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Testing. Advising. Assuring.

Title:

CLASSIFICATION OF
REACTION TO FIRE
PERFORMANCE
IN ACCORDANCE WITH
EN 13501-1:2007+A1:2009

Notified Body No:

0833

Product Name:

"Kooltherm Pipe Insulation"

Report No:

361596

Issue No:

1

Prepared for:

Kingspan Industrial Insulation
Limited, Glossop Brook Road,
Glossop, Derbyshire, SK13
8GF

Date:

21st March 2016



0249

1. Introduction

This classification report defines the classification assigned to "Kooltherm Pipe Insulation", a phenolic foam pipe insulation with a reinforced-aluminium foil facing, in accordance with the procedures given in EN 13501-1:2007 +A1: 2009

2. Details of classified product

2.1 General

The product, "Kooltherm Pipe Insulation", a phenolic foam pipe insulation with a reinforced-aluminium foil facing is defined as suitable for construction applications, linear pipe thermal insulation.

The Kooltherm Pipe Insulation products covered by this evaluation have the following type designations:

2.2 Product description

The product, "Kooltherm Pipe Insulation", a phenolic foam pipe insulation with a reinforced-aluminium foil facing, is fully described below and in the test reports provided in support of classification listed in Clause 3.1.

General description		Phenolic foam pipe insulation with a reinforced-aluminium foil facing
Product reference		"Kooltherm Pipe Insulation"
Name of manufacturer		Kingspan Industrial Insulation Limited
Pipe wall thickness		No restrictions
Overall outer diameter		Up to 300 mm
Pipe diameter		up to an overall outer diameter 300 mm
Product configuration		<ul style="list-style-type: none"> ▪ Foil facing (test face) ▪ Scrim ▪ Foam
Foil facing (test face)	Product reference	See Note 1 below
	Generic type	Aluminium foil/black aluminium foil
	Name of manufacturer	See Note 1 below
	Weight per unit area	94±9 g/m ² (silver) 77±9 g/m ² (silver and black)
	Thickness	30 µm (silver) 18 µm (silver and black)
	Flame retardant details	See Note 2 below
Scrim	Product reference	Plain Glass Scrim 5 x 5 mm
	Generic type	Glass scrim
	Name of manufacturer	See Note 1 below
	Type of weave	Bi-directional fibreglass / 340 dtex glass warp and weft
	Weight per unit area	Between 11.7 and 12.4 g/m ²
	Flame retardant details	See Note 2 below
Foam	Generic type	Phenolic foam
	Product reference	"Kooltherm Pipe Section"
	Name of manufacturer	Kingspan Industrial Insulation Limited

	Thickness	Up to 32 mm
	Density	40- 60 kg/m ³
	Colour	"Pink"
	Flame retardant details	See Note 2 below
Mounting and fixing details		The specimens were mounted with the maximum depth ventilated cavity between the specimen and the calcium silicate backing board. The joint in the foil was exposed to the flame conditions of the test
Brief description of manufacturing process		Continuous lamination

Note 1. The sponsor of the test has provided this information but at the specific request of the sponsor, these details have been omitted from the report and are instead held on the confidential file relating to this investigation.

Note 2. The sponsor of the test has confirmed that no flame retardant additives were utilised in the production of the component.

Note 3. The sponsor of the test was unable to provide this information.

3. Test reports/extended application reports & test results in support of classification

3.1 Test reports/extended application reports

Name of Laboratory	Name of sponsor	Test reports/extended application report Nos.	Test method / extended application rules & date
Exova Warringtonfire	Kingspan Industrial Insulation Limited	WF 316982, WF 324372, WF 349346, WF 349347, WF 349348	EN 13823
Exova Warringtonfire	Kingspan Industrial Insulation Limited	WF 324391	EN ISO 11925-2
Exova Warringtonfire	Kingspan Industrial Insulation Limited	WF 361595	EN/TS 15117

3.2 Test results

Test method & test number	Parameter	No. tests	Results	
			Continuous parameter - mean (m)	Compliance parameters
EN 13823	Figra _{0.2 MJ} (W/s)	3 + 3 + 2 + 2 + 1	230	Compliant
	THR _{600 s} (MJ)		4.39	Compliant
	Smogra (m ² /s ²)		2.2	Compliant
	TSP _{600 s} (m ²)		27.5	Compliant
	LFS (y/n)		N	Compliant
	Flaming droplets (y/n) <10 s (y/n) >10 s (y/n)		N	Compliant
EN ISO 11925-2 30 s surface exposure	Flame spread (mm)	6	nil	Compliant
	Flaming droplets (y/n)		None	Compliant
30 s edge exposure	Flame spread (mm)	6	Nil	Compliant
	Flaming droplets (y/n)		None	Compliant
30 s exposure of the core rotated at 90°	Flame spread (mm)	6	13	Compliant
	Flaming droplets (y/n)		None	Compliant

The values listed are the 'worst case' results achieved on the product range covered in this report.

4. Classification and field of application

4.1 Reference of classification

This classification has been carried out in accordance with clause 10 of EN 13501-1:2007 +A1: 2009

4.2 Classification

The product, "Kooltherm Pipe Insulation", a phenolic foam pipe insulation with a reinforced-aluminium foil facing, in relation to its reaction to fire behaviour is classified:

Reaction to fire classification: B_L-s1, d0

4.3 Field of application

These classification results are valid for the following end use applications:

- i) Pipe insulation up to an external diameter of 300 mm

This classification results are valid for the following product parameters:

Insulation wall thickness	up to 32 mm, up to an external diameter of 300 mm
Product density	40 – 60 kg/m ³ ± 15%
Facing	Black and uncoloured (silver) optional application of a self-adhesive strip for fixing
Product composition	No further variations allowed

5 Limitations

This classification document does not represent type approval or certification of the product.

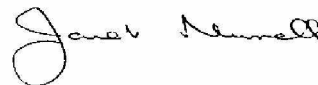
SIGNED



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Frans Paap
Certification Engineer

APPROVED



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Janet Murrell
Technical Manager
on behalf of **Exova Warringtonfire**

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