

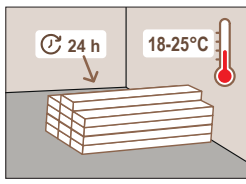
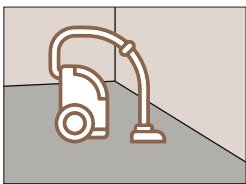


INVICTUS®
GREAT FLOORING · INVINCIBLE PERFORMANCE

INSTALLATION GUIDELINES INVICTUS DRYBACK

INVICTUS Primus and Maximus dryback are luxury vinyl floors, Primus is suitable for residential use; Maximus for both commercial and residential use. They are not suited for installation outdoors nor in rooms that will be continually wet. It is essential that these installation guidelines are followed carefully to ensure a quality fit.

1. PREPARATION

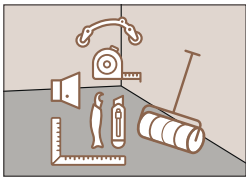


TRANSPORT AND STORAGE

For both transport and storage the floor boxes must be stored on a flat surface. Boxes must be stored inside. Do not store the cartons in very cold (<2°C) or very warm (>40°C) or humid places.

ACCLIMATISATION

It is important to **store the planks for at least 24 hours before installation, at room temperature (18-25°C)** in the room where the installation is to take place. Your Invictus floor should be stored flat in its packaging, in small neat piles, max. 5 boxes high. To condition, the boxes must be kept away from direct sunlight, heaters or air vents. This room temperature should be maintained throughout the installation and for least 72 hours after installation. The subfloor temperature should be above 15°C.



TOOLS

Utility knife and blades, pencil, chalk line, try square, tape measure/folding rule, damp cloth, hand roller and 50 kg roller, spatula and adhesive.

2. AREAS OF USE & SUBFLOOR REQUIREMENTS

Primus and Maximus Dryback are not suited for outdoor use or in areas with large temperature variations. Protect your floor from long-lasting exposure to direct sunlight by using appropriate window coverings. Extreme solar radiation, heat and extreme temperature fluctuations can cause damage. Ensure that the indoor temperature is always kept above 6°C and ideally between 18 and 25°C.

In areas that may be subject to excessive direct heat 45°C or above (e.g. fully glazed sun facing conservatories) the floor must be installed with special 'high temperature adhesive' (see 5. recommended glues).

Subfloor preparation and floor installation should always be in accordance with the requirements of **BS8203 and BS8204** (and other applicable Building Codes for the installation of resilient flooring).

SUBFLOOR REQUIREMENTS

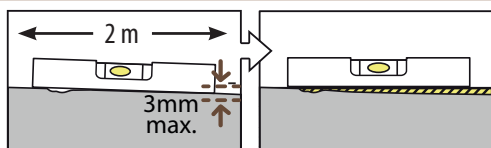
Careful subfloor preparation is essential for an excellent result. The subfloor must be hard, clean, dry and even.

Invictus dryback can be installed on concrete, timber, stone and many other hard subfloors, which have been suitably prepared with levelling compound.

Any irregularities in the subfloor will telegraph through the new floor and must be suitably prepared before installation.

Make sure the subfloor is free from chemical substances, remove all traces of plaster, paint, glue, oil, grease, etc. and vacuum.

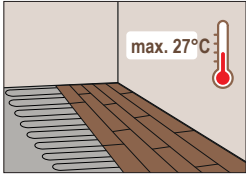
Although Primus and Maximus dryback are resistant to moisture, **subfloors must be checked for moisture problems:** Invictus dryback must be laid only on subfloors with moisture level below 75%RH when tested with a hygrometer. If hygrometer readings are above 75%RH, the proper remediation steps should be taken before installation f.e. check if a primer or sealer is needed; install a surface damp proof membrane (DPM), regardless if these are old or new floors.



Make sure floor level deviation is a maximum of 3mm per 2m. If these margins are exceeded, the subfloor imperfections must be evened out with a **suitable filler or levelling compound**. When using **products for subfloor preparation**, always follow the manufacturers' recommendations and the national standards for resilient floorcoverings.

COMMERCIAL LVT INSTALLATIONS

Part E of the UK Building Regulations require the floors of buildings other than private homes, to guarantee an acoustic performance of minimum 18dB. Therefore the use of an appropriate 1.5mm LVT-specific underlay is necessary in combination with Dryback LVT. Follow the instructions of the underlay manufacturer for installation and appropriate adhesives.



