

<b>Product Name</b>	<b>AUTEX GreenStuf® thermal insulation</b> (GreenTag GreenRate Level A certified)
<b>Document Type</b>	Green Building Rating Compatibility Analysis
<b>Document Code</b>	ES-GSNZ-12-03c
<b>Client</b>	Autex

Autex GreenStuf® is a NZ made range of quality 100% polyester thermal insulation. GreenStuf® is non-irritant, non-toxic and thermally efficient insulation for residential, commercial and industrial applications. Manufactured using a minimum of 45% already recycled fibre (from PET plastic) and is completely recyclable and manufactured under a "zero waste policy" where off-cuts and waste are recycled back into the production process.



Green Star Design & As Built NZ (V1)	Credit 21	Sustainability Factor (SF) = 1
Green Star Interiors NZ (V1)	Credit 21	Sustainability Factor (SF) = 1
Green Star Performance NZ (V1)	Credit 21	1 point
Green Star NZ (V3) Office / Industrial / Interiors + Education V3.1	MAT 3 EM-3	Criteria A – up to 1 point 1 point



Homestar V4	EHC 1 EHC 4 MAT 1	Contribution potential Up to 2 points 2 points (out of 2 points available for floor insulation)
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WELL Building Standard® V1	Feature 04	Complies
WELL Building Standard® V2	Feature X11	Complies



Living Building Challenge V3	Imperative 8	Pass
	Imperative 10	Pass
	Imperative 12	Pass
	Imperative 13	Pass
Living Building Challenge V4	Imperative 10	Pass
	Imperative 13	Pass
	Imperative 14 Imperative 15	Pass Pass



Passive House	Pass/Fail	Contribution potential
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Manner in which the product may contribute towards points	Legend of Symbols in EnviroSpec
Products must meet specific criteria (e.g. Paint VOC emissions, carpets, etc)	✓
Products may help achieve points by their very nature, if they are specified and installed (e.g. bicycle racks)	●
Products may help achieve an outcome but they must be used in a specific manner (e.g. lighting control and zoning systems) OR The nominated product(s) can contribute towards the outcome but many other products or factor influence that same outcome (E.g. Potable Water Calculator)	○
<p><b>Disclaimer - Please read this carefully</b>            Each Building Environmental Rating Tool and Scheme nominated herein is owned and operated by its respective operative organisation, independently of EnviroSpec Ltd., and EnviroSpec Ltd. equally operates independently of any nominated rating scheme. The information represented on EnviroSpec is not endorsed by any of these organisations in a direct manner and any decision regarding final approval or refusal of points and certifications where the nominated product(s) is used is at the final discretion of the respective owners and operators of the nominated Building Environmental Rating Schemes, and any network of assessors or auditors that are accredited to operate under their assessment structure, in accordance with all associated technical manuals, rules and guidelines. For detailed technical information about each Building Environmental Rating Scheme and product related criteria please refer to the appropriate technical manuals. EnviroSpec does not accept liability for any loss or damages resulting from the use of this document and emphasizes that this document is provided as guidance only. Use of, or reliance upon, any information contained in this report is at the user's own risk. The information presented in this report is valid for the Building Environmental Rating Schemes and Tools nominated herein only. As and when the respective owners and operators publish updates or new standards or guidelines, the information may require updating. EnviroSpec Ltd. will only update information in this report upon receiving written consent from the Manufacturer, Supplier or upon request from an operative organisation of one of the Building Environmental Rating Tools nominated herein. <b>It is the responsibility of the reader to check for regular updates.</b></p>	

Rating Tool	Credit / category	Points available	Requirements	Contribution symbol	Contribution Potential	Details of compliance
Green Star Design & As Built NZ (V1)	Credit 21	3	<p>This credit rewards the selection of products that meet transparency and sustainability requirements. Points are awarded based on the Project Sustainability Value (PSV*) and comparing it with the Project Contract Value (PCV).</p> <p><u>Benchmarks are:</u></p> <ul style="list-style-type: none"> <li>- 1 point is awarded if PSV &gt; 3% of PCV</li> <li>- 1 point is awarded if PSV &gt; 6% of PCV</li> <li>- 1 point is awarded if PSV &gt; 9% of PCV</li> </ul> <p><i>The Project Sustainability Value is the sum of all the compliant product's "Product Sustainability Value" (PSV).</i></p> <p><i>The PSV = Sustainability Factor x cost of product</i></p>	✓	Sustainability Factor (SF) = 1	<p>This product falls under the category of "All other products or materials used in a project which could potentially have a 'Transparency or Sustainability Initiative'.</p> <p>This insulation product holds a level A approved eco-label, therefore the Product Sustainability Value (PSV) can be calculated as :</p> <p>"Product Cost x 1".</p>





