



Autex GreenStuf® Thermal & Acoustic Insulation Specification Documents

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AUTEX GREENSTUF® THERMAL & ACOUSTIC INSULATION

1. GENERAL

This section relates to Autex GreenStuf® polyester fibre insulation installed, laid, hung or fitted as thermal and/or acoustic insulation.

1.1 RELATED WORK

Refer to~ for ~

1.2 ABBREVIATIONS AND DEFINITIONS

The following abbreviations apply specifically to this section:

BIB	Building Insulation Blanket
STC	Sound Transmission Class
NRC	Noise Reduction Coefficient
IIC	Impact Insulation Class
Rw	Weighted sound reduction index
CAC	Ceiling Attenuation Class

Documents

1.3 DOCUMENTS

The following documents are specifically referred to in this section:

NZBC H1/AS1	Energy efficiency
AS/NZS 3000	Electrical installations
NZS 4218:2004	Energy Efficiency - small building envelope
NZS 4243.1	Energy Efficiency - Large buildings - Building thermal envelope
NZS 4246	Energy Efficiency - Installing insulation in residential buildings
AS/NZS 60598.2.2	Luminaires- Particular Requirements - Recessed luminaires
AS/NZS 60695.11.5	Fire hazard testing - Test flames - Needle-flame test method - Apparatus, conformity test arrangement and guidance
AS/NZS ISO 9001	Quality management systems - requirements
ISO 14001	Environmental management systems – requirements

1.4 MANUFACTURER/SUPPLIER DOCUMENTS

Autex Insulation documents relating to work in this section are:

Autex Insulation Product Manual, including:

Data sheet	GreenStuf® Thermal insulation - Pad Form
Data sheet	GreenStuf® Thermal insulation - Roll Form
Data sheet	GreenStuf® Underfloor
Data sheet	GreenStuf® Building Insulation Blanket
Data sheet	GreenStuf® Masonry Wall Blanket
Data sheet	GreenStuf® Skillion Roof Blanket
Data sheet	GreenStuf® Sound Solution®
Data sheet	GreenStuf® ASB (Autex Sound Blanket)
Data sheet	GreenStuf® BaffleBlock
Installation Instructions - GreenStuf® Thermal Insulation	
Installation Instructions - GreenStuf® Underfloor insulation	
BRANZ Appraisal 380 - Autex GreenStuf® Polyester Thermal Insulation	
BRANZ Appraisal 734 GreenStuf® Underfloor Insulation	
Autex Insulation Acoustic Design Guide	
Autex Insulation Residential Design Guide	
Environmental Choice NZ (license No. 2508037) Autex GreenStuf® polyester thermal (resistive - type) insulation	

Manufacturer/supplier contact details
Company: Autex Industries Limited
Web: www.autex.co.nz
Telephone: 0800 428 839
Autex Insulation documents are also available on EBOSS
Web: www.eboss.co.nz

Warranties

1.5 WARRANTY - MANUFACTURER/SUPPLIER

Provide a material manufacturer/supplier warranty:

- 50 year durability for Autex polyester insulation products.
- Provide this warranty on the Autex Insulation Certificate of Warranty standard form (available for download from the Autex website)

Requirements

1.6 QUALIFICATIONS

Work to be carried out by tradesmen experienced, competent and familiar with Autex Insulation materials and techniques specified.

1.7 NO SUBSTITUTIONS

This work section relates to [NZBC](#) compliant systems and under the building consent process substitutions are not permitted to any specified insulation, associated products, components or accessories.

Autex GreenStuf® products have been selected on specific performance criteria and their reduced environmental impact. Substitution of specified insulation materials will not be accepted.

Performance

1.8 SOUND RATING REQUIREMENTS

Provide sound rated wall, floor and ceiling systems as scheduled.

1.9 ENERGY EFFICIENCY

Maintain the energy efficiency requirements, of NZBC H1/AS1, for small buildings to NZS 4218, and in large buildings to NZS 4243, as set out in SELECTIONS. Installation must maintain these requirements.