UNDERFLOOR HEATING

Both Primus & Maximus dryback are suited for use with **warmwater** underfloor heating and **also electric heating systems** with a maximum performance of 70 W/m². It is important that **the temperature at the subfloor surface does not exceed 27°C**. Only underfloor heating systems with heating components – hot water or electric – embedded in the subfloor are suitable. Heating films/wire or other systems that are placed on top of the subfloor are not suitable. The heating elements **must be fully embedded in a well-bonded and suitable levelling compound**. The floor must be fully supported by the heating system, to achieve a homogenous temperature of the floor.

Primus & Maximus dryback are not suited for reversible heating/floor cooling systems.

The underfloor heating **must be switched off 48 hours before installation and also during installation**.

48 hours after installation, you can re-start the underfloor heating, by **gradually increasing** the temperature by $\pm 5^{\circ}\text{C}$ daily, up to a maximum floor temperature of 27°C. Ideally, avoiding full operating temperature for 7 days.

(Follow the current standard of EN1264-2) **See separate document 'Underfloor heating Protocol' on our website.**

Always take care of gently heating-up and cooling-down of the heating system. Rapid temperature changes may lead to joints and openings of the floor. Avoid hot spots and thermal blocks on the surface.

DIFFERENT SUBFLOORS

New concrete or cement screed

Let **new concrete** dry sufficiently as it will contain a high percentage of residual moisture. When **RH is below 75%** (i.e. dry), clean the floor to remove contamination, then prime the floor and apply a compatible levelling compound (minimum 3mm).

Always record and keep your moisture content results. Residual moisture content from the subfloor:

For unheated screeds: < 2.0% CM (75% RH) in case of cement & < 0.5% CM in case of anhydrite

Underfloor heated screeds: < 1.5% CM (75% RH) in case of cement & < 0.3% CM in case of anhydrite

Always record and keep your moisture content results.

Repair surface imperfections with an appropriate repair compound and check if a primer or sealer is needed. Vacuum the subfloor afterwards to remove all debris.

Old Concrete or cement screed

RH < 75% : Must be free of all paint, grease, adhesive residue, wax, or any other foreign substance. Prime the surface and apply levelling compound of minimum 3mm.

RH > 75% : contact your retailer for information on surface DPM (Damp Proof Membrane) requirements.

Ceramic, stone tiles

Check the moisture level, and contact your retailer in case of moisture problems.

It is absolutely necessary to **fill the grouts** of a tile subfloor. Check the floor for loose and broken tiles. Remove loose pieces and fill deep cracks with quick drying mortar, degrease and apply levelling compound (minimum of 3mm). A second top coat may be required to nullify sinking of levelling compound over old tile grouts.

Soft and resilient floorcoverings

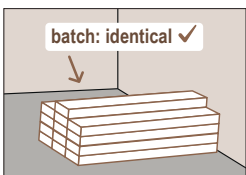
Such as carpet, cork, cushion vinyl, linoleum, laminate, ... should be removed as well as the adhesive residues by scraping. No solvents should be used to remove old adhesives. Apply levelling compound.

Wooden subfloors

Fix down all loose boards, replace worn/broken boards and overlay the floor with minimum 6mm thick plywood, which must be firmly fastened (fixed at max. 150mm centers). Use a suitable finishing compound or a fibre reinforced smoothing compound to level out the plywood joints (to make sure they will not show through when the dryback installation is completed). Existing laminate floor coverings must be uplifted and removed together with its underlay.

In case of doubt regarding the subfloor condition, seek professional help or contact your retailer.

3. BEFORE YOU START



Ensure that your flooring is the correct design and color and **check all boards for visible defects**, both before and during installation. Planks with defects may not be used. Installation of flooring implies acceptance of materials.

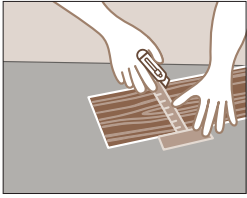
Use only a single production batch number for each installation, as we cannot guarantee a shade match between different batches.

Always keep the production batch number (printed on the box), together with your order form/invoice.

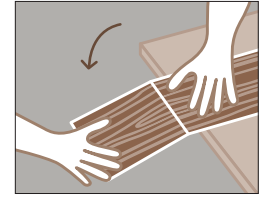
Consider saving a few planks for any potential future repairs.

Make sure that you mix panels from different boxes, in order to minimize shade variations. This will ensure a more natural looking floor. **Use the right glue and trowel** (see part 5. Recommended glues).

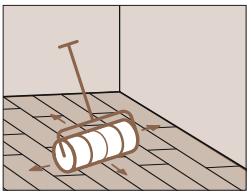
4. INSTALLATION



Your Invictus dryback floors can be **cut using a sharp metal blade** and ruler. Cut the boards decor side up.

