



Kooltherm® K9 Internal Insulation Board

SUBMITTAL

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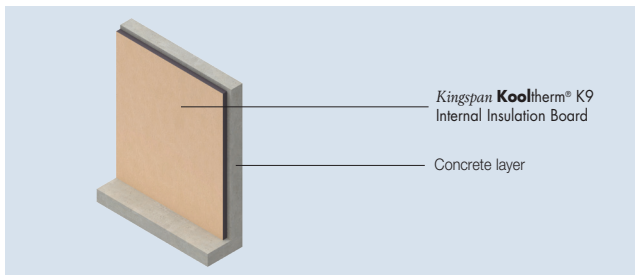
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Introduction

Kingspan Kooltherm® K9 Internal Insulation Board is a premium performance insulation product, used for interior exposed application on basement, crawlspace, attic and habitable space walls.



The Facings

The facings of *Kingspan Kooltherm® K9 Internal Insulation Board* has a glass tissue based facing, adhesively bonded to the insulation core during manufacture.

The Core

The core of *Kingspan Kooltherm® K9 Internal Insulation Board* is a premium performance rigid thermoset fiber-free phenolic insulant manufactured with a blowing agent that has zero Ozone Depletion Potential (ODP) and low Global Warming Potential (GWP).



Standard Dimensions

Kingspan Kooltherm® K9 Internal Insulation Board is available in the following standard size(s):

Nominal Dimension	Availability	
	(in)	(mm)
Width	47.244	1200
Length	89.370	2270
Insulant Thickness	Refer to Kingspan Insulation for current stock and non-stock sizes	
Custom length available	Made to order	



Thermal Resistance

The R-values detailed below are quoted in accordance with ASTM C518 (Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus).

Thermal resistance (R-value) varies with thickness and is calculated by dividing the thickness of the board.

Insulant Thickness		Thermal Resistance
(in)	(mm)	(R-value)
1.18	30	10.0
1.57	40 •	13.5
1.97	50 •	16.5
2.36	60 •	20.0
2.76	70	23.5
2.95	75 •	25.0
3.15	80	26.5
3.54	90	30.0
3.94	100 •	33.5

• **Stocked Items**

* Kingspan Insulation's maximum available thickness is subject to alteration without notice. At the time of publication, this specific insulation thickness must be built up from two thinner layers, but this may have changed by the time that the information in this literature is relied upon. Please contact Kingspan Insulation for current stock and non-stock sizes (see rear cover for details). Where multiple layers of insulation of different thicknesses are used, the thickest layer should be installed as the outermost layer in the construction.

Standards and Approvals

Kingspan **Kooltherm**® K9 Internal Insulation Board 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 (Occupational Health & Safety Management Systems. Requirements).

Durability

If correctly installed, Kingspan **Kooltherm**® K9 Internal Insulation Board can have an indefinite life. Its durability depends on the supporting structure and the conditions of its use.

Resistance to Solvents, Fungi & Pests

The insulation core is resistant to short-term contact with petroleum and with most dilute acids, alkalis and mineral oils. However, it is recommended that any spills be cleaned off fully before the boards are installed. Ensure that safe methods of cleaning are used, as recommended by the suppliers of the spilt liquid. The insulation core is not resistant to some solvent-based adhesive systems, particularly those containing methyl ethyl ketone. Adhesives containing such solvents should not be used in association with this product. Damaged boards or boards that have been in contact with harsh solvents or acids should not be used.

The insulation core and facings used in the manufacture of Kingspan **Kooltherm**® K9 Internal Insulation Board resist attack by mold and microbial growth, and do not provide any food value to pests.

SF-K9 1909

Code Report

Intertek CCRR-1066

Fire Performance

The rigid thermoset insulation core of Kingspan **Kooltherm**® K9 Internal Insulation Board, when subjected to the ASTM E84/UL 723 (Standard Test Method for Surface Burning Characteristics of Building Materials) fire test specified in the table below, has achieved the result shown.

Flame Spread	Smoke Developed
5	5

Further details of the fire performance of Kingspan Insulation products may be obtained from Kingspan Insulation.

Product Data

Property	Test Method	Result
		Stock*
Nominal Thickness (in / mm)		1.57 / 40 1.97 / 50 2.36 / 60 2.95 / 75 3.94 / 100
Standard Dimensions		
Width (in / mm)		47.244 / 1200
Length (in / mm)		89.370 / 2270
Compressive Strength, Min. (psi)	ASTM D 1621	17.5
Water Absorption, Max. (% by volume)	ASTM C 209	1.21
Density, Min. (lb/ft ³)	ASTM D 1622	2.0
Closed Cell Content (% of cells closed)	ASTM D 6226	94.67
Air Permeance (L/S/m ² / (cfm/ft ²))	ASTM E 2178	0.001 / 0.000
Water Vapor Permeance, Max. (perm) ¹	ASTM E 96	0.79

¹ Permeance shown is for 25mm thick board. Permeance typically decreases as board thickness increases.



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