2. PRODUCTS

Materials – Thermal Insulation

2.1 POLYESTER FIBRE THERMAL INSULATING PADS

Autex GreenStuf® Pad Form - 100% polyester fibres thermally bonded together to form a rectangular insulation pad. Manufactured in NZ under [AS/NZS ISO 9001](#) and ISO 14001 quality and environmental management systems. Refer SELECTIONS for details.

NOTE: All GreenStuf® Polyester insulation is compliant with AS/NZS 60695.11.5 and can safely be installed abutted to downlights classified CA 80, CA 135 and can be safely installed covering downlights classified IC and IC-F.

2.2 POLYESTER FIBRE THERMAL INSULATING ROLLS / BLANKET

Autex GreenStuf® Roll Form - 100% polyester fibres thermally bonded together to form a flexible insulation blanket / roll. Manufactured in NZ under [AS/NZS ISO 9001](#) and ISO 14001 quality and environmental management systems. Refer SELECTIONS for details.

NOTE: All GreenStuf® Polyester insulation is compliant with AS/NZS 60695.11.5 and can safely be installed abutted to downlights classified CA 80, CA 135 and can be safely installed covering downlights classified IC and IC-F.

- 2.3 **POLYESTER FIBRE THERMAL UNDERFLOOR INSULATION**
Autex GreenStuf® Underfloor- 100% polyester fibres thermally bonded to form a flexible insulation roll for insulating the underside of exposed joist floors. Manufactured in NZ under [AS/NZS ISO 9001](#) and ISO 14001 quality and environmental management systems. Refer SELECTIONS for details.
- 2.4 **POLYESTER FIBRE THERMAL INSULATING ROOF BLANKET**
Autex GreenStuf® Building Insulation Blanket (GreenStuf® BIB) - 100% polyester fibres thermally bonded to form a flexible insulation blanket/roll for commercial roofing applications. Manufactured in NZ under [AS/NZS ISO 9001](#) and ISO 14001 quality and environmental management systems. Refer SELECTIONS for details.
NOTE: All GreenStuf® Polyester insulation is compliant with AS/NZS 60695.11.5 and can safely be installed abutted to downlights classified CA 80, CA 135 and can be safely installed covering downlights classified IC and IC-F.
- 2.5 **POLYESTER FIBRE THERMAL INSULATING MASONRY WALL BLANKET**
Autex GreenStuf® Masonry Wall Blanket - 100% polyester fibres thermally bonded to form a flexible insulation blanket/roll for insulating strapped and lined masonry walls. Manufactured in NZ under [AS/NZS ISO 9001](#) and ISO 14001 quality and environmental management systems. Refer SELECTIONS for details.
- 2.6 **POLYESTER FIBRE THERMAL INSULATING SKILLION ROOF BLANKET**
Autex GreenStuf® Skillion Roof Blanket - 100% polyester fibres thermally bonded to form a flexible insulation material designed to achieve high R-Value performance in restricted cavities such as Skillion Roofs. Manufactured in NZ under [AS/NZS ISO 9001](#) and ISO 14001 quality and environmental management systems. Refer SELECTIONS for details.
NOTE: All GreenStuf® Polyester insulation is compliant with AS/NZS 60695.11.5 and can safely be installed abutted to downlights classified CA 80, CA 135 and can be safely installed covering downlights classified IC and IC-F.