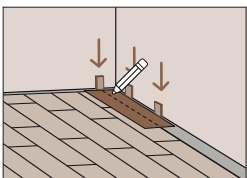


1. Decide your **installation direction**: normally the planks/tiles are installed perpendicular to direct sunlight sources, including large windows, doors, etc. Measure the room carefully. Calculate how the partition of plank or tiles will be across the width of the room/area and **mark a 100% straight line in the middle of your the floor**.
2. **Divide your floor in different sections**, make sure that the section has the right size: meaning that the planks can be installed on the adhesive within the open time of the glue. Read the manufacturer's instructions prior to using the glue
3. **Apply the glue on the floor** according to the manufacturers recommendations. Spread the right amount of adhesive evenly over the subfloor, using a trowel with the right notch size. Do not use worn trowels. Let it tack-off until it reaches its ideal bonding strength. This **open time** depends on the adhesive that is being used.
4. **Lay the Invictus planks/tiles into the tacked-off adhesive**, in order to transfer the adhesive fully onto the backing (working time). It is critical to keep the first rows straight and square, as they are the "foundation" for the rest of the installation. Check regularly for straightness.
5. Do not spread adhesive on a section greater than can be processed within the working time. Check manufacturers recommendation for open/waiting time before you start installing the planks into the adhesives.
6. To ensure full contact with adhesive, **immediately press every plank or tile with a hand roller**.
7. **Clean excess adhesive** immediately before it is allowed to dry, using a damp cloth. Never use detergents
8. The cut-off part of the last plank of a row can be used as first plank in the next row. This will help in maintaining a random appearance. Cut the planks or tiles to fit against the wall.

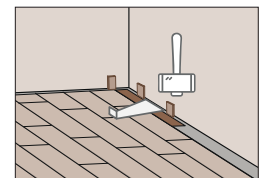


9. When a section is installed, roll each section **with a 50 kg roller as soon as possible and before the adhesive sets** (timing depends on site conditions and adhesive). Roll several times, in different directions, during the adhesive working time to ensure a good adhesive transfer.

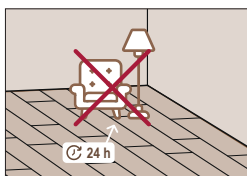
10. **Repeat steps 3 to 9** until the entire room is completed.



11. To install the **last row**: Place a new plank upside down up to the wall and mark the plank. Cut the marked plank to size and fit in place. This method should be repeated for each plank until the last row is complete.



WAITING TIME BEFORE USE

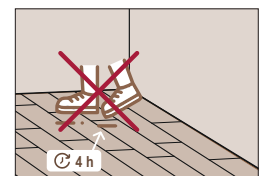


The glue must be able to cure 100% before moving in any furniture.

Protect the floor from **heavy traffic** so that the adhesive can stabilize, please check the installation instructions of your glue.

This is **at least 24 hours** after installation, at a constant temperature between 18-25°C.

Do not walk on your Invictus floor after installation. Wait at least 4h before doing so.



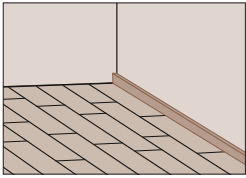
First contact with water: prevent the floor from coming into contact with water for the first **72 hours** after installation. Hereafter the adhesive is sufficiently resistant to water so that the bonding strength will not be affected.

5. RECOMMENDED GLUES

See list underneath. Only the recommended adhesives should be used – others will not give adequate performance and may fail.

