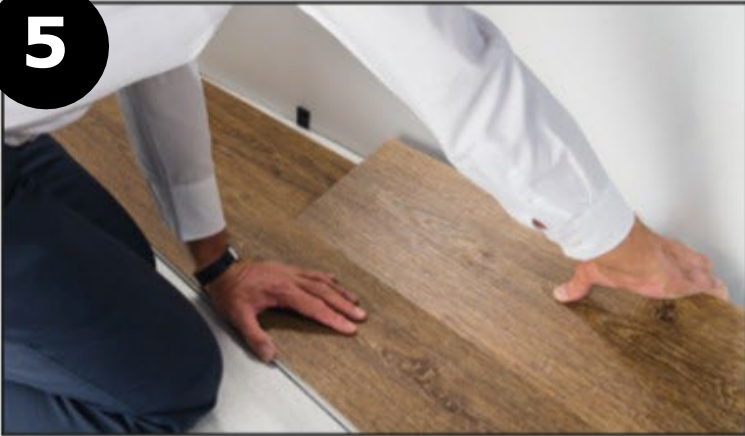
4



INSTALL 2ND PLANK

Now select a long plank [2]. Using the drop-lock ngle system, angle the long side of plank 2 on to the long side of plank 1. Drop plank 2 to lock. Make sure there are no gaps.

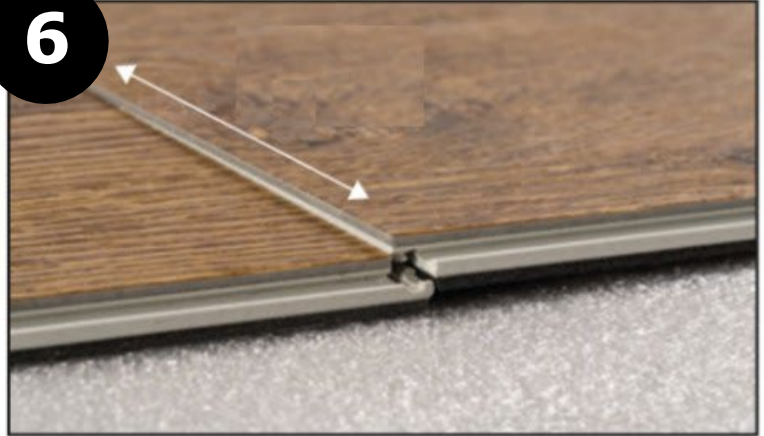
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ENGAGE 3RD PLANK ON LONG SIDE

Take another long plank (3). Repeating the previous step, insert the long side of plank 3 into the long side of plank 2. Then slide plank 3 to your left until the short side is in contact with the short side of plank 1.

6



ENGAGE 3RD PLANK ON SHORT SIDE (Part I)

Using the drop-lock one piece drop-lock system, drop the short side of plank 3 onto the short side of plank 1.

7



ENGAGE 3RD PLANK ON SHORT SIDE (Part II)

Using a soft rubber mallet slightly tap the joints on the short side to secure. This ensures 3x locking.

8



FINISH ROWS 1 AND 2

Continue alternating planks on rows 1 and 2 to avoid misalignment. From row 3 onwards, installation does not require alternating rows. Install one row after the other by starting with angling on the long side, sliding until the short sides are in contact and then locking the short side.

INSTALLATION ILLUSTRATIONS

12

9



SECURING PLANKS

As you go, don't forget to use a soft rubber mallet on the short sides to secure the locking.

10



FINALIZE FLOOR

Finished? Remove spacers and cover gaps with a trim.

11



DISASSEMBLING THE LONG SIDE

Lift up the entire row in the same angle as you did during installation, then slide the rows apart.

12



DISASSEMBLING THE SHORT SIDE

Disassemble the row by sliding apart the planks on the short side.

HYDROGEN 5 is approved to be installed over radiant heated subfloors. The heating system either "hydronic or electric" must be tested and fully operational at normal living temperatures. Please allow for cement/mortar cure times to ensure proper installation of heating system if applicable.

HYDROGEN 5 is compatible with a concrete subfloor with an in-floor (embedded) radiant heating system. There must be a minimum of 1.25cm (1/2") separation between SPC and radiant in-floor heat system.

- Before installing, make sure the heating system has been pressure tested and set to maximum heat (81°F) to force out any residual moisture and to make sure the system is working properly.
- Shut down the heating system at least 48 hours before, during, and after installation.
- Keep room temperature between 68°F and 77°F during the installation.
- After flooring is installed, the temperature of the radiant heat floor may be increased gradually 48 hours after installation, in increments of 5°F, but the surface temperature should never exceed 80°F. Contact the radiant heating manufacturer for further recommendations.
- Radiant Heat Systems must have fail-safe capabilities to ensure surface temperatures **DO NOT EXCEED 26.6 degrees Celsius or 80 degrees Fahrenheit.**

- **HYDROGEN 5** stairnose profile is not a click joint. The back lip of the plank or tile only slides and rests in the groove of the nosing, creating a flush finish.
- Ensure the plank or tile fits properly into the groove. A knife may also be required to clean any excess core material in the groove for a tight fit.
- For best results, the bottom of the nosing that rests directly in the subfloor or stair, can be lightly sanded for supreme holding strength with the adhesive.
- **BIYORK CANADA** recommends using a 1/4"x1/4" square notch trowel to apply construction adhesive to achieve an even coat for optimal adhesion and support.
- PL Premium construction adhesive is recommended to secure and hold the nosing down. (Please note that PL premium takes 10 to 12 hours to cure)
- Painter's Tape and direct weight (heavy object) can also be used to hold the nosing in place, while the adhesive is curing if required.
- After 10 to 12 hours, the stairnose will be secure and the installer can work off the nosing. Crazy glue can also be applied into the groove of the stairnose to create an instant bond between the stairnose and plank or tile. (Be careful not to walk on or disturb the nosing during this process)
- If an installer needs to work immediately off the nosing that day. A couple of brad nails in a discreet area on the face of the nosing can be used to hold the nosing down in place, while the adhesive is curing.
- The immediate plank worked off the nosing can also have a lazy S of PL adhesive to prevent movement at this connection. (Only if required)
- Avoid applying excessive adhesive when installing transitions as it may act as a pinch point to a floating floor.