Green Star Interiors NZ (V1)	Credit 21	19	<p>This credit rewards the selection of products that meet transparency and sustainability requirements. Points are awarded based on the Project Sustainability Value (PSV*) and comparing it with the Total Materials Cost (TMC).</p> <p><u>Benchmarks are:</u></p> <ul style="list-style-type: none"> <li>- 3.8 points are awarded if PSV &gt; 20% of TMC</li> <li>- 7.2 points are awarded if PSV &gt; 40% of TMC</li> <li>- 11.4 points are awarded if PSV &gt; 60% of TMC</li> <li>- 15.2 points are awarded if PSV &gt; 80% of TMC</li> <li>- 19 points are awarded if PSV = 100% of TMC</li> </ul> <p><i>The Project Sustainability Value is the sum of all the compliant product's "Product Sustainability Value" (PSV).</i></p> <p><i>The PSV = Sustainability Factor x cost of product</i></p>	✓	Sustainability Factor (SF) = 1	<p>This product falls under the category of "All other products or materials used in a project which could potentially have a 'Transparency or Sustainability Initiative'.</p> <p>This insulation product holds a level A approved eco-label, therefore the Product Sustainability Value (PSV) can be calculated as :</p> <p>"Product Cost x 1".</p>
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Green Star Performance NZ (V1)	Credit 21	3	<p>This credit rewards the measurement and reduction of the environmental impacts of materials in building operations, maintenance and upgrades.</p> <p><u>Benchmarks are:</u></p> <ul style="list-style-type: none"> <li>- 1 point is awarded for developing a sustainable procurement framework</li> <li>- 1 point is awarded where the top 3 consumable materials are purchased in accordance with the procurement framework</li> <li>- 1 point is awarded where refurbishment and maintenance materials are purchased in accordance with the procurement framework.</li> </ul> <p><u>Refurbishment materials</u> - This includes at a minimum :</p> <ul style="list-style-type: none"> <li>- <b>Paints adhesives, sealants and carpets</b> (to comply with Green Star V3 "Low emitting materials"),</li> <li>- <b>Concrete</b> (to comply with Green Star V3 "Concrete and Aggregate"),</li> <li>- <b>Steel</b> (to comply with Green Star V3 "Steel").</li> </ul> <p><i>* Note: This credit can, if desired, be extended to include doors, wall finishes and paneling, wall and roof insulation, carpet, floor tiles, ceiling tiles, light fixtures and any other building component owned by the building owner (e.g. roof replacement, built in furniture and joinery, etc)</i></p> <p><i>This only applies if the refurbishment work is &gt; \$5/m2, otherwise the credit is deemed N/A</i></p>	✓	1 point	<p>For materials credits in Green Star Performance, if the specific requirement is not covered in the submission guidelines, the project should refer to the GS Design &amp; As Built for reference.</p> <p>This insulation product holds a level A approved eco-label, therefore and can be included as a compliant refurbishment material.</p>
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Rating Tool	Credit / category	Points available	Requirements	Contribution symbol	Contribution Potential	Details of compliance
Homestar V4	EHC-1	20	This credit rewards the good thermal performance of the overall building design, encompassing insulation, glazing, orientation, ventilation and massing.	○	Contribution potential	Thermal insulation products are strongly encouraged in the walls, ceilings (and under floor) to levels that are higher than required by Building Code to help achieve a better thermal performance of the building. The nominated product(s) can help achieve this outcome.
	EHC-4	5	This credit rewards measures that reduce condensation on and within building components to improve the indoor environment for occupants.	○	Up to 2 points	Provided there is no thermal bridging in the design from steel or concrete elements (or that these thermal bridges are isolated with insulation) then the nominated products can help achieve the minimum construction system R values required for Homestar.
	MAT-1	10	This credit rewards the use of eco-preferred and responsibly sourced materials. Insulation products are one of thirteen possible material categories eligible for 2 points each.	✔	2 points (out of 2 points available for floor insulation)	The nominated product has Level A approved eco label certification, contributing to 2 points (unweighted in the calculator), thus satisfying the requirement of this credit. This product has low VOC emissions, contributing 1 point.  <i>Note: All Autex GreenStuf products are manufactured in the same manner as a Level A approved eco label certification. In accordance with the Technical Questions (TQ) document published on the New Zealand Green Building Council (NZGBC) website to date, the lower R-value versions of GreenStuf thermal insulation may also contribute towards points.</i>
WELL Building Standard® V1	Feature 04	Pass/Fail	Any newly installed items from the below product groups must meet prescribed low emissions criteria and/or equivalencies.  <b>PART 1:</b> Interior Paints and Coatings <b>PART 2:</b> Interior Adhesives and Sealants <b>PART 3:</b> Flooring <b>PART 4:</b> Insulation (excluding duct insulation) <b>PART 5:</b> Furniture and Furnishings  For detailed compliance criteria and acceptable equivalencies please refer to WELL V1 Standard	✔	Pass	This insulation product holds GreenTag GreenRate level A certification, which has been approved by IWBI as an acceptable equivalency to demonstrate compliance with this feature.
WELL Building Standard® V2	Feature X11	3	<b>PART 1: Furniture and Furnishings</b> • 1 point is available if >50% by cost of newly installed furniture and furnishings meet VOC emission thresholds. • 2 points are available if >90% by cost of newly installed furniture and furnishings meet VOC emission thresholds.  <b>PART 2: Flooring and Insulation</b> • 1 point is available if all newly installed flooring and thermal and acoustic insulation (excluding duct insulation) inside the building meet the following VOC emission thresholds.  For detailed compliance criteria and acceptable equivalencies please refer to WELL V2 Standard	✔	Pass	This insulation product holds GreenTag GreenRate level A certification, which has been approved by IWBI as an acceptable equivalency to demonstrate compliance with this feature.

