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Testing, calibrating, advising.

**Title:**

European reaction to fire classification of Teknos FR Facade in accordance with BS EN 13501-1.

**WF Report No:**

BMT/RFP/F14055/05  
Revision 3

**Prepared for:**

**Teknos A/S**

Industrivej 19  
DK 6580 Vamdrup  
Denmark

**Date:**

April 2016

**Notified Body No:**

1314



1762

## **Exova Warringtonfire – the new name for BM TRADA**

On December 1<sup>st</sup> 2015, Chiltern International Fire Limited (trading as BM TRADA) commenced trading under the name Exova Warringtonfire.

To coincide with this change, our Technical Reports, Test Reports, Product Assessments, company stationery and marketing collateral have been updated to reflect the Exova Warringtonfire branding.

The validity of all documents previously issued by Chiltern International Fire Limited including certificates, test reports and product assessments is unaffected by this change. A letter to this effect is available upon request by e-mailing [globalfire@exova.com](mailto:globalfire@exova.com)

### **About Exova Warringtonfire**

Exova Warringtonfire is part of the Exova Group one of the world's leading laboratory-based testing groups, trusted by organisations to test and advise on the safety, quality and performance of their products and operations. Headquartered in Edinburgh, UK, Exova operates 143 laboratories and offices in 32 countries and employs around 4,500 people throughout Europe, the Americas, the Middle East and Asia/Asia Pacific. With over 90 years' experience, Exova specialises in testing across a number of key sectors from health sciences to aerospace, transportation, oil and gas, fire and construction.

Be assured that whilst the name will change, your service provision and primary contacts have not. What will be available to you is a wider team of testing experts and an extended range of testing capabilities including structural steelwork testing, ventilation duct and damper testing, ASTM testing, water mist system testing and smoke toxicity testing and covering additionally both the rail and marine sectors.

If you have any questions, please do not hesitate to contact a member of the team and we will do our best to answer them. We appreciate your business to date and we look forward to working with you in the future.

Kind regards

Exova Warringtonfire

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## **1 Introduction**

This classification report defines the classification assigned to the product, Teknos FR Facade, in accordance with the procedures given in BS EN 13501-1:2007+A1:2009 Fire classification of construction products and building elements – Part 1: Classification using data from reaction to fire tests.

### **1.1 Membership of EGOLF and GNB-FSG SH02**

BM TRADA is a member of EGOLF and GNB-FSG (Fire Sector Group for the Group of Notified Bodies) and any agreements and recommendations that have been drawn up by these bodies to harmonise the approach of Laboratories has, where relevant, been incorporated within this classification report.

### **1.2 Sampling**

BM TRADA did not conduct any sampling of this product and the Sponsor did not provide evidence that any sampling had taken place.

## 2 Details of classified product

### 2.1 Product description

The product, Teknos FR Facade, is described briefly below.

Product name	Teknos FR Facade	
Description	Teknos FR Facade consists of square edged spruce cladding boards with sawn or planed front face coated with Teknosafe 2407 primer and Nordica Eko 3330 top coat.	
Uncoated timber cladding boards	Species:	Nordic Spruce (Picea Abies)
	Density:	500kg/m <sup>3</sup> ± 100kg/m <sup>3</sup> (417kg/m <sup>3</sup> measured)
Top coating	Product name:	Nordica Eko 3330-03
	Manufacturer:	Teknos OY
	Description:	Paint top coating for exterior use
	Thickness:	125µm ±10%
	Mass per unit area:	150g/m <sup>2</sup> ±10%
	Colour:	White
	Application method:	Sprayed on
Base/primer coating	Product name:	Teknosafe 2407
	Manufacturer:	Teknos OY
	Description:	Fire intumescent primer
	Batch number:	32324-*-*1
	Thickness:	280µm ±10%
	Mass per unit area:	350g/m <sup>2</sup> ±10% (wet)
	Colour:	White
Application method:	Sprayed on	
Coated cladding Colour:	White	
Manufacture of Teknos FR Facade:	Spruce solid wood, industrially treated with: <ul style="list-style-type: none"> <li>• Primer Teknosafe 2407 at 350 g / sqm (wet)</li> <li>• Top coat Nordica Eko 3330 at 150g/sqm</li> </ul> The coating is applied to the front surface and all 4 edges of each treated board.	
Intended application	Exterior and interior wall and ceiling cladding where there are fire safety requirements.	

