



# OPTIM-R™

NEXT GENERATION INSULATION SOLUTIONS



Low Energy –  
Low Carbon Buildings

## Description

*Kingspan OPTIM-R™* is an optimum performance next generation insulation solution from Kingspan Insulation.

*Kingspan OPTIM-R™* comprises a rigid vacuum insulation panel with a microporous core which is evacuated, encased and sealed in a thin, gas-tight envelope, giving outstanding thermal conductivity, with the thinnest possible solution to insulation problems.

## General

With a declared (aged) thermal conductivity ( $\lambda$ ) of 0.007 W/m·K, *Kingspan OPTIM-R™* provides an insulating performance that is up to five times better than other commonly available insulation materials.

The high level of thermal efficiency with minimal thickness, achieved by *Kingspan OPTIM-R™* provides solutions for applications where a lack of construction depth or space is an issue.

For instance, in retrofit applications, *Kingspan OPTIM-R™* provides solutions for areas that previously would have remained un-insulated because there was insufficient space available. In new constructions *Kingspan OPTIM-R™* can significantly enhance U-values in areas that would otherwise be accepted as denigrating the overall thermal performance.

If installed correctly and protected from damage and penetration, *Kingspan OPTIM-R™* can provide reliable long term thermal performance over the lifetime of the building.

*Kingspan OPTIM-R™* is available in a range of sizes and thicknesses to suit various applications, including roofs, walls and floors. It is also suitable for use in a variety of OEM systems. Please contact Kingspan Insulation to discuss individual requirements.

## Standards & Approvals

*Kingspan OPTIM-R™* is manufactured to the highest standards under a management system certified to ISO 9001: 2008 (Quality Management Systems. Requirements), ISO 14001: 2004 (Environmental Management Systems. Requirements) and OHSAS 18001: 2007 (Health and Safety Management Systems. Requirements).

Product Properties	
Product Thickness (mm)	20 – 40*
Product Length (mm)	300 – 1200*
Product Width (mm)	300 – 600*
Density (BS EN 1602: 1997)	180 – 210 kg/m <sup>3</sup>
Compressive Strength (BS EN 826: 1996)	> 160 kPa @ 10% compression
Tensile Strength (BS EN 1607: 1997)	≥ 60 kPa
Service Temperature (°C)	-40 to +80

Thermal	
Thermal Conductivity (EN 12667: 2001)	0.007 W/m·K (aged design value**)
Thermal Resistance (R-value)	2.857 m <sup>2</sup> ·K/W (thickness 20 mm)
	3.571 m <sup>2</sup> ·K/W (thickness 25 mm)
	4.285 m <sup>2</sup> ·K/W (thickness 30 mm)
	5.714 m <sup>2</sup> ·K/W (thickness 40 mm)

Fire & Smoke	
The core of Kingspan <b>OPTIM-R™</b> is non-combustible	

Recyclability	
Over 90% (by weight) recyclable	

\* Other sizes may be available dependent on order quantity. Please contact Kingspan Insulation for more details.

\*\* Aged design value allowing for edge effect.

*Kingspan Insulation Ltd. reserves the right to amend product specifications without prior notice. Product thicknesses shown in this document should not be taken as being available ex-stock and reference should be made to Kingspan Insulation's Customer Service Department. The information, technical details and fixing instructions etc. included in this literature are given in good faith and apply to uses described. Recommendations for use should be verified for suitability and compliance with actual requirements, specifications and any applicable laws and regulations. For other applications or conditions of use, Kingspan Insulation offers a Technical Advisory Service (see below), the advice of which should be sought for uses of Kingspan Insulation products that are not specifically described herein. Please check that your copy of this literature is current by contacting the Kingspan Insulation Marketing Department (see below).*



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