BUILDING INSULATION BLANKET (BIB)

GreenStuf® Building Insulation Blanket (BIB) is 100% polyester thermal insulation blanket. GreenStuf BIB is a non-irritant thermally efficient insulation designed for insulating commercial and industrial roofs. GreenStuf BIB is supplied as lofted green-tinted insulation blanket for commercial roofing applications.

APPLICATIONS

GreenStuf BIB is designed for the thermal and acoustic insulation of commercial and industrial buildings and will assist in meeting the requirements of the New Zealand Building Code (NZBC) H1 Energy Efficiency.

To ensure Building Code compliance, architects and building designers are advised to consult an engineer or the relevant NZ Standards before specifying thermal and acoustic insulation products. For information and assistance please contact your Autex account manager.

TECHNICAL

NZBC Compliance: When installed in accordance with the manufacturer's instructions, GreenStuf will satisfy the 50 year durability clause NZBC B2.3.1 (a). GreenStuf meets the relevant clauses of NZBC E3 Internal Moisture, F2 Hazardous Building Materials, and will contribute to meeting H1 Energy Efficiency.

Acoustic Performance: GreenStuf insulation will assist in reducing airborne sound (including rain drum) by absorbing reverberant noise. Actual performance will vary depending on design, materials and installation. For further information on acoustic design please contact your Autex account manager.

Fire Regulations: GreenStuf insulation may not be suitable for all applications, as stipulated in the NZBC. Please consult a fire engineer when specifying GreenStuf insulation or contact your Autex account manager for further information.

Durability: GreenStuf has a 50 Year Durability Warranty.

Moisture: GreenStuf is not affected by moisture.

Exposure to an atmosphere of 50°C at 90% relative humidity for four days showed moisture absorption by weight of less than 0.03%.

Fire ratings:
ISO 9705: 1993
Classification: Group 1-S
Smoke Production Rate: <5.0m^2/s
As required by NZBC C/VM2
FAR 4045-2 issued 8th October, 2013

AS1530.3
Ignitability Index (0-20) 0
Heat Evolved Index (0-10) 0
Spread of Flame Index (0-10) 0
Smoke Developed Index (0-10) 3
APL Report 98055 (Test conducted on GreenStuf Thermal Insulation)

IEC 60695-11-5 (Downlight Fire Test Standard)
GreenStuf has been tested and assessed as complying with IEC 60695-11-5 Needle-flame Test.

Foil Facings: GreenStuf BIB is supplied as standard without a foil face as the product in standard installations is fully self-supporting and does not require the additional stability of a foil. Where a vapour barrier or foil is required please discuss your requirements with your Autex account manager.

Hazardous Building Materials: GreenStuf is non-hazardous.

VOC Emission Safe:

VOC concentration:	0.01 mg/m^3 (7 days).
GECA/GreenGuard Limit:	0.25 mg/m^3 (7 days).

Cetec Pty Ltd (Report: RCV080408)

Non-Corrosive: GreenStuf polyester is considered non-corrosive based on AS/NZS 4859.1 Standard for insulation.

Non-Toxic, Non-Allergenic, Non-Irritant: There are no known hazards with the use or handling of GreenStuf polyester.

Vermin: GreenStuf is naturally resistant to insect and vermin attack.

MSDS: Material Safety Data Sheets (MSDS) are available on request from your Autex account manager or can be downloaded from our website greenstuf.co.nz

Specification & Substitution: Autex specification documents are available through Masterspec or can be downloaded from our website greenstuf.co.nz

Substitution of any products in NZBC compliant systems should not be accepted and we recommend this be made clear in all specification and tender documents.

Installation: Autex recommends that all thermal and acoustic insulation be installed in accordance with the manufacturer's instructions (included on each GreenStuf pack) and design detail. Insulation can be laid either between or under the purlins, or between the ceiling joists, but an air-gap of 25mm (minimum) must be provided under the underlay.

R-VALUE	THICKNESS	PACK SIZE	WEIGHT	DENSITY	M²/PACK
R1.0 BIB	45mm	1200mm x 16.67Lm x 1 Roll	700gsm	15.6kg/m³	20.0m²
R1.5 BIB	100mm	1200mm x 10.83Lm x 1 Roll	750gsm	7.5kg/m³	13.0m²
R1.8 BIB	100mm	1200mm x 10.83Lm x 1 Roll	1025gsm	10.3kg/m³	13.0m²
R2.2 BIB	150mm	1200mm x 10.42Lm x 1 Roll	1100gsm	7.3kg/m³	12.5m²
R2.6 BIB	140mm	1200mm x 7.50Lm x 1 Roll	1650gsm	11.8kg/m³	9.0m²
R3.2 BIB	190mm	1200mm x 7.50Lm x 1 Roll	1700gsm	8.9kg/m³	9.0m²
R3.4 BIB	200mm	1200mm x 6.67Lm x 1 Roll	1850gsm	9.3kg/m³	8.0m²
R3.6 BIB	210mm	1200mm x 7.08Lm x 1 Roll	2050gsm	9.8kg/m³	8.5m²
R4.1 BIB	210mm	1200mm x 5Lm x 1 Roll	2750gsm	13.1kg/m³	6.0m²

This is a NZBC requirement under E2 External Moisture. Insulation installed touching the underlay will cause condensation and over time may cause corrosion of the underside of the cladding.

