

# THERMAL WALL INSULATION

**GreenStuf<sup>®</sup> Thermal Wall Insulation is made up of 100% polyester semi-rigid thermal insulation segments in pad and roll forms, pre-cut to fit common timber-framed internal and external walls.**

## APPLICATIONS

GreenStuf<sup>®</sup> Thermal Wall Insulation comes in roll form and pads and can be used in internal and external walls as well as ceilings and midfloor cavities.

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 GreenStuf account manager.

## TECHNICAL

**NZBC Compliance:** When installed in accordance with the manufacturer's instructions, GreenStuf insulation 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.

**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 GreenStuf account manager for further information.

**Acoustic Performance:** GreenStuf insulation will assist sound reduction by reducing the resonating noise inside the construction cavity. Typical improvement in sound transmission loss through walls with the use of GreenStuf R2.0 Wall insulation is an increase of 5-6 STC points.

**Hazardous Building Materials:** GreenStuf is non-hazardous.

**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<sup>2</sup>/s

As required by NZBC C/VM2

FAR 4045-2 issued 8<sup>th</sup> 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.

### VOC Emission Safe:

VOC concentration: 0.01 mg/m<sup>3</sup> (7 days).

GECA/GreenGuard Limit: 0.25 mg/m<sup>3</sup> (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.

**Installation:** GreenStuf recommends that all thermal and acoustic insulation be installed in accordance with the manufacturer's instructions (included on each GreenStuf Thermal Pads pack) and NZS 4246 Energy Efficiency - Installing Bulk Insulation in Residential Buildings.

With a drained cavity wall construction and stud spacings greater than 450mm, NZBC E2/AS1, 9.1.8.5 Wall Framing behind Cavities, requires stud straps to prevent insulation bulging into the cavity. Straps must be run at 300mm centres over the wall underlay.

When retrofitting in exterior walls (without wall underlay) with direct-fixed claddings, use semi-rigid insulation that is at least 20mm thinner than the framing width (e.g. for walls with 90mm framing, the insulation shall be no thicker than 70mm).

**MSDS:** Material Safety Data Sheets (MSDS) are available on request from your GreenStuf account manager or can be downloaded from our website [greenstuf.co.nz](http://greenstuf.co.nz)

**Specification & Substitution:** GreenStuf specification documents are available through Masterspec or can be downloaded from our website [greenstuf.co.nz](http://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.



**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 Thermal Insulation is manufactured using 100% polyester fibre and contains a minimum of 82% previously recycled fibre content (from PET plastic). All GreenStuf products are manufactured under Autex's Zero Waste Programme where all manufacturing waste is recycled back into the production process.

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 GreenStuf account manager, or visit our website [greenstuf.co.nz](http://greenstuf.co.nz)

PRODUCT	THICKNESS	WIDTH	FORM	WEIGHT	DENSITY
R1.3	45mm	580mm	Pads	2700gsm	60.0kg/m <sup>3</sup>
R2.0 (Retrofit)	70mm	560mm	Pads	3600gsm	51.4kg/m <sup>3</sup>
R2.0	90mm	360 - 560mm	Pads	1500gsm	16.7kg/m <sup>3</sup>
R2.2	90mm	360 - 560mm	Pads	1950gsm	21.7kg/m <sup>3</sup>
R2.5	90mm	360 - 560mm	Pads	3250gsm	36.1kg/m <sup>3</sup>
R2.6	140mm	580mm	Roll	1650gsm	11.8kg/m <sup>3</sup>
R2.8	140mm	580mm	Roll	1800gsm	12.9kg/m <sup>3</sup>
R2.9	140mm	580mm	Roll	1850gsm	13.2kg/m <sup>3</sup>
R3.2	140mm	360 - 560mm	Pads	2250gsm	16.1kg/m <sup>3</sup>
R3.4	140mm	580mm	Roll	2550gsm	18.2kg/m <sup>3</sup>
R3.6	140mm	360 - 560mm	Pads	3100gsm	22.1kg/m <sup>3</sup>



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