Rating Tool	Credit / category	Points available	Requirements	Contribution symbol	Contribution Potential	Details of compliance
Passivhaus	Exterior Building Component -Opaque	Pass/Fail	<p>Passivhaus accreditation requires the building to abide by 5 principles:</p> <ul style="list-style-type: none"> <li>• good levels of insulation</li> <li>• minimal thermal bridges</li> <li>• passive solar gains and internal heat sources</li> <li>• excellent level of airtightness</li> <li>• good indoor air quality, provided by a whole house mechanical ventilation system with highly efficient heat recovery.</li> </ul> <p>Opaque external building elements in a passive house must meet certain minimum U-value criteria depending on climate zone.</p> <p>NZ North Island is assigned "warm" climate zone (U-value required &lt; 0.50) and NZ South Island is assigned "warm temperate" Climate Zone (U-value required &lt; 0.25).</p>	○	Contribution potential	<p>The nominated product is of essential use to help achieve sufficient building envelope thermal performance.</p> <p>The thickness and R values of the insulation required will depend on the climate zone and other element products (such as framing).</p> <p>The system or element final U-value needs to be determined on a project basis by a certified Passive House Consultant, using approved software.</p>

Living Building Challenge V3	Imperative 8	Pass/Fail	<p>Projects must create a Healthy Interior Environment Plan nominating:</p> <ul style="list-style-type: none"> <li>• Compliance with the current version of ASHRAE 62, or international equivalent</li> <li>• Smoking must be prohibited within the project boundary</li> <li>• Results from an Indoor Air Quality test before and nine months after occupancy</li> <li>• Compliance with the CDPH Standard Method v1.1-2010 (or international equivalent) for all interior building products that have the potential to emit VOCs</li> <li>• Dedicated exhaust systems for kitchens, bathrooms, and janitorial areas</li> <li>• An entry approach that reduces particulates tracked in through shoes</li> <li>• An outline of a cleaning protocol that uses cleaning products that comply with the EPA Design for the Environment label (or international equivalent)</li> </ul>	✓	Pass	<p>The nominated product(s) have been tested and shown to comply with the CDPH Standard Method v1.1-2010 (or international equivalent)</p> <p><i>Compliance with this imperative is dependent on the other requirements of the imperative also being achieved.</i></p>
	Imperative 10	Pass/Fail	This imperative restricts the use of products that contain Red List chemicals as nominated by the Living Building Challenge.	✓	Pass	The nominated product(s) meet the requirements.
	Imperative 12	Pass/Fail	This imperative encourages responsible industry when sourcing product and materials by rewarding the use of FSC certified timber and/or products that have Declare ingredients label.	✓	Pass	The nominated product(s) holds a valid Declare label.
	Imperative 13	Pass/Fail	This imperative encourages local sourcing of materials to help sustain the local economy and reduce transportation cost. Only 25% of all materials by cost (materials construction budget) can come from any location, with the remaining having to adhere to distance sourcing restrictions.	✓	Pass	The nominated product(s) manufacturing plant is located in Auckland, New Zealand.