Table 1: Product specification

The product is described in greater detail in the test reports provided in support of classification listed in Clause 3.1 of this document.

The sponsor has confirmed that there is a clearly identifiable stage in the production process of this component which results in an improvement in the reaction to fire performance.

### **3 Test reports/extended application reports and test results in support of classification**

#### **3.1 Test reports/extended application reports**

<b>Name of Laboratory</b>	<b>Name of Sponsor</b>	<b>Test Reports / Extended application results</b>	<b>Test Method</b>
BM TRADA	Teknos A/S	BMT/RFP/ F14055/01	EN ISO 11925-2:2010
BM TRADA	Teknos A/S	BMT/RFP/ F14022/01 Revision 1	EN 13823:2010
BM TRADA	Teknos A/S	BMT/RFP/ F14055/02 Revision 1	EN 13823:2010
BM TRADA	Teknos A/S	BMT/RFP/ F14055/03 Revision 1	EN 13823:2010
BM TRADA	Teknos A/S	BMT/RFP/ F14055/04 Revision 2	EN 15725:2010

### 3.2 Test results

Test Method	Number of tests and report number	Parameter	Results	
			Parameter result / mean result	Compliance with parameters for classification
<b>BS EN ISO 11925-2:2010</b>				
30s exposure surface test Clause 7.3.3.1	18 BMT/RFP/ F14055/01	F <sub>s</sub> (flame spread)	F <sub>s</sub> ≤ 150mm within 60s	compliant
		Flaming droplets/ particles	No ignition of filter paper	compliant
<b>BS EN 13823:2010</b>				
BS EN 13823:2010	3 BMT/RFP/ F14022/01 Revision 1	FIGRA 0.2 MJ	100.3	compliant
		LFS (to edge of specimen)	None	compliant
		THR 600s	5.94	compliant
		SMOGRA	2.7	compliant
		TSP 600s	36.2	compliant
		Flaming droplets/ particles	None	compliant
BS EN 13823:2010	3 BMT/RFP/ F14055/02	FIGRA 0.2 MJ	88.1	compliant
		LFS (to edge of specimen)	None	compliant
		THR 600s	5.5	compliant
		SMOGRA	0.9	compliant
		TSP 600s	39.3	compliant
		Flaming droplets/ particles	None	compliant
BS EN 13823:2010	4 BMT/RFP/ F14055/03	FIGRA 0.2 MJ	126.3, 89.3, 90.0, 75.0	compliant
		LFS (to edge of specimen)	None	compliant
		THR 600s	5.7, 5.2, 5.0, 5.0	compliant
		SMOGRA	1.4, 0, 2.9, 0	compliant
		TSP 600s	33.3, 28.2, 49.1, 30.3	compliant
		Flaming droplets/ particles	None	compliant

## **4 Classification and field of application**

### **4.1 Reference of classification**

This classification has been carried out in accordance with clause 8 of BS EN 13501-1:2007+A1:2009 Fire classification of construction products and building elements – Part 1: Classification using data from reaction to fire tests.

### **4.2 Classification**

The product, Teknos FR Facade, in relation to its reaction to fire behaviour is classified:

**B**

The additional classification in relation to smoke production is:

**s1**

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

**d0**

**Reaction to fire classification: B-s1, d0**



### 4.3 Field of application for the sawn front face coated product

This classification is valid for the following product parameters:

<b>Thickness</b>	19 mm to 57mm nominal thickness			
<b>Colour</b>	White			
<b>Timber species</b>	Nordic spruce (Picea Abies)			
<b>Nominal mass per unit area</b>				
<b>Surface classified</b>	The classification has been carried out with the treated sawn surface of the product being deemed as the front face.			
<b>Coating</b>	Surface	Coating	( $\mu\text{m}$ )	$\text{g}/\text{m}^2$ (wet)
	Front	Nordica Eko 3330-03 top coat	$125 \pm 10\%$	$150 \pm 10\%$
		Teknosafe 2407 base coat	$280 \pm 10\%$	$350 \pm 10\%$
Rear	None	-	-	

This classification is valid for the following end use applications:

<b>Substrate*</b>	Any substrate of Class A1 or A2-s1,d0 with a density of at least $525 \text{ kg}/\text{m}^3$ and a thickness of at least 12.0mm.
<b>Air gap</b>	44mm ventilated cavity
<b>Means of fixing</b>	Product fixed with nails onto timber studs
<b>Orientation</b>	The cladding boards are vertically orientated.
<b>Corner joint</b>	Butt joint
<b>Horizontal joint</b>	No