Materials – Acoustic Insulation

- 2.7 **POLYESTER FIBRE ACOUSTIC INSULATION**
Autex GreenStuf® - 100% polyester fibres thermally bonded to form a rectangular pad, and/or flexible blanket / roll. Manufactured in NZ under [AS/NZS ISO 9001](#) and ISO 14001 quality and environmental management systems. Refer SELECTIONS for details.
NOTE: All GreenStuf® Polyester insulation is compliant with AS/NZS 60695.11.5 and can safely be installed abutted to downlights classified CA 80, CA 135 and can be safely installed covering downlights classified IC and IC-F.
- 2.8 **POLYESTER FIBRE ACOUSTIC CEILING BAFFLE**
Autex GreenStuf® BaffleBlock® - 100% polyester fibres thermally bonded to form a flexible blanket/roll for controlling ceiling path sound transmission. Manufactured in NZ under [AS/NZS ISO 9001](#) and ISO 14001 quality and environmental management systems. Refer to SELECTIONS for details.
- 2.9 **POLYESTER FIBRE ACOUSTIC PANEL**
Autex GreenStuf® AAB - 100% polyester fibres thermally bonded to form a flexible panel/sheet. Manufactured in NZ under ISO 9001 and ISO 14001 quality and environmental management systems. Refer to SELECTIONS for details.

Components

- 2.10 **TAPES**
Proprietary plastic tape, stapled across framing to retain insulation in unlined wall and ceiling locations.

- 2.11 FASTENERS, POLYESTER FIBRE ACOUSTIC PANELS
Insulation anchors/fasteners for attaching insulation to substrate.
- 2.12 ADHESIVE, POLYESTER FIBRE ACOUSTIC PANELS
Contact type adhesive to the manufacturer's requirements.
- 2.13 STAPLES / GUN STAPLER
Gun stapler and staples (standard or stainless steel as appropriate) for fixing GreenStuf® Masonry Wall Blanket and GreenStuf® Underfloor in place.

3. EXECUTION

Conditions

- 3.1 STORAGE
Accept materials undamaged and dry and store in a location that protects them from the weather and damage. Avoid distortion, stretching, puncturing and damage to edges of sheet materials. Do not use damaged materials.
- 3.2 HANDLING
Avoid delamination or distortion of the rectangular form. Maintain full thickness unless compression is an installation system requirement.
- 3.3 INSPECTION
Before starting installation of Autex GreenStuf® blankets and pads, check that the location and framing are free from moisture, that the cavities are not interconnected and that mesh, wall and roofing underlays and vapour barriers are in place.

Application

- 3.4 INSTALL INSULATION - GENERAL
Lay, install, fit and fix to [NZBC H1](#)/AS1: Energy efficiency, 2.0 Building thermal envelope, and to manufacturer's requirements. Install in housing to [NZS 4218](#) and [NZS 4246](#). Install in large buildings to [NZS 4243.1](#) and [NZS 4220](#). Allow insulation to re-loft/relax prior to installation. Do not cover vents. Allow a clear gap around metal flues as recommended by the fireplace manufacturer. Lift up electrical wires, lighting transformers/controllers and lay the insulation underneath.
- 3.5 RECESSED LIGHT FITTINGS - CLEARANCE
Non-residential applications;
The clearance between insulation and recessed downlights;
 - 100mm gap to [AS/NZS 3000](#), figure 4.9.
 - Provide larger clearances where required by the light manufacturer.
Residential applications;
 - Ensure new recessed downlights are one of the new classes classified in [AS/NZS 60598.2.2](#); CA 80, CA 135, IC and IC - F
 - Classification type CA 80, CA 135, to [AS/NZS 60598.2.2](#); GreenStuf insulation can abut the sides (wrapping around the sides)
 - Classification type IC and IC - F, to [AS/NZS 60598.2.2](#); GreenStuf insulation can abut and cover over the top of the downlight
 - Provide larger clearances where required by the light manufacturer.
 - In a retrofit situation where recessed downlights are unclassified or unknown, ensure 100mm clearance from the insulation to [AS/NZS 3000](#), figure 4.9.
- 3.6 CHECK FOILS
Ensure foils are dry, clean, bright, undamaged and free of debris before installing insulation.

