

Customer details: Interface European Manufacturing
B.V
Industrielaan 15
P.O. Box 16
3925 ZG Scherpanzeel
Netherlands

SATRA reference: FLO0251345 /1644/3

Your reference:

Date of report: 12 December 2016

Samples received: 23 November 2016

For the attention of: Mark Griffin

Date(s) work carried out: 23 November 2016 –
09 December 2016

TECHNICAL REPORT

Subject: Testing of one flooring product, described by the customer as 'Level Set Colour Beech' to BS EN 13501-1:2002 - Fire classification of construction products and building elements. Classification using test data from reaction to fire tests.

Conditions of Issue:

This report may be forwarded to other parties provided that it is not changed in any way. It must not be published, for example by including it in advertisements, without the prior, written permission of SATRA.

Results given in this report refer only to the samples submitted for analysis and tested by SATRA. Comments are for guidance only.

Tests marked \neq fall outside the UKAS Accreditation Schedule for SATRA. All interpretations of results of such tests and the comments based upon them are outside the scope of UKAS accreditation and are based on current SATRA knowledge.

A satisfactory test report in no way implies that the product tested is approved by SATRA and no warranty is given as to the performance of the product tested. SATRA shall not be liable for any subsequent loss or damage incurred by the client as a result of information supplied in the report.

Please note uncertainty of measurement has not been applied to the results in this report. SATRA uncertainty of measurement values are available on request.

Report signed by: Mandy de Wet
Position: Technologist
Department: Furniture and Floor coverings



TESTING OF ONE FLOORING PRODUCT, DESCRIBED BY THE CUSTOMER AS 'LEVEL SET COLOUR BEECH' TO BS EN 13501-1:2002 - FIRE CLASSIFICATION OF CONSTRUCTION PRODUCTS AND BUILDING ELEMENTS. CLASSIFICATION USING TEST DATA FROM REACTION TO FIRE TESTS.

1. Introduction

This classification report defines the classification assigned to reference 'Level Set Colour Beech', in accordance with the procedures given in BS EN 13501-1:2002. Testing has been conducted and completed by SATRA Technology Centre Ltd at the request of Interface European Manufacturing B.V – the Sponsor. All SATRA Reports are held in the relevant file associated with this report and this classification report is issued under the SATRA agreement.

2. Details of Classified Products

2.1 General

With regards to the property assessed, the product 'Level Set Colour Beech' is defined as being suitable for floor covering applications.

Description of Test Specimens

The description of the specimen given below has been prepared from information provided by the sponsor of the test. All values quoted are nominal, unless tolerances are given.

General description of flooring system			Luxury Vinyl Tile (Resilient Flooring)
Product reference of flooring system			
Colour reference			Wood effect
Name of Manufacturer			DONGSHIN POLYMER CO., LTD.
Overall weight per unit area			6.70kg/m ²
Overall Thickness			4.5 mm
Product Configuration			
Floor covering	Layer 1 (Poly Urethane)	Product Reference	UV paint
		Generic Type	Urethane base
		Name of Manufacturer	DONGSHIN POLYMER CO., LTD.
		Application Rate	Thickness : 8 ~ 12μm
		Application method	Roll coating
		Specific gravity	1.1
		Colour reference	Clear
		Flame Retardant Details	N/A
	Layer 2 (Wear Layer)	Product Reference	Clear film
		Generic Type	PVC semi flexible clear film
		Name of Manufacturer	DONGSHIN POLYMER CO., LTD.
		% Composition	10.35%
		Weight per unit area	0.69kg/m ²
		Thickness	0.55mm
		Trade name of flame retardant	N/A
		Generic form of flame retardant	N/A
	Amount of flame retardant	N/A	
	Layer 3 (Printed film)	Product Reference	
		Generic Type	PVC printed film
		Name of Manufacturer	DONGSHIN POLYMER CO., LTD.
		% Composition	1.50%
		Weight per unit area	0.10kg/m ²
		Thickness	0.07mm
		Flame Retardant details	N/A
		Generic form of flame retardant	N/A
	Amount of flame retardant	N/A	
	Glass fibre sheet incorporated in backing layer	Product Reference	Glass fabric
		Generic Type	PVC plastisol Impregnated Glass fabric
		Name of Manufacturer	DONGSHIN POLYMER CO., LTD.
		Thickness	0.45mm
		Weight per unit area	0.62kg/m ²
		Flame Retardant details	N/A
Generic form of flame retardant		N/A	
Amount of flame retardant		N/A	

