

## Technical Bulletin August 2016

### Kingspan Kooltherm® FM Pipe Insulation Green Guide Rating & BREEAM

#### BREEAM Update

The BRE has published a new Environmental Profile Methodology for Pipe Insulation products that has been created to provide a more accurate assessment of the environmental impact of pipe insulation products. The new methodology introduces a significant change to environmental profiles and Green Guide rating claims for pipe insulation, and supersedes all previous certification. No claims can be made regarding the performance of pipe insulation without assessment or reference to the new guidance. Green Guide ratings are now assessed according to the building service pipework the insulation is applied to, listed by the type of building the service is installed in.

#### Summary

Kingspan Kooltherm® FM Pipe Insulation has achieved A and A+ BRE Green Guide 2008 Summary Ratings. The ratings were awarded by BRE Global, which used its new Environmental Profiles Methodology for Pipe Insulation Products to assess the environmental impacts of the products across their entire life cycles from cradle to grave.

The 2008 Green Guide rating system uses such data to classify performance in a number of key areas and awards a Summary Rating on a scale from E (worst) up to A+ (best). All of the products for which BRE Green Guide 2008 Summary Ratings were produced and their respective Summary Ratings are shown in the table overleaf.

Details of all BRE Green Guide 2008 Summary Ratings are published on BRE's Green Book Live website. Go to [www.greenbooklive.com](http://www.greenbooklive.com) and search on the company name "Kingspan Insulation". Click on the appropriate Appendix No. and a copy of the relevant certificate will be displayed.

The BRE has not published Green Guide Ratings for mineral fibre pipe insulation products, as the mineral fibre industry declined permission for its data to be used for the creation of mineral fibre pipe insulation Green Guide ratings.

Those interested are invited to consider why the mineral fibre industry does not wish Green Guide ratings to be published for its pipe insulation products. What could be worse than having no published Green Guide rating at all?

#### BREEAM

Launched in 1990, BREEAM is the world's leading environmental assessment method and rating system for buildings. Over 500,000 buildings have certified BREEAM assessment ratings and over two million more are registered for assessment. BREEAM set the standard for best practice in sustainable building design, construction and operation, and is now applied in over 70 countries worldwide.

A BREEAM assessment uses recognised measures of performance, which are set against established benchmarks, to evaluate a building's specification, design, construction and use.

BREEAM addresses wide-ranging environmental and sustainability issues and enables developers, designers and building managers to demonstrate the environmental credentials of their buildings.

A Certificated BREEAM assessment is delivered by a licensed organisation, using assessors trained under a UKAS accredited competent person scheme, at various stages in a buildings life cycle.



There are ten sections in BREEAM New Construction 2014 for which credits can be achieved, as shown below:

- management (Man 01 – Man 05)
- health & wellbeing (Hea 01 – Hea 06)
- energy (Ene 01 – Ene 09)
- transport (Tra 01 – Tra 05)
- transport (Tra 01 – Tra 05)
- materials (Mat 01 – Mat 06)
- waste (Wst 01 – Wst 06)
- land use & ecology (LE 01 – LE 05)
- pollution (Pol 01 – Pol 05)
- Innovation (Inn 01)

## Kingspan Kooltherm® FM Pipe Insulation

Kingspan Kooltherm® FM Pipe Insulation can contribute towards the achievement of credits in BREEAM, through Mat 03 Responsible sourcing of materials, Mat 04 Insulation, Hea 02 Indoor air quality and indirectly through 'Ene 01 Reduction of CO<sub>2</sub> emissions'.

The BRE has confirmed that a Green Guide Rating of A+/A can be used for Kingspan Kooltherm® FM Pipe Insulation, representing the best environmental performance/least environmental impact.

## Mat 03 Responsible Sourcing of Materials

Up to 3 credits are available for Responsible sourcing of materials, Compliance Note CN3.2 refers to BRE Guidance Note GN18 V 2.0, which in turn sets out the criteria for Responsible sourcing of materials including insulation products. The manufacture of Kingspan Kooltherm® FM Pipe Insulation (key process) and phenolic resin production (supply chain processes) are both covered by Environmental Management Systems certified in accordance with BS EN ISO 14001:2004, achieving Responsible Sourcing Points. The EMS certificates for Kingspan and our supply chain process are available upon request.

### Breeam Recognised Responsible Sourcing Schemes

### Associated Responsible Sourcing Point Score

Reused materials only.

10

Currently there are no BREEAM Recognised Responsible Sourcing Certification Schemes that achieve this point score

3

Environmental Management System (EMS) (certified): Key Process<sup>1</sup> and supply chain<sup>2</sup> extraction process (see Table 2 below)

2

Environmental Management System (EMS) (certified): Key Process<sup>1</sup> (see Table 2 below)

1

<sup>1</sup> Key Process: The final major aspects of processing that are carried out for the product / material in question. There may be a single process or multiple processes requiring assessment, depending on the end product. The scope of the process covered by the certified EMS for each applicable material category is detailed in Table 2: Complaint EMS scope by material category.