- 3.7 **CHECK WALL AND ROOF UNDERLAYS**
Ensure foils are dry, clean, bright, undamaged and free of debris before installing insulation.
- 3.8 **CHECK VAPOUR BARRIERS**
Ensure vapour barriers form a homogeneous sheet vapour barrier before installing insulation.
- 3.9 **FIT POLYESTER FIBRE THERMAL INSULATION PADS**
Friction fit Autex GreenStuf® insulation pads in place to completely fill the whole of the cavities. Slightly oversize length for friction fit and tear by hand across pad and fill cavity. Tear to smaller pieces for smaller spaces and around penetrations. Leave no gaps and maintain full thickness of the insulation over the whole of the installation. Do not cover vents and cut around metal flues to the safety requirements of the fireplace manufacturer. Fix in place with plastic tape as necessary to hold the insulation until the wall and or ceiling linings are in place.
Refer to GreenStuf® Pads and Roll Form installation instructions.
- 3.10 **FIT POLYESTER FIBRE THERMAL INSULATION ROLLS**
Friction fit Autex GreenStuf® insulation rolls between the studs/joists, or in place to completely fill the whole of the cavities. Slightly oversize length for friction fit and tear by hand across width to fit nogs and small spaces around penetrations. Leave no gaps and maintain full thickness of the insulation over the whole of the installation. Do not cover vents and cut around metal flues to the safety requirements of the fireplace manufacturer. Fix in place with plastic tape as necessary to hold the insulation until the wall and or ceiling linings are in place.
Refer to GreenStuf® Pads and Roll Form installation instructions.
- 3.11 **FIT POLYESTER FIBRE THERMAL INSULATION - BIB APPLICATION**
Lay the GreenStuf® BIB blanket in the same direction as and over the mesh/vapour barrier, firmly butting edges and ends together to leave no gaps. Tear blanket by hand across the width for length. Maintain full thickness of the insulation blanket over the whole installation except where detailed otherwise.
- 3.12 **FIT POLYESTER FIBRE THERMAL INSULATING MASONRY WALL BLANKET**
Friction fit GreenStuf® Masonry Wall Blanket between the strapping to completely fill the whole space between. Slightly oversize length for friction fit and tear by hand across the width of the roll. Tear to smaller pieces for smaller spaces and around penetrations. Leave no gaps and maintain full thickness over the whole of the installation. Insulation should be stapled to the strapping each side at the top of each drop to hold the insulation until wall linings are in place.
Refer to GreenStuf® Masonry Wall Blanket installation instructions.
- 3.13 **FIT POLYESTER FIBRE THERMAL INSULATING SKILLION ROOF BLANKET**
Friction fit Autex GreenStuf® Skillion Roof Blanket between the framing, or in place to completely fill the whole of the cavities. Slightly oversize length for friction fit. Use off-cuts to fill small spaces around penetrations. Leave no gaps and maintain full thickness of the insulation over the whole of the installation. Do not cover vents and leave gap around metal flues to the manufactures requirements. Ensure clearance from building elements to [AS/NZS 3000](#), figure 4.9.
- 3.14 **FIT POLYESTER FIBRE THERMAL UNDERFLOOR INSULATION**
Friction fit GreenStuf® Underfloor insulation rolls between the floor joists to completely fill the space between each and staple to the side of the joist. Slightly oversize length for friction fit and tear by hand across the width of the roll. Tear to smaller pieces for smaller spaces and around penetrations. Leave no gaps and maintain full thickness over the whole of the installation. Insulation should be stapled into place using a staple gun to each side of the joist. In coastal areas use stainless steel staples to avoid corrosion. Refer to GreenStuf® Underfloor installation instructions, and the installation video on the Autex website.

