

**Product name:**

## Graphex

**Product Line:**

Substrate

**Product description and its intended use:**

Graphex is a premium product for the insulation of timber-framed, steel-framed and masonry buildings. The addition of graphite to expanded polystyrene (EPS) creates a product that offers one of the most effective forms of interior insulation available.

Compared to standard EPS, Graphex uses fewer raw materials during processing without reducing insulation performance. This makes Graphex one of the most eco-efficient choices for insulation.

The unique matrix structure of Graphex gives exceptional rigidity and strength. Graphex has a well-regarded reputation as a reliable wall insulation product.

- Installed as an overlay to masonry buildings
- Used to make cavity battens
- As a substrate over timber/steel framed buildings

The unique matrix structure of expanded polystyrene (EPS) creates block rigidity. An inert, rigid foam product EPS/Graphex does not settle over time, thus ensuring the R-value for the life of the building.

**Product identifier:**

The product is unlabeled.

**Place of Manufacture:**

New Zealand

**Legal and Trading Information:**

Legal and trading name of the importer(s):

Rockcote Resene Limited T/A Resene Construction Systems

Address of the Manufacturer:

32-50 Vogel Street, Naenae, Lower Hutt

Website Address:

<https://reseneconstruction.co.nz>

Email Address:

[help@reseneconstruction.co.nz](mailto:help@reseneconstruction.co.nz)

Phone Number:

0800 507040

NZBN:

9429034745786

This product is not subject to a warning or ban under s26 of the Building Act.

**Relevant Building Code clauses:**

- Clause B1 - Structure - Performance B1.3.1, B1.3.2 and B1.3.4
- Clause B2 - Durability - Performance B2.3.1 (b) 15 years, B2.3.1 (c) 5 years and B2.3.2
- Clause E2 - External Moisture - Performance E2.3.2
- Clause F2 - Hazardous Building Materials - Performance F2.3.1

**How the building product is expected to contribute to compliance:**

This product is used and has been tested as part of a wider system.

B1 - This product has a low probability of rupturing, becoming unstable, losing equilibrium, or collapsing during construction or alteration and throughout its life. This product has a low probability of causing loss of amenity through undue deformation, vibratory response, degradation, or other physical characteristics throughout its life and during construction or alteration when the building is in use. This product has made allowance for the requirements of this functional requirement.

B2 - When installed in accordance with the system specifications and drawings, it will meet this performance requirement. Based on material properties and history of use, this product has been assessed to have a durability of at least 15 years when installed as part of a system. This product must be installed in accordance with the relevant specifications outlined in the design section of this document.

E2 - When installed in accordance with the system specifications and drawings, it will meet this performance requirement.

F2 - This product is safe when handled in accordance with its Technical and Safety DataSheet. Dust resulting from sanding and mixing compounds may be a respiratory irritant, and the use of suitable respiratory protection is required. This product meets the requirements set out in F2 and will not present a health hazard to people once installed.

**Limitations on the use of the building product:**

Requires over-coating with a protective coating.

Resene Construction Systems recommends that this product be applied by a licensed tradesperson who has extensive experience in applying these products for similar applications to your particular project. The success of each project requires the tradesperson to have a thorough technical knowledge of appropriate building design, substrate conditions and client expectations to determine if this product fits the purpose expected for your project.

It should be noted that Resene Construction Systems products do not satisfy code requirements on their own but deliver code-compliant performance when used as part of a Resene Construction System's system and installed in accordance with the specific specifications.

**Design requirements that would support the use of the building product:**

Specific applications, design and installation instructions are available for each system on our

website. This outlines where this product should be installed as part of the wider system.

Typical thicknesses:	50-100mm
Thermal Resistance R-Value:	50mm - R1.56 (m <sup>2</sup> K/W) 60mm - R1.88 (m <sup>2</sup> K/W) 70mm - R2.19 (m <sup>2</sup> K/W) 80mm - R2.50 (m <sup>2</sup> K/W) 90mm - R2.81 (m <sup>2</sup> K/W) 100mm - R3.13 (m <sup>2</sup> K/W)
Density:	18kg/m <sup>3</sup>
Compressive strength at 10% deformation (min):	105KPA (AS2498.3)
Cross breaking strength:	200KPA (AS2498.4)
Determination of flame propagation surface ignition	
- Medium flame duration	2 sec (max)(AS2122.1-1993)
- Eighth value:	3 sec (AS2122.1-1993)
Fire Behaviour	
- Spread of Flame Index	0 (AS2122.1-1993)
- Smoke Developed Index:	5 (AS/NZS 1530.3:1999)
Dimensional stability of length, width & thickness (max) at 70° for 7 days:	1% (AS2498.6)
Rate of water transmission (max) measured parallel to rise at 23°C:	520mg/m <sup>2</sup> s (AS2498.5)

### **Installation requirements:**

If the substrate has been left exposed to UV / sunlight for more than two weeks, dust and dirt may build up on the surface. The surface may also discolour (yellow) you must remove all surface dust, oxidation, and other contaminants to reveal fresh polystyrene. Use a rasp or a stiff broom to prepare the substrate

Check should be made using a straight edge to ensure the wall is flat, plumb and true. Any irregularities should be taken out by straightening using a rasp.

The Render coating is not designed to straighten deviations that exceed the specified Resene Construction Systems Render System thickness.

### **Environmental and Safety:**

Ensure styrene does not enter waterways. Contain in bags to ensure loose material is not blown away. Currently, many locations around the country provide access to recycling services. Many recycling providers also offer pick-up and drop-off services to ensure you can recycle hassle-free. They are also committed to environmentally sound recycling processes and ensuring that styrenes can be recycled and reused often.

Material Safety Data Sheets are available upon request or access directly from

<https://reseneconstruction.co.nz/technical-library/safety-data-sheets/>