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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:

"Merino FR Grade 12mm
Compact Laminate"

Report No:

319369

Issue No:

1

Prepared for:

Merino Industries Limited
Village Acheja
PO Hapur Distt
Panchsheel
Nagar
245101 India

Date:

18th July 2012

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1. Introduction

This classification report defines the classification assigned to "Merino FR Grade 12mm Compact Laminate", a compact high pressure laminate, in line with the procedures given in EN 13501-1:2007+A1: 2009.

2. Details of classified product

2.1 General

The product, "Merino FR Grade 12mm Compact Laminate", a compact high pressure laminate, is defined as being suitable for construction applications, excluding flooring and linear pipe thermal insulation.

2.2 Product description

The product, "Merino FR Grade 12mm Compact Laminate", a compact high pressure laminate, is fully described below and in the test reports provided in support of classification listed in Clause 3.1.

General description			Compact high pressure laminate (HPL) in accordance with EN 438
Product reference of composite			"Merino FR Grade 12mm Compact Laminate"
Name of manufacturer of composite			Merino Industries Ltd
Thickness of composite			12mm (stated by sponsor) 12.14mm (determined by **Exova Warringtonfire**)
Weight per unit area of composite			16.96kg/m^2 (determined by **Exova Warringtonfire**)
Density of composite			1.45g/cm^3 (stated by sponsor) 1.40g/cm^3 (determined by **Exova Warringtonfire**)
Decorative face	Paper	Product reference	"Decorative Base Paper"
		Pattern reference	"Merino Pattern"
		Name of manufacturer	Technocell
		Generic type	Décor paper for surface coating and impregnating
		Number of layers	One
		Thickness of each layer	0.1mm
		Weight per unit area of each layer	80g/m^2
		Flame retardant details	**See Note 1 below**
	Resin	Product reference	"Melamine Formaldehyde"
		Name of manufacturer	Merino Industries Limited
		Generic type	Amino resin
		Amount of resin	50g/m^2
		Flame retardant details	**See Note 1 below**

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Core	Paper	Product reference	"Absorbent Kraft Paper"
		Name of manufacturer	StoraEnzo
		Generic type	Wood pulp based Kraft paper
		Number of layers	70
		Thickness of each layer	0.22mm
		Weight per unit area of each layer	160g/m^2
		Flame retardant details	**See Note 1 below**
	Resin	Product reference	"Phenol Formaldehyde Resin"
		Name of manufacturer	Merino Industries Limited
		Generic type of resin	Phenolic thermosetting resin
		Amount of resin	16kg/m^2
		Flame retardant details	**See Note 2 below**
Reverse face	Paper	Product reference	"Decorative Base Paper"
		Pattern reference	"Merino Pattern"
		Name of manufacturer	Technocell
		Generic type	Décor paper for surface coating and impregnating
		Number of layers	One
		Thickness of each layer	0.1mm
		Weight per unit area of each layer	80g/m^2
		Flame retardant details	**See Note 1 below**
	Resin	Product reference	"Melamine Formaldehyde"
		Name of manufacturer	Merino Industries Limited
		Generic type	Amino resin
		Amount of resin	50g/m^2
		Flame retardant details	**See Note 1 below**
Mounting and fixing details			The specimen was tested with a maximum depth ventilated cavity between the reverse face and the 12mm thick calcium silicate board substrate (as specified in EN 13238)
Brief description of manufacturing process			Decorative paper is impregnated with MF resin and Kraft paper is impregnated with phenolic resin mixed with flame retardant chemicals. They are pressed together in the press with a pressure of 90-95kg/cm^2, at a temperature of 140-150°C for 35 minutes heating and 35 minutes cooling to have all resin flow into the paper. It is then fully cured to form a single compact laminate.

Note 1. The sponsor 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.

3. Test reports & test results in support of classification

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3.1 Test reports

Name of Laboratory	Name of sponsor	Test reports/extended application report Nos.	Test method / extended application rules & date
Exova warringtonfire	**Merino Industries Limited**	WF 319221	EN ISO 11925-2
Exova warringtonfire	**Merino Industries Limited**	WF 319222	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 13823	FIGRA $_{0.2MJ}$	3	55.68	Compliant
	FIGRA $_{0.4MJ}$		52.79	Compliant
	THR $_{600s}$		4.92	Compliant
	LFS		None	Compliant
	SMOGRA		0.00	Compliant
	TSP_{600s}		41.57	Compliant

4. Classification and field of application

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4.1 Reference of classification

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

4.2 Classification

The product, “Merino FR Grade 12mm Compact Laminate”, a compact high pressure laminate, in relation to its reaction to fire behaviour is classified:

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	-	s	1	,	d	0

i.e. B – s1 , d0

Reaction to fire classification: B – s1, d0

4.3 Field of application

This classification is valid for the following end use applications:

i) Construction applications, mechanically installed with a minimum airgap of 180mm

This classification is also valid for the following product parameters:

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Product thickness	No variation allowed
Product weight per unit area	No variation allowed
Product colour/pattern	No variation allowed
Product composition	No variation allowed
Product construction	No variation allowed

SIGNED

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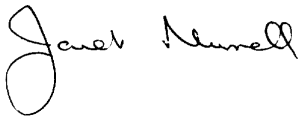
Matthew Dale
Certification Engineer
Technical Department

APPROVED



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Janet Murrell
Technical Manager
Technical Department
on behalf of **Exova warringtonfire**

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