<sup>2</sup> Supply Chain EMS: Supply chain EMS covers all of the major aspects of processing and extraction involved in the supply chain for the end product. Note that recycled materials are not required to demonstrate a Supply Chain EMS. If the EMS certification is provided for the Key Processes for recycled materials, this is assumed by default. The scope of the key process and supply chain covered by the certified EMS for each of the assessed material category are detailed in Table 2: Compliant EMS scopy by material category.

Table 1: BREEAM Recognised Responsible Sourcing Certification Schemes

## Mat 04 Insulation

One credit is available for insulation products for low embodied environmental impact relative to its thermal properties.

The credit is awarded by calculating the Insulation Index, relative to Green Guide rating, volume, and thermal conductivity of the insulation.

The BRE has confirmed that the Green Guide Ratings listed below can be used for Kingspan Kooltherm® FM Pipe Insulation, typically achieving the credit for Embodied Impact.

Please contact Kingspan Industrial Insulation Ltd for further details.

## Hea 02 Indoor air quality

Up to five credits are available in the Health and Wellbeing section of BREEAM. Kooltherm® FM Pipe Insulation has achieved Eurofins Indoor Air Quality Gold certification, a scheme recognised by the BRE for building products.

## Hea 04 Thermal comfort

Three credits are available for improving the thermal comfort of users under the BREEAM. An increased level of insulation on pipework has been demonstrated to reduce the potential for overheating in buildings, particularly in corridors. The UK Government Enhanced Capital Allowance scheme promotes the installation of pipework insulation above and beyond the Building Regulations minimum standards. These increased levels of insulation can help demonstrate compliance with the Thermal Modelling requirements of Hea 04.

## 2008 Green Guide Summary Ratings for Kooltherm® FM Pipe Insulation

Element Specifications	Element No.	Buildings Assessed	Service Life (years)	Ecopoint Score per linear metre	2008 Green Guide Summary Rating
Kingspan Kooltherm® FM Pipe Insulation with aluminium foil facing (silver), for dwellings (hot water and heating)	1635800013	Domestic	60	0.000928	A+
Kingspan Kooltherm® FM Pipe Insulation with aluminium foil facing (silver), for non-domestic buildings (hot water 60°C)	1636810013	Commercial	60	0.00162	A+
Kingspan Kooltherm® FM Pipe Insulation with aluminium foil facing (silver), for non-domestic buildings (heating 75°C)	1637820013	Commercial	60	0.00162	A+
Kingspan Kooltherm® FM Pipe Insulation with aluminium foil facing (silver), for non-domestic buildings (chilled 10°C)	1638830013	Commercial	60	0.00101	A
Kingspan Kooltherm® FM Pipe Insulation with aluminium foil facing (silver), for non-domestic buildings (chilled 5°C)	1639840013	Commercial	60	0.00136	A+
Kingspan Kooltherm® FM Pipe Insulation with aluminium foil facing (silver), for non-domestic buildings (chilled 0°C)	1640850013	Commercial	60	0.00162	A+
Kingspan Kooltherm® FM Pipe Insulation with aluminium foil facing (black), for dwellings (hot water and heating).	1635800015	Domestic	60	0.000825	A+
Kingspan Kooltherm® FM Pipe Insulation with aluminium foil facing (black), for non-domestic buildings (hot water 60°C)	1635800015	Commercial	60	0.00149	A+
Kingspan Kooltherm® FM Pipe Insulation with aluminium foil facing (black), for non-domestic buildings (heating 75°C)	1637820015	Commercial	60	0.00149	A+
Kingspan Kooltherm® FM Pipe Insulation with aluminium foil facing (black), for non-domestic buildings (chilled 10°C)	1638830015	Commercial	60	0.000907	A+
Kingspan Kooltherm® FM Pipe Insulation with aluminium foil facing (black), for non-domestic buildings (chilled 5°C)	1639840015	Commercial	60	0.00124	A+
Kingspan Kooltherm® FM Pipe Insulation with aluminium foil facing (black), for non-domestic buildings (chilled 0°C)	1640850015	Commercial	60	0.00149	A+

**Table 2: 2008 Green Guide Ratings for Kingspan Kooltherm® FM Pipe Insulation.**

*Element Specification (as installed over a 60-year study period):*

*1m length of Kingspan Kooltherm® FM Pipe Insulation (thermal conductivity 0.025 W/mK, density 37 kg/m³) with aluminium foil facing in silver or black as indicated.*



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