<b>Vertical joint</b>	No
<b>Exposed edges</b>	No

\* Reference EGOLF recommendation EGR 57:2011 (substrate thickness)

#### 4.4 Field of application for the planed front face coated product

This classification is valid for the following product parameters:

<b>Thickness</b>	19 mm nominal thickness only			
<b>Colour</b>	White			
<b>Timber species</b>	Nordic spruce (Picea Abies)			
<b>Nominal mass per unit area</b>	8.6 kg/m <sup>2</sup> (treated boards)			
<b>Surface classified</b>	The classification has been carried out with the treated planed surface of the product being deemed as the front face.			
<b>Coating</b>	Surface	Coating	( $\mu\text{m}$ )	g/m <sup>2</sup> (wet)
	Front	Nordica Eko 3330-03 top coat	125 $\pm$ 10%	150 $\pm$ 10%
		Teknosafe 2407 base coat	280 $\pm$ 10%	350 $\pm$ 10%
	Rear	None	-	-

This classification is valid for the following end use applications:



<b>Substrate*</b>	Any substrate of Class A1 or A2-s1,d0 with a density of at least 525 kg/m <sup>3</sup> and a thickness of at least 12.0mm.
<b>Air gap</b>	44mm ventilated cavity
<b>Means of fixing</b>	Product fixed with screws onto timber studs
<b>Orientation</b>	The cladding boards are vertically orientated.
<b>Corner joint</b>	Butt joint
<b>Horizontal joint</b>	No
<b>Vertical joint</b>	No
<b>Exposed edges</b>	No

\* Reference EGOLF recommendation EGR 57:2011 (substrate thickness)

## 5 Limitations

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

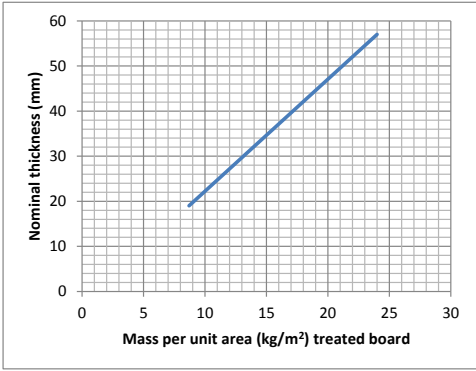
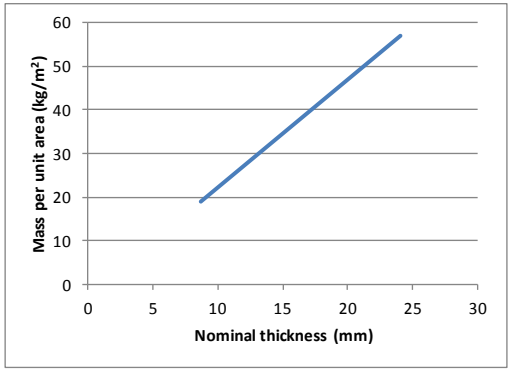












## 6 Authorisation

	Written by:	Checked and Authorised by:
<b>Signature:</b>		
<b>Name:</b>	Philip Howard	Mark Cummings
<b>Title:</b>	Technical Head Fire	Commercial Head - Fire
<b>Date of issue:</b>	04/05/16	

## 7 Revisions

Page	Revision 1	Previous
5	Species: Nordic Spruce	Species: Norway Spruce
6	BM TRADA Edit made in 3 places.	BM TRADA Ltd
6	Section 3.1 test report reference amended to reflect revised reports Reports references amended are: BMT/RFP/F14055/02 revision 1 BMT/RFP/F14055/03 revision 1 BMT/RFP/F14055/04 revision 1	Un revised reports referenced for: BMT/RFP/F14055/02 BMT/RFP/F14055/03 BMT/RFP/F14055/04
9	Nominal mass per unit area. Previous text removed. Graph added.	Mass per unit area 8.7 kg/m <sup>2</sup> (at 19mm nominal thickness) to 24.0 kg/m <sup>2</sup> (at 57mm nominal thickness).
9	Means of fixing Product fixed with nails onto timber studs	Means of fixing Product fixed with screws onto timber studs.
10	Nominal mass per unit area	Mass per unit area

Page	Revision 2	Previous
6	BMT/RFP/F14055/04 Revision 2	BMT/RFP/F14055/04 Revision 1

Page	Revision 3	Previous																																			
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