<b>Living Building Challenge V4</b>	Imperative 10	Pass/Fail	<p>This imperative focusses on IAQ. Projects must:</p> <ul style="list-style-type: none"> <li>• Provide the results from an IAQ test, or readings from an approved continuous IAQ monitor system.</li> <li>• &gt;90% of potentially VOC emitting interior building products must comply with CDPH Standard Method v1.1-2010 (or international equivalent)</li> <li>• Implement a cleaning protocol that uses cleaning products that comply with the EPA Safer Choice label (or international equivalent)</li> </ul> <p>-----</p> <p>In addition, all projects must provide 95% of occupants access to views and daylight , with at least two of the following:</p> <ul style="list-style-type: none"> <li>• Sufficient operable windows to provide natural ventilation for at least six months of the year.</li> <li>• Ability for the occupants to influence their local airflow and temperature through direct input or controls.</li> <li>• Flexible options for working and learning such as sit/stand options.</li> </ul>		Pass	<p>The nominated product(s) have been tested and shown to comply with the CDPH Standard Method v1.1-2010 (or international equivalent)</p> <p><i>Compliance with this imperative is dependent on the other requirements of the imperative also being achieved.</i></p>
	Imperative 13	Pass/Fail	<p>This imperative restricts the use of products that contain Red List chemicals as nominated by the Living Building Challenge.</p>		Pass	<p>The nominated product(s) meet the requirements.</p>
	Imperative 14	Pass/Fail	<p>This imperative encourages responsible industry when sourcing product and materials by rewarding the use of FSC certified timber and/or products that have Declare ingredients label.</p>		Pass	<p>The nominated product(s) hold a valid Declare label.</p>
	Imperative 15	Pass/Fail	<p>This imperative encourages local sourcing of materials to help sustain the local economy and reduce transportation cost. Only 25% of all materials by cost (materials construction budget) can come from any location, with the remaining having to adhere to distance sourcing restrictions.</p>		Pass	<p>The nominated product(s) manufacturing plant is located in Auckland, New Zealand.</p>

## LEGACY GREEN STAR NZ TOOLS

Tool	Credit category	Points available	Requirements	Contribution symbol	Contribution Potential	Details of compliance
Green Star NZ Office V3.0 + Education V3.1 + Industrial V3.0 + Interiors V3	MAT-3	5	This credit rewards up to 5 points in total.  <b>CRITERIA A</b> • Up to 3 points are allocated for the use of Environmentally preferable products (including Applied coatings, Insulation, Flooring, Internal walls and partitions). Each product type is worth up to 1 point.  <u>Benchmarks are:</u> - 0.5 points are awarded if > 50% of a selected product type complies - 1 point is awarded if > 90% of a selected product type complies.  <b>CRITERIA B</b> Up to 2 further points are allocated if "common uses of PVC" (including flooring and resilient wall coverings, pipes, wires and blinds) meet the GBCA Best Practice Guidelines or are PVC-free. 1 point is awarded if > 60% by cost complies and 2 points are awarded if > 90% by cost complies	✓	Up to 1 point	CRITERIA A. The nominated product has Level A approved eco label certification, contributing to up to 1 point (unweighted in the calculator.)  <i>Note: the remaining points in criteria A are achieved if the other product types also comply.</i>
Green Star NZ Office V3.0 + Education V3.1 + Industrial V3.0 + Interiors V3	EMI-3	1	This credit rewards the use of Insulation products that contain no Ozone Depleting Substances in their content or manufacture.	✓	1 point	The nominated product satisfies this criteria.