



(System Patent No: 2015/01267)

Roof Insulation Spacer/Packer

Insultrak® is a roof insulation spacer system designed specifically for use with faced flexible fibre and reflective foil roof insulation materials in over-purlin roof applications.

Insultrak® is a proprietary extruded polymer composite manufactured from 95% industrial mineral waste and recycled polymers, making it an eco-friendly "green" product. Insultrak® is manufactured in a standard dimension of 40mm x 40mm square for use with all thicknesses of faced flexible fibre and reflective foil roof insulation materials.

By being used as a spacer/packer between the insulation and the roof sheet, Insultrak® provides the necessary spacing to allow the faced fibre insulation to attain maximum installed thickness and significantly reduces backward pressure on the roof sheet or clip system. The use of Insultrak® in this application has shown to increase the thermal value of the insulation by up to 77% as opposed to the insulation being installed without any spacer/packer.

In the case of reflective foil laminate roof insulation materials their quoted Thermal Resistance (R-Values) according to SANS 1381-4:2013 are tested with a 40mm air gap on the "hot" side. The use of Insultrak® for these applications is therefore also perfectly suited and thereby ensures that the actual quoted thermal values are achieved.

Insultrak® is a solid spacer/packer with extremely high dimensional stability and strength, and will therefore not deteriorate, collapse or crack as has been found with foam spacers/packers. Insultrak® is non-combustible and therefore provides no additional fire load to a building. Proprietary spacer/packer systems such as Insultrak® are included in the new SANS 10400-XA Energy Regulations.

The following indicative Thermal Resistance (R-Values) for the relevant thickness of insulation in conjunction with a 40mm Insultrak® spacer/packer may be used for design purposes. Calculations are based on 70% nominal average thickness achieved including the catenary effect of the support wires using the Ashrae Zone Method. Plus the thermal value of the Insultrak® spacer with an R-Value of 0.45m².K/W adds further thermal value to the system. Using ISO simulation conditions more akin to RSA conditions using a resultant R-Value of 0.35m².K/W is recommended for design values.

- 50mm Faced Flexible Fibreglass 12kg/m³ density – 1.40 m²K/w.
- 75mm Faced Flexible Fibreglass 12kg/m³ density – 1.79 m²K/w.
- 100mm Faced Flexible Fibreglass 12kg/m³ density – 2.17 m²K/w.
- 135mm Faced Flexible Fibreglass 12kg/m³ density – 2.69 m²K/w.

*Thermal Report available upon request.

Application Methodology

The Insultrak® spacers/packers are simply laid over the insulation on top of the purlin before fixing of the roof sheet, or clip system for secret fix roof sheeting. The roof is then fixed down in the standard method applied for the relevant roof sheet with the addition of longer fixing screws to accommodate the 40mm spacer/packer. Insultrak® is supplied in standard 3m lengths and bundled in packs of 25 lengths per pack.

Fire Performance

Insultrak® has been fire tested according to the SANS 10177-10 application test for over-purlin roof insulation systems with an A1 fire rated faced fibre roof insulation and achieved an A1 Non-combustible fire rating.

*Fire report available upon request.

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