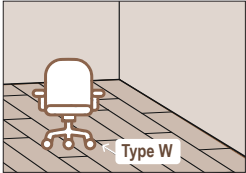
BRAND	ADHESIVE	SPECIFICATIONS	TROWEL	CONSUMPTION /m ²
F.BALL	F44, F46, F48+, F49	permanent glue		-
F.BALL	F74, F81, F84	heavy duty, wet areas		-
F.BALL	F49, F66	vertical		-
F.BALL	F58plus	fiber-reinforced glue, fast drying	A2 trowel	15kg: up to 90 m ² / 166g/m ²
MAPEI	Ultrabond4 LVT	-		16kg: 64 - 46m ² / 250-350 g/m ²
MAPEI	UltrabondEco V4 Evolution	for extreme conditions such as intense traffic, wet area, direct sunlight, fibre reinforced		5kg: 20 - 11m ² / 250-450 g/m ² 16kg: 64m ² / 36m ² / 250-450 g/m ²
ARDEX	AF 145 - Pressure Sensitive Adhesive	-		14kg : 65 m ² / 215 g/m ²
ARDEX	AF 2365 - Universal Adhesive	-		14kg : 67 m ² / 209 g/m ²
ARDEX	AF 2575 - Heavy Duty Adhesive 1-Component	high temperature resistance, for use in areas with direct sunlight		7kg : 23 m ² / 300 g/m ²
ARDEX	AF 2575 - Heavy Duty Adhesive 2-Components	high temperature resistance, for use in areas with direct sunlight		6kg : 20 m ² / 300 g/m ²
EUROCOL	640 Eurostar Special	-	A2 trowel	12kg : 53-44 m ² / 225-275 g/m ²
EUROCOL	646 Eurostar Premium	better resistance to high temperatures than Eurostar Special. Floor can be wet cleaned	A2 trowel	12kg : 48-34 m ² / 250-350 g/m ²
EUROCOL	140 Euromix PU glue	for long exposure to high temperatures	A2 trowel	6,9kg : 12-10 m ² / 550-690 g/m ²
UZIN	KE 2000 S	universal adhesive for all common floor coverings	A2 trowel	14kg: up to 70 m ² / 200-320 g/m ²
UZIN	KE 66	fibre reinforced	A2 trowel	14kg: up to 58 m ² / 240-280 g/m ²
UZIN	KE 68 1-Component Heavy Duty Adhesive	also for wet areas and areas with high temperatures	A1 trowel	14kg: up to 56 m ² / 250-400 g/m ²
BOSTIK	Stix A550 Power Elastic	for all dry rooms	A2 trowel	13kg: 40-36 m ² / 320-360 g/m ²
BOSTIK	Stix P956 2-Component	also for rooms with daily water cleaning	A2 trowel	8kg: 20-7 m ² / 400-1100 g/m ²
INVICTUS	SPRAY & FIX Adhesive		no trowel	1 spraycan: 14 m ²

6. FINISHING



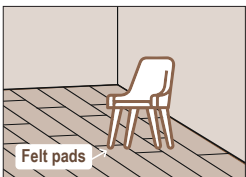
Use Invictus feature strips for a realistic tile grouting, available in 5 colors
Use Invictus scotia's for a perfect result.

7. MAINTENANCE For more detailed information: please read our 'INVICTUS MAINTENANCE & CARE GUIDE' online



DOORMATS

To keep your floor in good condition, it is important to place **non-rubber backed doormats** at all entrances, to keep dirt, sand and water off of the floor. Placing doormats will eliminate abrasive particles driven by footwear and will extend the life of your floor. Do not use rubber-backed mats, as long-lasting contact with rubber can cause permanent discoloration. Never place doormats on a wet floor.



FELT PADS / NO RUBBER

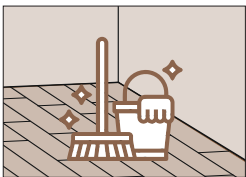
Use protective caps on furniture legs. Rolling office chairs should be fitted with soft, **non-rubber casters**, to avoid permanent damage to your floor. **Use felt or protective pads**, especially for furniture or other items that contain rubber and directly touch the floor (f.e. fitness appliances). Prolonged contact with rubber will cause permanent discoloration.

Use a **suitable desk mat** to protect your floor from damage due to castor chairs. Periodically clean castor wheels and check for wheels that may be broken (and if so, replace immediately).



MOVING FURNITURE

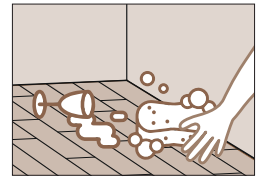
Avoid dragging or sliding heavy items or furniture across the floor. Use protective boards or appropriate furniture movers designed for use over hard surface flooring to move your furniture.



CLEANING

Initial Cleaning

First remove all dirt and dust from the flooring with a brush or vacuum cleaner. Then clean with water and a neutral pH detergent, until the water stays clean. We recommend to use our Invictus PU Cleaner, other cleaning products may contain agents that damage resilient floor surfaces.



Regular cleaning

Daily/ weekly maintenance by **sweeping, vacuum or dust mopping or using a damp mop**. (do not use vacuums with metal heads). Regularly sweeping removes loose dirt or grit as these can cause fine scratches.

When required, use a solution of clean water and our Invictus PU Cleaner. Do not flood the floor with water. Rinse thoroughly and soak up residual water.

Always wipe up spills as soon as possible, to reduce the risk of slipping and possible staining. .

Do not use chlorinated solvents. Never use wax or varnish coating. Never use maintenance products that contain wax or oil. (furniture polish spray should be avoided as they can cause slippery floors)

Never use a steam mop.

8. WARRANTY INFO AND CONDITIONS

Warranty for first user

If you notice a defect, contact your dealer within two weeks with your original purchase receipt. For more detailed information: www.invictus.co.uk

9. LEGAL INFORMATION

This document presents the general installation instructions, based on the latest available information. For the best result, and to ensure the validity of the warranty, these instructions should be followed carefully.