



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 K5 EWB"

Report No:

WF 349136

Issue No:

1

Prepared for:

Kingspan Insulation Limited
Pembroke
Leominster
Herefordshire
HR6 9LA

Date:

3rd March 2015



1. Introduction

This classification report defines the classification assigned to "Kooltherm K5 EWB", a family of tissue-faced thermoset phenolic insulation boards, in line with the procedures given in EN 13501-1:2007+A1: 2009.

2. Details of classified product

2.1 General

The product, "Kooltherm K5 EWB", a family of tissue-faced thermoset phenolic insulation boards, is defined as being suitable for construction applications, excluding flooring and linear pipe thermal insulation.

2.2 Product description

The product, "Kooltherm K5 EWB", a family of tissue-faced thermoset phenolic insulation boards, is fully described below and in the test reports provided in support of classification listed in Clause 3.1.

General description		Tissue-faced thermoset phenolic insulation board
Name of manufacturer		Kingspan Insulation Ltd.
Trade name		"Kooltherm K5 EWB"
Thickness		60mm to 100mm
Weight per unit area		4.14kg/m ²
Product configuration		<ul style="list-style-type: none"> • Tissue facer • Phenolic foam • Tissue facer
Tissue facer	Product reference	See Note 1 below
	Generic type	Glass tissue facer
	Name of manufacturer	See Note 1 below
	Weight per unit area	See Note 1 below
	Thickness	0.67mm
	Colour	"Off-white"
	Flame retardant details	See Note 2 below
Foam	Product references	"K5"
	Generic type	Phenolic foam
	Name of manufacturer	Kingspan Insulation Ltd.
	Thickness	60mm to 100mm
	Density	±15% of tested density See Note 1 below
	Colour reference	"Pink"
	Flame retardant details	See Note 2 below

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Substrate	Product reference	"Promat – Brandschultzbauplatten; Promatect-H"
	Generic type	Calcium Silicate based board
	Name of manufacturer	Promat
	Thickness	12mm
	Density	870kg/m ³
	Flame retardant details	The substrate is inherently flame retardant
Mounting and fixing details		As per end use application: reisser countersunk screws 6x150mm with 70x70mm SFS 'Isofast' ID 70 plate washers. Edge fixings sited more than 50mm and not less than 150mm from board edges with no overlap of board joints. Fixings applied at overall rate of 9.44 per m ² .
Joint details		Long wing: one horizontal at 500mm of specimen height, vertical 200mm in from corner line - Short wing one horizontal joint at 500mm height. As per EN 13823 5.2.2
Brief description of manufacturing process		Facings auto adhesively bonded to phenolic foam during the manufacturing process. Foam boards are made at 70°C under pressure

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.

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

3.1 Test reports and extended application report

Name of Laboratory	Name of sponsor	Test reports/extended application report Nos.	Test method / extended application rules & date
Exova warringtonfire	Kingspan Insulation Limited	WF 329592	EN ISO 11925-2
Exova warringtonfire	Kingspan Insulation Limited	WF 329586, WF 329585	EN 13823
Exova warringtonfire	Kingspan Insulation Limited	WF 349132	EN/TS 15117

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	20	Compliant
	Flaming droplets/ particles		None	Compliant
EN ISO 11925-2 (30s exposure - edge)	F _s	6	18.3	Compliant
	Flaming droplets/ particles		None	Compliant
EN ISO 11925-2 (30s exposure - edge turned at 90 degrees)	F _s	6	Nil	Compliant
	Flaming droplets/ particles		None	Compliant
EN 13823	FIGRA _{0.2MJ}	Formal test average	354.60	Compliant
		Indicative 1	217.08	
	FIGRA _{0.4MJ}	Formal test average	174.21	Compliant
		Indicative 1	135.46	
	THR _{600s}	Formal test average	5.34	Compliant
		Indicative 1	4.64	
	LFS	Formal test average	None	Compliant
		Indicative 1	None	
	SMOGRA	Formal test average	1.48	Compliant
		Indicative 1	0.00	
	TSP _{600s}	Formal test average	35.88	Compliant
		Indicative 1	29.73	

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 EN 15715: 2009.

4.2 Classification

The product, "Kooltherm K5 EWB", a family of tissue-faced thermoset phenolic insulation boards, in relation to its reaction to fire behaviour is 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

i.e. C – s1 , d0

Reaction to fire classification: C – s1, d0

4.3 Field of application

This classification is valid for the following end use applications:

- Construction Applications used over any substrate with a density equal to or greater than 870kg/m³, having a minimum thickness of 12mm and a fire performance of A2 or better (excluding paper faced gypsum plasterboard).

This classification is also valid for the following product parameters:

Insulation thickness	60mm to 100mm
Insulation density	± 15% of tested density
Product composition	No variation allowed
Thickness / area weight of facings composition	For the tested thickness only. The test result obtained for Euroclass A1 and A2 facings will also be valid for thicker facings of the same type.

SIGNED



Matthew Dale

Certification Engineer
Technical Department

APPROVED



Frans Paap

Certification Engineer
Technical Department
on behalf of **Exova warringtonfire**

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