

# UNDERFLOOR

## INSTALL INSTRUCTIONS

The total R-Value of the building system depends on the building materials, design and installation and may be less than, greater than or equal to the R-Value of this product. GreenStuf® polyester insulation products have an indefinite life and carry a 50 Year Product Durability Warranty.

The initial performance of this product may be reduced if it is stored for too long in its compressed packaging. Should this product be found to be compressed at installation, it will recover to its nominal thickness and R-Value between 72 hours and one month following installation, depending on the environmental conditions. GreenStuf® will not settle or reduce its performance over time and if installed in accordance with these manufacturer's instructions, it will meet and exceed the 50 year durability clause of the NZBC (B2.3.1(a)).

## TECHNICAL

**Safety Instructions:** GreenStuf polyester insulation is safe to handle and install without protective clothing, however due to the conditions under some homes we recommend long sleeved loose clothing, face mask, goggles and adequate lighting when fitting under floor insulation. Always have a comprehensive first aid kit on site. Beware of sharp objects such as broken glass and protruding nails etc. Check drainage pipes for leaks and have them repaired before starting the installation. Beware of other hazards such as animals and vermin.

**WARNING: Electrical hazard:** Before you begin fitting GreenStuf Underfloor insulation you should locate and identify all wires and cabling to reduce the risk of electric shock. Where possible, insulation should be installed above electrical wiring leaving all cables and wiring clearly visible.

Beware of damaged, exposed or hanging cables and wires.

Contact a registered electrician to complete necessary repairs prior to starting the installation.

Treat all wires as live. Wherever possible isolate power to this area before commencing work.

Do not staple within 50mm of any wiring.

Avoid covering and/or hiding electrical wires and cables

**CAUTION:** Electric cables and equipment partially or completely surrounded with any bulk thermal insulation may overheat and fail. This applies to wiring installed prior to 1989. Please follow these installation instructions.

**Installation Tools:** We recommend you have:

- Sharp wide-blade knife and/or sharp scissors
- Appropriate lighting
- Tape measure
- Safety glasses, face mask and appropriate clothing
- Staple gun with 12-14mm staples
- Basic tool kit (hammer, pliers, screw-drivers, and hack saw)

**Product Selection:** GreenStuf Underfloor is designed for use in residential and commercial exposed joist floors. GreenStuf Underfloor is available in a range of widths and performance options and can be installed in new and existing buildings with enclosed, semi-enclosed and open sub-floor spaces. Choose the product width to best suit the framing size. Joist widths can vary so be sure to measure more than just one. You may need several widths of GreenStuf® Underfloor to complete the job and minimise waste.

**GreenStuf Underfloor widths available:**

- GreenStuf Underfloor @ 450mm wide  
- ideal for joist spaces up to 430mm
- GreenStuf Underfloor @ 500mm wide  
- ideal for joist spaces between 430mm and 480mm
- GreenStuf Underfloor @ 600mm wide  
- ideal for joist spaces above 470mm and up to 580mm



**Install Instructions:** We recommend all thermal and acoustic insulation is installed in accordance with NZS 4246. Energy Efficiency – Installing Insulation in Residential Buildings. Copies of this Standard are available from Standards New Zealand.

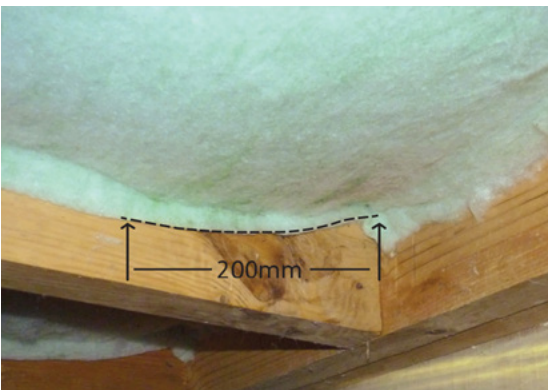
**Start:** GreenStuf Underfloor is de it the roll between the floor joists and adjust so the side edges are equal.

**Touching the floor:** GreenStuf Underfloor should be installed touching the underside of the floor, but not compressed. GreenStuf Underfloor is designed to be wider than the joist cavity, excess material should be folded down on each side and stapled at approximately 50-80mm from the top of the joist. See Fig. 1.

Fig. 1



Fig. 2



Staple spacing along the length of the roll:

- 600mm @ 150mm intervals
- 500mm @ 200mm intervals
- 450mm @ 300mm intervals

**Tight with no air gaps:** GreenStuf Underfloor should be pulled tight between the joists to ensure there is no air-gap or air movement between the insulation material and the floor.

**Do not staple to floor or compress:** Do not compress the insulation and do not staple directly to the floor as this will reduce the insulation performance. GreenStuf® Underfloor should be installed without visible folds and compression lines (other than the stapled folded edge) as this will also affect the installed performance.

**Ends:** GreenStuf Underfloor should be sealed off at the end of each joist run to reduce the opportunity for air movement above the insulation. This can be achieved by tapering the position of the staples up to the floor at each end. See Fig. 2 Staple every 50-100mm for the first 200mm of each joist run.

**Bottom plate to bottom plate:** Insulate all areas of the floor from exterior wall to exterior wall leaving no gaps. Insulation should extend to the centre of the bottom plate wherever possible. Off-cuts can be used to fill small spaces where full width product is not suitable.

**Joins:** When joining the end of one roll to the start of another, simply butt join them together ensuring no gaps and staple in place through the fold-down to the side of the floor joists. Double staple to start then staple every 50-100mm for the first 200mm each side of a join.

Installing 140mm underfloor insulation between 140mm joists: When installing 140mm underfloor insulation between 140mm timber joists, we recommend friction fitting the insulation between joists and securing it with plastic straps. The underfloor insulation should be slightly wider than the gap between joists to ensure a good fit. For example, 380mm wide for joists at 400mm centres or, 580mm wide for joists at 600mm centres.

Begin installation at the point furthest from the access point and work your way towards the access point. Ensure that GreenStuf Underfloor touches the underside of the floor without any gaps, while keeping the insulation uncompressed. When installing more than one roll between joists, butt join them together ensuring no gaps between rolls. There is no need to staple GreenStuf Underfloor to the joists, but make sure that there is no gap between the insulation and the joists to minimise the opportunity for air movement above the insulation.

Secure GreenStuf Underfloor insulation with strapping across the width of the insulation. Straps should be spaced at max 300mm intervals.

**Clearances:** Leave a clear 100mm gap around waste pipes that penetrate through the floor to allow for future service. See Fig. 3

**Cutting:** Cutting to size – always cut GreenStuf slightly oversized to ensure a tight friction fit. GreenStuf rolls can easily be torn across the width by hand. GreenStuf Underfloor should not require edge trimming however if you require to cut down the length of the roll this can easily be done using sharp scissors or by compressing the insulation under a timber off-cut and then cutting through with a sharp wide blade disposable knife.

Where wind wash is a concern we suggest selecting the highest R-Value GreenStuf Underfloor suitable for the building to maintain maximum thermal performance of the floor system. In open sub-floor spaces, it is recommended that a suitable lining material is applied.

For more information or advice please contact your local GreenStuf Account Manager on 0800 428 839.

Fig. 3



**Staples:** We recommend the use of 12-14mm staples. In coastal areas we recommend you use stainless steel staples to eliminate corrosion, as per the NZBC requirements.

**Underfloor Install Guide:** An underfloor blanket installation video is available online at [greenstuf.co.nz](http://greenstuf.co.nz)



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