All floor coverings require some care to look their best; many problems can be prevented before they occur. The type and frequency of traffic on your floor covering will determine the frequency of maintenance needed. The type of flooring and even the colour will also have some bearing on how much care may be necessary. For example, solid colour floorings will show scuffs, scratches, dirt, and general wear to a greater degree than multi-colour chips or patterns. Of course, white, or light colours will show staining to a greater degree than darker colours. For this reason, solid colour and white flooring should receive special attention concerning preventative maintenance and the amount of care provided. Proper selection when choosing the type and style of flooring will help prevent maintenance related problems after installation.

First time for optimal maintenance. Best within 24 hours of installation.

- Regular cleaning is a proven way to help keep your SPC flooring in top shape.
- Establishing a regular maintenance regime will keep your floors looking beautiful for years to come.
- Sweep/Vacuuming: Sweep at least once a week to remove any dusty loose dirt, small pebbles. Before vacuuming, be sure to check the condition of the beater bars.
- Mop: Never use abrasive cleaners. Only use recommended/approved vinyl floor cleaners along with a microfiber cloth.
- Harsh Chemicals: Do not use vinegar or one step cleaners/polishing agents or oil soaps on Hydrogen Products. These products can leave a film or residue, change the sheen level, and affect the wear layer over time.
- **Never use a steam cleaner on Hydrogen.** The hot steam is doing more harm than good to your SPC flooring. The excessive heat together with the moisture that seeps in the joining edges can weaken the adhesive bonds and layers of the floors structure. It will also cause irreversible damage like warping edge cupping, bending, and bubbling of the plank or tile.
- Spills: Clean up any spillage instantly by simply wiping it off with a damp cloth. The click system does not prevent liquids from seeping under. Wipe away any liquids spilled as soon as possible. Be sure to wipe the area dry once you are done. (The longer the spills are left unattended the more likely they are to permanently stain the flooring). However, some stubborn stains are more difficult to remove. Common stains like juices, red wine, food and grease, marker pens, paint, or lipstick. Apply mineral spirits to a clean cloth to slowly release the stain. Once the stain has been lifted use another damp cloth with water to clean up the stain, this also helps dilute the mineral spirits off the surface. Dry off when complete.

- **Minimize dirt:** Invest in a good quality rug, non- stain or non- rubber backed doormat in front of all entrances to prevent any sand, loose soil, grit, dust, and other dirt being carried into the house. It is best to place a doormat at every entry point.
- **No Shoes:** One of the most effective ways to reduce dirt: simply adopt the 'no shoes' policy. This can further eliminate possible dirt from outdoors and maintain SPC floor hygiene at the same time. Adopting the no shoe policy will cut down the chances of scratches caused by stones and sand that are carried along when you have your shoes on. Stiletto shoes should not be worn on the flooring as they can cause permanent damage.
- **Heavy Protection:** Protect your SPC flooring with quarter-inch plywood, or cardboard when moving furniture or changing out appliances. This will help prevent scratches and scuff marks.
- **Damage from Dryer/Washing Machine** on top of a floating floor is not warranted.
- **Any colour changes** from chemical reactions from rubber area rugs or surface contaminates are not warranted.
- **Pets:** If you are a pet lover, do watch out as animals' nails will also leave scuff marks on your floor. Trimming the nails and claws of your pet regularly will help minimize potential scratches.
- **Future Protection:** Another way to avoid unwanted scratches and scuff marks is to install felt pad protectors underneath tables, chairs, desks, couches, etc. As most furniture items in the home are constantly moving and sliding on the flooring, felt pad protectors will help eliminate and protect the flooring from surface scratching. They should be checked and replaced when required. Check the condition of all casters or rollers on the furniture before placing the furniture on the floor.
- **Sunlight and Excessive Heat:** Prolonged exposure of direct / extreme sunlight may cause your SPC flooring to fade, become dull or discolour. Hydrogen floors must be protected from direct sunlight. We recommend the use of blinds or curtains on all windows that allow direct or extreme sun exposure. This will also help limit uncontrollable heat. Flooring exposed to excessive heat can be affected by thermal expansion, which can cause the floor to bend or undulate.
- **BIYORK CANADA** is not responsible for any damaged or defects caused from the effects of the sun.

To maintain the **BIYORK CANADA** warranty, the homeowner is responsible for the following tasks:

- Please ensure the colour and appearance of materials are accurate prior to installation.
- Please read the installation and warranty document prior to the installation of the Hydrogen SPC flooring.
- Follow our cleaning and maintenance guidelines to properly maintain your investment.
- In the case of any repairs required to the flooring in the future, we recommend homeowners have 1 extra carton of material stored in a cool dry area.
- Final inspection of the installation rests with the homeowner or the installer
- **BIYORK CANADA** is not responsible for any damaged or scratched pieces of flooring that have been installed.
- It is the installers responsibility to set aside any material in question during the installation process.
- For further information, please visit www.biyorkcanada.com/pages/resource-library