- 3.15 **FIT POLYESTER FIBRE ACOUSTIC BLANKET / ROLL - METAL STUD PARTITION WALLS**
After the wall lining is fixed to one side of the wall/partition, friction fit Autex GreenStuf® ASB acoustic insulation blanket/roll in place to completely fill the whole of the cavities. Leave no gaps. Slightly oversize to retain friction fit. Fix insulation to top track as appropriate and carefully tear by hand across blanket, fit to cavity. Maintain full thickness of acoustic insulation over whole installation.
- 3.16 **FIT POLYESTER FIBRE ACOUSTIC PADS / BLANKET / ROLL - TIMBER STUD WALLS**
After the wall lining is fixed to one side of the wall/partition, friction fit Autex GreenStuf® Sound Solution acoustic insulation segment / blanket in place to completely fill the whole of the cavities. Leave no gaps. Slightly oversize to retain friction fit, carefully tear by hand across blanket, fit to cavity. Maintain full thickness of acoustic insulation over whole installation. Fix in place with plastic tape as necessary.
- 3.17 **FIT POLYESTER FIBRE ACOUSTIC PADS / BLANKET / ROLL - MID-FLOOR**
Friction fit the GreenStuf® Sound Solution acoustic insulation between the joists to completely fill the space between each. Leave no gaps. Slightly oversize length for friction fit, carefully tear by hand across blanket, fit to cavity. Maintain full thickness over the whole of the installation. Fix in place with plastic tape as necessary.
- 3.18 **FIT POLYESTER FIBRE ACOUSTIC ROLLS - CEILING BAFFLE**
Install GreenStuf® BaffleBlock® in ceiling voids above STC rated partitions to control ceiling path sound transmission. GreenStuf® BaffleBlock® must be installed with at least enough compression to ensure stack stability and a snug fit to all surfaces including slab, roof or floor above. Compress layers to required thickness, refer SELECTIONS for installed thickness. No gaps to be allowed through the width of the BaffleBlock®. Small pieces should be used to fill around ducting, services or structural component. Consult with the air conditioning installer to ensure no loss of effective air movement to the active return air system for the air conditioning.
- 3.19 **FIT POLYESTER FIBRE ACOUSTIC PANELS**
Attach Autex GreenStuf® AAB panels to substrate using mechanical fixings such as insulation anchors, and/or contact type adhesive. Trim and square edges as necessary, and butt edges firmly to the adjoining panel. Adhesives are available for some applications and are to be used in accordance with Autex and the adhesive manufacturer's instructions.
- Fix insulation anchors to the substrate at minimum 600mm centres in both directions or as detailed. Install GreenStuf® AAB with the smooth slightly textured surface facing out from the substrate, i.e. facing the sound source.
- 3.20 **CLEAN UP**
Clean up as the work proceeds, so no spare offcuts or any other matter or item remain behind claddings or linings.
- 3.21 **LEAVE**
Leave work to the standard required by following procedures.
- 3.22 **REMOVE**
Remove debris, unused materials and elements from the site.

4. SELECTIONS

Substitutions are not permitted to the following, unless stated otherwise.

- 4.1 **POLYESTER FIBRE THERMAL & ACOUSTIC INSULATION - EXTERIOR WALLS**
- | | |
|------------|------------------------------------|
| Location: | External walls and apartment walls |
| Brand: | Autex GreenStuf® AAB 48-50 |
| R Value: | R1.47 |
| Thickness: | 50mm |

- 4.2 POLYESTER FIBRE THERMAL INSULATION - ROOF
Location: Roof
Brand: Autex GreenStuf® Roll Form/BIB
R Value: R3.6
Thickness: 210mm
- 4.3 POLYESTER FIBRE THERMAL INSULATION, UNDER FLOORS
Location: Under Suspended Slab (below apartment spaces)
Brand: Autex GreenStuf® ASL R2.0
R Value: R2.0
Thickness: 75mm
- 4.4 POLYESTER FIBRE ACOUSTIC INSULATION, BETWEEN FLOORS
Location: Ceilings over rondo suspended ceiling systems
Brand: Autex GreenStuf® ASB 5
Thickness: 70mm
- 4.5 INSULATION ANCHORS
Distributor: Rasmset Insulfast 75mm
Brand: Forman Building Systems