

Exova Warringtonfire
Holmesfield Road
Warrington
WA1 2DS
United Kingdom

T : +44 (0) 1925 655 116
F : +44 (0) 1925 655 419
E : warrington@exova.com
W: www.exova.com



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:

"Glasswool Faced With
Aluglass"

Report No:

WF 370051

Issue No:

1

Prepared for:

Kuwait Insulating Material
Manufacturing Co (KIMMCO)
P.O. Box 10042
Shuaiba
65451
Kuwait

Date:

1st August 2016



1. Introduction

This classification report defines the classification assigned to "Glasswool Faced With Aluglass", a foil faced glass cloth adhered to pipe insulation, in line with the procedures given in EN 13501-1:2007+A1: 2009.

2. Details of classified product

2.1 General

The product, "Glasswool Faced With Aluglass", a foil faced glass cloth adhered to pipe insulation, is defined as being suitable for construction applications, excluding flooring and linear pipe thermal insulation.

2.2 Product description

The product, "Glasswool Faced With Aluglass", a foil faced glass cloth adhered to pipe insulation, is fully described below and in the test reports provided in support of classification listed in Clause 3.1.

General description		Foil face glass cloth adhered to pipe insulation material
Product reference		"Glasswool Faced With Aluglass"
Name of manufacturer		Kuwait Insulating Material Manufacturing Co (KIMMCO)
Wall thickness		50mm or thinner
Outer diameter		122±4mm
Inner diameter		22±1mm
Density of composite		67.30kg/m ³ (determined by Exova Warringtonfire)
Foil	Generic type	Aluminium
	Product reference	"Aluminium Foil"
	Name of manufacturer	See Note 1 below
	Thickness	20microns
	Density	2.7kg/m ³
	Colour reference	"Silver"
	Flame retardant details	See Note 2 below
Adhesive	Generic type	See Note 3 below
	Product reference	"Flame Retardant Adhesive, High Temperature Resistant"
	Name of manufacturer	See Note 3 below
	Colour reference	See Note 3 below
	Application rate	See Note 3 below
	Application method	See Note 3 below
	Flame retardant details	See Note 3 below
Curing process	See Note 3 below	

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Glass cloth	Generic type	Fiberglass
	Product reference	"Fiberglass Cloth"
	Name of manufacturer	See Note 1 below
	Colour reference	"White"
	Thickness	150microns
	Weight per unit area	101g/m ²
	Type of weave	Plain weave
	Cell dimensions	0.83mm x 0.91mm
	Flame retardant details	See Note 2 below
Adhesive	Generic type	Water based
	Product reference	"Flame Retardant Water Based Adhesive"
	Name of manufacturer	See Note 1 below
	Colour reference	"White"
	Application rate	40±10g/m ²
	Application method	On-line
	Flame retardant details	See Note 3 below
	Curing process	Drying
Insulation	Generic type	Glasswool
	Product reference	"Glass Fiber Bonded With Thermosetting Resin"
	Name of manufacturer	Kuwait Insulating Material Manufacturing Co (KIMMCO)
	Colour reference	"Yellow"
	Thickness	50mm or thinner
	Density	64kg/m ³
	Generic type of resin	Phenolic
	Product reference of resin	See Note 1 below
	Amount of resin	3.83 % (of 4.36% binder content)
	Generic type of oil	Emulsion
	Product reference of oil	"Oil Emulsion"
	Amount of oil	0.36 % (of 4.36% binder content)
Flame retardant details	See Note 2 below	
Air space details	A 25mm ventilated cavity was situated between the reverse face of the specimens and the calcium silicate backing board	
Mounting and fixing details	Reinforced-aluminium foil faced rigid phenolic pipe insulation, mounted on to steel pipes in accordance with clause 5.3.2.8.2 of EN 15715: 2009.The vertical and horizontal joint were sealed with foil tape.	

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Diagram of specimen configuration	<p>a) Front view</p> <p>b) Top view</p>
Brief description of manufacturing process	Transfer molten glass into fibrous material using centrifuge process, fibrous material is bonded with thermosetting resin

Note 1: The sponsor was unwilling to provide this information.

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 was unable to provide this information.

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	Kuwait Insulating Material Manufacturing Co (KIMMCO)	WF 369226	EN ISO 11925-2
		WF 369225	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	Nil	Compliant
	Flaming droplets/ particles		None	Compliant
EN ISO 11925-2 (30s exposure - edge)	F _s	6	Nil	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}	3	15.15	Compliant
	FIGRA _{0.4MJ}		0.00	Compliant
	THR _{600s}		0.89	Compliant
	LFS		None	Compliant
	SMOGRA		0.00	Compliant
	TSP _{600s}		25.52	Compliant

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, "Glasswool Faced With Aluglass", a foil faced glass cloth adhered to pipe insulation, in relation to its reaction to fire behaviour is classified:

B_L

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	
B_L	-	s	1	,	d	0

i.e. **B_L – s1 , d0**

Reaction to fire classification: B₁ – s1, d0

4.3 Field of application

This classification is valid for the following end use applications:

- i) Linear pipe thermal insulation

This classification is also valid for the following product parameters:

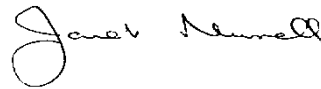
Thickness of insulation	50mm or thinner
Product density	±15%
Facing type	Tested product only
Facing thickness / weight per unit area	The result obtained for Euroclass A1 and A2 facings will also be valid for thicker facings of the same types.
Product colour/pattern	No variation allowed
Product composition	No variation allowed
Product construction	No variation allowed

SIGNED



.....
Matthew Dale
Senior Certification Engineer
Technical Department

APPROVED



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

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