

# Product Data

## Description

*Kingspan Kooltherm*<sup>®</sup> rigid phenolic insulation is based on patented technology. Whilst retaining all the benefits of rigid polyurethane and rigid polyisocyanurate insulation, *Kingspan Kooltherm*<sup>®</sup> rigid phenolic insulation has far superior resistance to burning and spread of flame and the lowest thermal conductivity of any commonly available insulant at 0.021 W/m·K.

*Kingspan Kooltherm*<sup>®</sup> rigid phenolic insulation is entirely CFC/HCFC-free with zero Ozone Depletion Potential (ODP).

*Kingspan Kooltherm*<sup>®</sup> rigid phenolic insulation has gained a reputation for quality and consistency, a reputation that has spread worldwide.

*Kingspan Kooltherm*<sup>®</sup> Duct Insulation is manufactured by a continuous lamination process.

## Temperature Range

*Kingspan Kooltherm*<sup>®</sup> rigid phenolic insulation may be used for operating temperatures from -20°C to +80°C.

## Moisture Resistance

*Kingspan Kooltherm*<sup>®</sup> rigid phenolic insulation has a greater than 90% closed cell structure, which makes it highly resistant to moisture penetration and wicking. It is an ideal insulation material for air conditioning ductwork.

## Insulation Performance

*Kingspan Kooltherm*<sup>®</sup> rigid phenolic insulation has a high closed cell content and fine cell structure. The result is a thermal conductivity of 0.021 W/m·K.

0.021 W/m·K is the lowest thermal conductivity of any commonly available insulation material. A thinner insulant often results in lower surface area and therefore savings in finishing materials.



## Sustainability

Kingspan Insulation carries out rigorous independent appraisals of the economic, social, environmental and natural resource impacts of the manufacturing facility that makes *Kingspan Kooltherm*<sup>®</sup> Duct Insulation using Arup's SPeAR<sup>®</sup> tool. More detail is given in section 5 of the "Issues to Consider" section of this document.

Kingspan Insulation is currently completing a BRE Ecoprofile for its rigid phenolic insulation board products, including *Kingspan Kooltherm*<sup>®</sup> Duct Insulation.

*Kingspan Kooltherm*<sup>®</sup> Duct Insulation is manufactured without the use of CFCs/HCFCs and has zero Ozone Depletion Potential (ODP).



Kingspan Insulation has achieved BS EN ISO 14001: 2004 (Environmental management systems. Requirements with guidance for use), which insists on year on year environmental improvements in the performance of any company that achieves the standard.



## Chemical Resistance and Compatibility

*Kingspan Kooltherm*<sup>®</sup> rigid phenolic insulation is resistant to a wide range of oils, solvents and chemicals. It is compatible with most solvent based coatings and adhesives, and polyester and epoxy resin based coatings.

## Hygiene

*Kingspan Kooltherm*<sup>®</sup> rigid phenolic insulation is resistant to fungus and mould growth, will not sustain vermin, is non-fibrous, odourless and non-tainting.



## Fire and Fire Performance

The resistance to burning and spread of flame of *Kingspan Kooltherm*<sup>®</sup> rigid phenolic insulation is far superior to that of any other cellular plastic insulation, regardless of facing type. In addition, there is an almost complete absence of smoke when subjected to a flame source. *Kingspan Kooltherm*<sup>®</sup> rigid phenolic insulation is Class O / Low Risk to the Building Regulations / Standards.

## Quality Assurance

*Kingspan Kooltherm*<sup>®</sup> rigid phenolic insulation is manufactured to the highest quality standards under a quality control system approved to BS EN ISO 9001: 2000 (Quality management systems. Requirements).



Manufactured to BS EN ISO 9001: 2000  
Certificate No. 388

## Technical Data

For further comprehensive data on all of the above-mentioned properties, please refer to Appendix A1 of the Specification section of this document.

## Technical Advice

Extensive support is available via Kingspan Insulation's Technical Services Department. Kingspan Insulation offers a huge wealth of project experience, supported by an in-house capability for carrying out all material thickness and heat loss / gain calculations. All quoted performance data is based on accredited testing.