If insulation is placed above the rafter and takes up the full purlin depth, air movement is inhibited.

To provide sufficient ventilation, it is necessary to use a counter-batten to provide an air-gap between the insulation and underlay. The use of counter-battens requires a sufficient number of fixings to transmit the up-lift wind loads through the roof structure, and allow extra penetration depth of the cladding fixings to meet the appropriate withdrawal resistance values.

ISO Standards: GreenStuf is committed to Occupational Health and Safety, Quality and Environmental best practice through our ISO 45001, ISO 9001 and ISO 14001 certified management systems.

Takeback programme: GreenStuf is recyclable. We will gladly recycle used polyester insulation site waste, including offcuts and packaging, to help keep it out of landfills. Please ensure used polyester insulation and offcuts are in a general state of cleanliness in line with standard site conditions. Excessive contamination, such as metal and cement, will not be accepted. Please contact your account manager to request a Material Diversion Certificate prior to dropping insulation off. For more information on recycling GreenStuf, contact us on 0800 428 839.

Packaging Recycling: GreenStuf packaging is recyclable LDPE 4. Please refer to your local recycling centres for drop off and collection services.

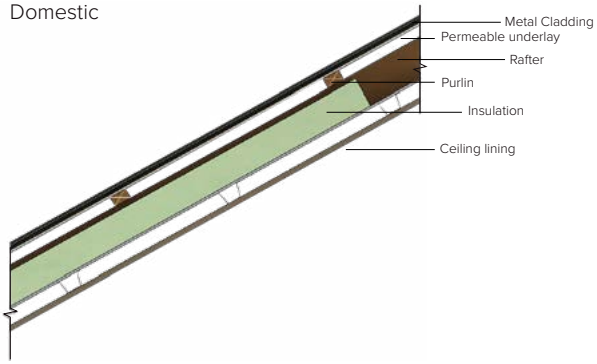
Environmental: GreenStuf Building Insulation Blanket (BIB) is manufactured using 100% polyester fibre and contains a minimum of 91% previously recycled fibre content (from PET plastic). Greenstuf views waste as a resource with potential, not something to be disposed of. With this in mind, all product trimmings and offcuts are reused, and waste material goes back through production to make more GreenStuf.

GreenStuf products are Global GreenTag GreenRate Level A certified and can be used to contribute to Green Star and Homestar accreditation.

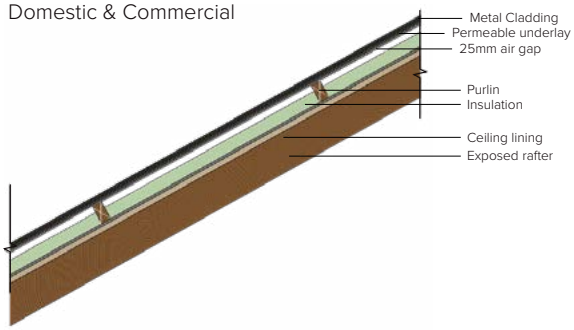
GreenStuf is also Declare certified to be Red List chemical free and can be used in Living Building Challenge projects. For more information, please contact your Autex account manager, or visit our website greenstuf.co.nz. Please refer to your local recycling centres for drop off and collection services.

EXAMPLE ROOF DETAILS USING BIB

Domestic



Domestic & Commercial



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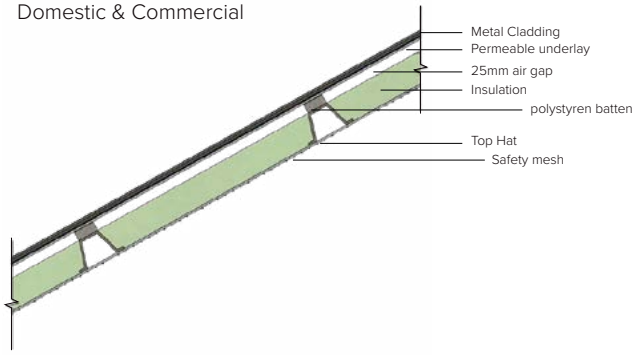

GreenStuf®

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AN ISO 9001, ISO 14001 AND ISO 45001 CERTIFIED COMPANY