Floor covering	Middle Layer Material (Calendared Layer)	Product Reference	Middle Layer
		Generic Type	PVC, Plasticizer & filler layer
		Name of Manufacturer	DONGSHIN POLYMER CO., LTD.
		Thickness	0.60mm
		Weight per unit area	1.23 kg/m²
		Flame Retardant details	N/A
		Generic form of flame retardant	N/A
		Amount of flame retardant	N/A
	Base Layer Material (Calendared Layer)	Product Reference	Base Layer
		Generic Type	PVC, Plasticizer & filler layer
		Name of Manufacturer	DONGSHIN POLYMER CO., LTD.
		Thickness	1.43 mm
		Weight per unit area	2.95 kg/m²
		Flame Retardant details	N/A
		Generic form of flame retardant	N/A
		Amount of flame retardant	N/A
	Backing Material 1 (Calendared Layer)	Product Reference	Balance sheet
		Generic Type	PVC & Plasticizer layer
		Name of Manufacturer	DONGSHIN POLYMER CO., LTD.
		Thickness	0.30mm
		Weight per unit area	0.38 kg/m²
		Flame Retardant details	N/A
		Generic form of flame retardant	N/A
		Amount of flame retardant	N/A
	Backing Material 2 (SOL Layer)	Product Reference	SOL sheet
		Generic Type	PVC, Plasticizer & filler layer
		Name of Manufacturer	DONGSHIN POLYMER CO., LTD.
		Thickness	1.10mm
		Weight per unit area	0.72 kg/m²
		Flame Retardant details	N/A
		Generic form of flame retardant	N/A
		Amount of flame retardant	N/A
Brief Description of the manufacturing process			<div><div>Input of raw material</div><div>1st&2nd Calendaring line(Production of Semi-product)</div><div>3rd Calendaring line(Production of Semi-product & Lamination)</div><div>UV coating</div><div>Annealing & Cooling</div><div>Cutting</div><div>Packaging</div><div>Completion of production</div></div>

Laboratory Supplied Substrate;

Adhesive	Product Reference	N/A
	Generic Type	N/A
	Name of Manufacturer	N/A
	Density (20°C)	N/A
	Colour	N/A
Substrate	Product reference	'Cembrit HD'
	Generic type	Fibre cement board
	Name of supplier	Clarkes of Walsham Ltd
	Thickness	8 ± 2mm
	Density	1800 ± 200 kg/m ³

Note 1: The sponsor of the test has failed to provide the information

Note 2: The sponsor has provided the required information but at the request of the sponsor it has been omitted from the final report.

Note 3: The sponsor was unwilling to provide the required information.

Test reports/extended application reports & test results in support of classification

3.1 Test Reports/extended application reports

Testing Laboratory	Name of Sponsor	Test Reports / extended application reports	Test method / extended application rules & date
SATRA Technology Centre Ltd	Interface European Manufacturing B.V	FLO0251345 /1644/1	BS EN ISO 9239-1:2002
SATRA Technology Centre Ltd	Interface European Manufacturing B.V	FLO0251345 /1644/2	BS EN ISO 11925-2:2002

3.2 Test Results

Test method & test number	Parameter	No. tests	Results	
			Continuous parameter – mean	Compliance with Bfl-s1 parameters
EN ISO 9239-1	Critical flux (kW/m ²) or HF-30 (kW/m ²)	3	9.32 9.83 9.49 Mean = 9.55	Compliant
	Smoke (%.min)		228.16 201.38 215.81 Mean = 215.12	Compliant
EN ISO 11925-2 (15s exposure - surface)	F _s (mm)	6	42	Compliant
	Flaming Droplets / particles		None	Compliant

4. Classification and field of application

4.1 Reference of application

This classification has been carried out in accordance with clause 11 of BS EN 13501-1:2002

4.2 Classification

The product 'Level Set Colour Beech', in relation to its reaction to fire behaviour is classified:

B_{fl}

The additional classification in relation to smoke production is:

s1

The format of the reaction to fire classification for flooring is:

Fire Behaviour	Smoke Production
B_{fl}	s 1

i.e **B_{fl} – s1**

Reaction to Fire classification: B_{fl} – s1

4.3 Field of application

This classification is valid for the following end use applications:

- i) Flooring applications, used over and above any substrate with a density equal to or greater than 1800 Kg/m^3 , having a minimum thickness of 6 mm and a fire performance of A2 or better.
- ii) Installed with or without adhesive

This classification is also valid for the following product parameters:

Products:	'Level Set Colour Beech'
Product thickness:	4.5mm
Product weight per unit area:	6.70 Kg/m ²
Colour:	Any variation allowed
Composition:	No variation from the described product

TERMS AND CONDITIONS OF BUSINESS

1. **GENERAL**
Work done or services undertaken are subject to the terms and conditions detailed below and all other conditions, warranties and representations, expressed or implied are hereby excluded.
2. **PRICES**
Prices are based on current material and production costs, exchange rates, duty and freight and are subject to change without notice.
3. **DELIVERY ESTIMATES**
Delivery estimates are made in good faith and date from receipt of a written order and full information to enable us to proceed. While SATRA or its subsidiaries (hereafter referred to as "SATRA") make every effort to fulfil them, such estimates are subject to unforeseen events and if not maintained, cannot give rise to any claim. Offers "ex stock" are subject to prior sale.
4. **CANCELLATION AND RETURNS**
Cancellation of orders for goods, services, training or consultancy is only acceptable by prior agreement of SATRA and a charge will normally be made.
5. **CLAIMS**
Claims for errors, shortages etc should be notified within 10 days of date of receipt. In the event of goods damaged in transit, packing materials should be retained for examination; otherwise no liability can be accepted.
6. **PAYMENT TERMS**
Payment terms are net 21 days from date of invoice. Failure to comply with the terms of payment may result in delayed delivery of goods and services and a review of the Customer's credit account. Should the customer become subject to an administration order, or becomes bankrupt or goes into liquidation, SATRA has a right to cancel any contract and discontinue any work. SATRA reserves the right to adjust US Dollar and Euro sales price where customer exceeds credit terms and where the exchange rate has moved more than 10% since invoicing.
7. **RETENTION OF TITLE**
All goods remain the property of SATRA until paid in full. Under no circumstances will a customer's purchase order override SATRA's Retention of Title clause. In the case of software, the ownership of the software remains with SATRA. Payment of invoices in full will entitle the customer to use the software under licence until (a) they cease to be a member of SATRA or (b) they cease trading. In both instances, the licence shall then revert to SATRA.
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9. **TEST REPORTS**
Results given in test reports refer only to samples submitted for analysis and tested by SATRA. A satisfactory test report in no way implies that the product tested is approved by SATRA and no warranty is given as to the performance of the product tested. SATRA shall not be liable for any subsequent loss or damage incurred by the Customer as a result of information supplied in a test report.
10. **TEST SAMPLES**
Unless otherwise agreed in advance, test samples will be disposed of 6 weeks after the date of the final report. If required, samples can be returned at the Customer's expense.
11. **RESPONSIBILITY**
Every effort is made to ensure accuracy in description, drawings and other information in correspondence, catalogues, etc but no warranty is given in this respect and SATRA shall not be liable for any error therein. SATRA carries out all tests and/or advises only on the basis that the same are carried out, made or given without any responsibility whether for negligence or otherwise. SATRA and its servants or agents will not be liable for any damage or loss direct or indirect of whatsoever kind, whether or not the same results directly or indirectly from negligence on the part of SATRA or its servants or agents.
12. **CONFIDENTIALITY**
Unless specifically excluded in the terms of an individual contract between SATRA and its Customer, the following shall apply to all reports, advice, drawings, photographs, specifications or data:
 - i. The above shall not be disclosed to third parties or used in litigation without the consent of SATRA.
 - ii. Where SATRA has given consent to disclosure, the Customer shall draw the attention of the third party to these terms of business and the basis on which SATRA undertakes test, reporting and advising. The Customer shall indemnify SATRA for any failure to do so.
 - iii. The above items are submitted to the Customer as confidential documents. Confidentiality shall continue to apply after completion of the business, but shall cease to apply to information or knowledge which may come into the public domain.
13. **CONSTRUCTION AND ARBITRATION**
The laws of England shall govern all contracts and the parties submit to exclusive jurisdiction of the courts of England, unless otherwise agreed.

Issue Date: 1st October 2009