

AlphaCore[®] Pure

Microporous silica-based insulation for use in OEM application systems

The product

Kingspan AlphaCore[®] Pure consists of a water-repellant microporous silica-based core.

Standard dimensions

Kingspan AlphaCore[®] Pure is available in the following standard size(s):

Nominal dimension		Availability
Length	(mm)	1000
Width	(mm)	600
Insulant thickness	(mm)	20, 25, 30, 40, 50

Water absorption

Kingspan AlphaCore[®] Pure achieves a water absorption (long term partial immersion) of $W_{lp} \leq 0.1 \text{ kg/m}^2$ when tested to EN 12087: 2013 (Thermal insulating products for building applications. Determination of long term water absorption by immersion).

Water vapour control / condensation

Consideration should be given to the risk of condensation, when designing thermal elements.

A condensation risk analysis should be carried out following the procedures set out in BS 5250: 2021 (Management of moisture in buildings. Code of practice). The Kingspan Insulation Technical Service Department can provide this service.

Compressive strength

The average compressive strength of Kingspan AlphaCore[®] Pure exceeds 90 kPa at 10% compression, when tested to EN 826: 2013 (Thermal insulating products for building applications. Determination of compression behaviour).

Thermal properties

The λ -values and R-values detailed below are quoted in accordance with BS EN 12667: 2001 (Thermal performance of building materials and products. Determination of thermal resistance by means of guarded hot plate and heat flow meter methods. Products of high and medium thermal resistance).

Thermal conductivity

Kingspan AlphaCore[®] Pure achieves a thermal conductivity (λ -value) of 0.020 W/mK.

Thermal resistance

Thermal resistance (R-value) varies with thickness and is calculated by dividing the thickness of the board (expressed in metres) by its thermal conductivity. The resulting number is rounded down to the nearest 0.05 ($\text{m}^2\text{K/W}$).

Insulant thickness (mm)	Thermal resistance ($\text{m}^2\text{K/W}$)
20	1.00
25	1.25
30	1.50
40	2.00
50	2.50

NB Kingspan Insulation's maximum available single insulation thickness is subject to alteration without notice. Refer to local distributor or Kingspan Insulation price list for current stock and non-stock sizes.



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Fire performance

Kingspan AlphaCore® Pure achieves European Classification (Euroclass) A2-s1,d0 when classified to EN 13501-1: 2018 (Fire classification of construction products and building elements - Classification using data from reaction to fire tests).

Kingspan AlphaCore® Pure is assessed under Assessment and Verification of Constancy of Performance (AVCP) System 1 for Reaction to Fire.

Certificate of Constancy
of Performance

0800-CPR-23-1570-3

Further fire test data for Kingspan AlphaCore® Pure may be obtained by contacting the Kingspan Insulation Technical Service Department (see rear cover for details).

Responsible sourcing

Kingspan AlphaCore® Pure produced at Kingspan Insulation's Pembridge, Herefordshire manufacturing facility is manufactured under a management system certified to ISO 14001: 2015 (Environmental management systems).

NB The above information is correct at the time of writing. Please visit the Kingspan Insulation [website](#) to download the certificate.

Sustainability & responsibility

Kingspan Insulation has a long-term commitment to sustainability and responsibility: as a manufacturer and supplier of insulation products; as an employer; as a substantial landholder; and as a key member of its neighbouring communities.

A report covering the sustainability and responsibility of Kingspan Insulation Ltd's British operations at its Pembridge, Herefordshire and Selby, North Yorkshire manufacturing facilities is available upon request from literature@kingspaninsulation.co.uk.

Standards & approvals

Kingspan AlphaCore® Pure is manufactured under a management system certified to ISO 9001: 2015 (Quality management systems), ISO 14001: 2015 (Environmental management systems), ISO 37301: 2021 (Compliance management systems), ISO 45001: 2018 (Occupational health and safety management systems) and ISO 50001: 2018 (Energy management systems).

The use of the Kingspan AlphaCore® Pure is covered by ETA Certificate No. ETA 22/0717.

Specification clause

Kingspan AlphaCore® Pure should be described in specifications as:-

Kingspan AlphaCore® Pure _____ mm thick: comprising a water-repellent, microporous silica-based core. The product shall have a thermal conductivity of 0.020 W/mK. The product shall be manufactured under a management system certified to ISO 9001: 2015, ISO 14001: 2015, ISO 37301: 2021, ISO 45001: 2018 and ISO 50001: 2018; by Kingspan Insulation Limited; and installed in accordance with the instructions issued by them.

Fire safety

For guidance regarding the routes to compliance for meeting the fire safety requirements of the Building Regulations / Standards, refer to www.kingspaninsulation.co.uk/fireregulations (for GB) or contact technical services at technical@kingspaninsulation.ie (for Ireland).

Fire stop & cavity barrier strategy

Current guidance to the Building Regulations / Standards should be considered with regard to the performance requirements for, and the provision of fire stops and cavity barriers.

Health & safety

- A Safety Information Data Sheet for this product is available from the Kingspan Insulation website: www.kingspaninsulation.co.uk/safety or www.kingspaninsulation.ie/safety.
- Kingspan Insulation advises installers to use personal protective equipment. Please refer to the Safety Information Data Sheet for further details.

Warning - do not stand on or otherwise support your weight on this product unless it is fully supported by a load bearing surface.

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