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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 K15"

Report No:

WF 380591

Issue No:

2

Prepared for:

Kingspan Insulation Ltd,
Torvale Industrial Estate,
Pembroke,
Leominster
HR6 9LA

Date:

27th February 2017



1. Introduction

This classification report defines the classification assigned to "Kooltherm K15", a family of reinforced foil faced and backed foam insulation, in line with the procedures given in EN 13501-1:2007+A1: 2009.

2. Details of classified product

2.1 General

The product, "Kooltherm K15", a family of reinforced foil faced and backed foam insulation, is defined as being suitable for construction applications, excluding flooring and linear pipe thermal insulation.

2.2 Product description

The product, "Kooltherm K15", a family of reinforced foil faced and backed foam insulation, is fully described below and in the test reports provided in support of classification listed in Clause 3.1.

General description		Reinforced foil faced and backed foam insulation product
Product reference		"Kooltherm K15"
Batch No		"8100224619.1000"
Name of manufacturer		Kingspan Insulation Ltd.
Thickness		25 – 150 mm
Weight per unit area		5.68kg/m ² (stated by sponsor) 5.82 kg/m ² (determined by Exova Warringtonfire)
Foil	Generic type	Aluminium
	Product reference	"Scrim Composite Foil-Perforated"
	Detailed description / composition details	Lamtec 25 micron printed, perforated, composite foil ref: "10131"
	Name of manufacturer	Lamtec
	Thickness	0.38mm
	Weight per unit area	171g/m ²
	Colour reference	"Silver With Kingspan Logo"
	Flame retardant details	See Note 1 below
Scrim reinforcement	Generic type	See Note 2 below
	Product reference	See Note 2 below
	Name of manufacturer	See Note 3 below
	Colour reference	"Silver"
	Thickness	See Note 2 below
	Density / weight per unit area	See Note 2 below
	Type of weave / cell dimensions	Bi directional scrim
	Flame retardant details	See Note 1 below

Continued on next page

Bonding details		Auto adhesively bonded during the manufacturing process
Foam insulation	Generic type	Phenolic
	Product reference	"K15"
	Detailed description / composition details	Factory made closed cell phenolic foam
	Name of manufacturer	Kingspan Insulation Ltd.
	Thickness	25 - 150mm
	Density	40kg/m³
	Colour reference	"Pinkish"
Flame retardant details		See Note 1 below
Bonding details		Auto adhesively bonded during the manufacturing process
Scrim reinforcement	Generic type	See Note 2 below
	Product reference	See Note 2 below
	Name of manufacturer	See Note 3 below
	Colour reference	"Silver"
	Thickness	See Note 2 below
	Density / weight per unit area	See Note 2 below
	Type of weave / cell dimensions	Bi directional scrim
Flame retardant details		See Note 1 below
Foil	Generic type	Aluminium
	Product reference	"Scrim Based Composite Foil Perforated"
	Detailed description / composition details	1-1963 Lamtec 25micron foil face. No print. perforated
	Name of manufacturer	Lamtec
	Thickness	0.38mm
	Weight per unit area	171g/m²
	Colour reference	"Silver Foil"
Flame retardant details		See Note 1 below
Brief description of manufacturing process		Facing is auto adhesively bonded to foam during the manufacturing process.

Note 1: The sponsor of the test has confirmed that no flame retardant additives were utilised in the production of the component.

Note 2: The sponsor was unable to provide this information.

Note 3: 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.

The description of the specimens as given above is not as detailed as would usually be the case for descriptions included in **Exova Warringtonfire** test reports and the description may not fully comply with the requirements of the test standard. In all other respects however the tests were conducted fully in accordance with the requirements of the test standard and the test results are valid

3. Test reports & test results in support of classification

3.1 Test reports

Name of Laboratory	Name of sponsor	Test reports/extended application report Nos.	Test method / extended application rules & date
Exova Warringtonfire	Kingspan Limited	WF 379563 and WF 379564	EN ISO 11925-2
Exova Warringtonfire	Kingspan Limited	WF 379561 and WF 379562	EN 13823

3.2 Test results

Test method & test number	Parameter	No. tests	Results	
			Continuous parameter - mean (m)	Compliance parameters
EN ISO 11925-2 (30s exposure - surface)	F _s	6, 6	60mm, 50mm	Compliant
	Flaming droplets/ particles		None, None	Compliant
EN ISO 11925-2 (30s exposure – edge)	F _s	6, 6	40mm, 30mm	Compliant
	Flaming droplets/ particles		None, None	Compliant
EN ISO 11925-2 (30s exposure – edge turned at 90 degrees)	F _s	6, 6	50mm, 45mm	Compliant
	Flaming droplets/ particles		None, None	Compliant
EN 13823	FIGRA _{0.2MJ}	3, 3	279.38, 256.91	Compliant
	FIGRA _{0.4MJ}		119.55, 137.32	Compliant
	THR _{600s}		2.26, 3.56	Compliant
	LFS		None, None	Compliant
	SMOGRA		27.1, 18.5	Compliant
	TSP _{600s}		39.88, 45.68	Compliant

4. Classification and field of application

4.1 Reference of classification

This classification has been carried out in accordance with clause 8 of EN 13501-1:2007+A1: 2009 and BS EN 14509:2013.

4.2 Classification

The product, "Kooltherm K15", a family of reinforced foil faced and backed foam insulation, in relation to their reaction to fire behaviour are classified:

C

The additional classification in relation to smoke production is:

s1

The additional classification in relation to flaming droplets / particles is:

d0

The format of the reaction to fire classification for construction applications, excluding flooring and linear pipe thermal insulation is:

Fire Behaviour		Smoke Production			Flaming Droplets	
C	-	s	1	,	d	0

Reaction to fire classification: C – s1, d0

4.3 Field of application

This classification is valid for the following end use applications, as defined in connection with EN 14509:2013.

- i) Wall and ceiling applications
- ii) Free standing

This classification is also valid for the following product parameters as determined in connection with EN 14509:2013:

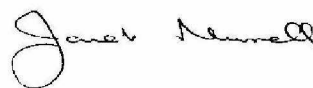
Overall product thickness	25 – 150 mm
Insulation thickness	25 – 150 mm
Thickness of metal facing	0.38mm
Density of insulation	No variation allowed
Product weight per unit area	No variation allowed
Product colour/pattern	Any colour
Product composition	No variation allowed
Product construction	No variation allowed

SIGNED



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Katie Williams
Junior Certification Engineer

APPROVED



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

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Issue 2: 6th March 2017, corrections to descriptions table