

Customer details: Amtico International  
Factory Nos 1 & 2  
Kingfield Road  
Coventry  
Warwickshire  
CV6 5AA

SATRA reference: FLO0255470 /1712/3

Your reference: PO AM1703-03

Date of report: 10 April 2017

Samples received: 10 March 2017

For the attention of: Andy Huang

Date(s) work carried out: 10 March 2017 –  
29 March 2017

## TECHNICAL REPORT

Subject: Testing of one sample described by the customer as 'Amtico Form Stone' to  
BS EN 13501-1:2002.

### 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 It must not be published, for example by including it in advertisements, without the prior, written permission of SATRA.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



Mandy de Wet

## TESTING OF ONE SAMPLE DESCRIBED BY THE CUSTOMER AS 'AMTICO FORM STONE' TO BS EN 13501-1:2002.

### 1. Introduction

This classification report defines the classification assigned to reference 'Amtico Form Stone', 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 Amtico International – 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 'Amtico Form Stone' 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 Tiles	
Product reference of flooring system		Amtico Form	
Colour reference		N/A	
Name of Manufacturer		Amtico International	
Overall weight per unit area		3550 g/m <sup>2</sup>	
Overall Thickness		2.5mm	
Product Configuration			
Floor covering	Layer 1 (Silicon / Quartz Particulate)	Product Reference	UV Coating
		Generic Type	Urethane
		Name of Manufacturer	Note 3
		Application Rate	Note 3
		Application method	Note 3
		Specific gravity	Note 3
		Colour reference	Not Applicable
	Layer 2 (Wear Layer)	Flame Retardant Details	Not Applicable
		Product Reference	Clear Film
		Generic Type	Wear Layer
		Name of Manufacturer	Amtico International
		% Composition	>90% binder
		Weight per unit area	835 g/m <sup>2</sup>
		Thickness	0.7mm
		Trade name of flame retardant	Not Applicable
	Layer 3 (Printed film)	Generic form of flame retardant	Not Applicable
		Amount of flame retardant	Not Applicable
		Product Reference	Various
		Generic Type	Digital Print Film
		Name of Manufacturer	Note 3
		% Composition	Note 3
		Weight per unit area	98 g/m <sup>2</sup>
		Thickness	0.08mm
	Glass fibre sheet incorporated in backing layer	Flame Retardant details	Not Applicable
		Generic form of flame retardant	Not Applicable
		Amount of flame retardant	Not Applicable
		Product Reference	Not Applicable
		Generic Type	Not Applicable
Name of Manufacturer		Not Applicable	
Thickness		Not Applicable	
Weight per unit area	Not Applicable		
Flame Retardant details	Not Applicable		
Generic form of flame retardant	Not Applicable		
Amount of flame retardant	Not Applicable		

<b>Floor covering</b>	Backing Material (Calendar and Layer)	Product Reference	Grey Back
		Generic Type	Filled PVC
		Name of Manufacturer	Amtico International
		Thickness	1.725mm
		Weight per unit area	2618g/m <sup>2</sup>
		Flame Retardant details	Not Applicable
		Generic form of flame retardant	Not Applicable
		Amount of flame retardant	Not Applicable
Brief Description of the manufacturing process		<ul style="list-style-type: none"> <li>• Ply formulations are blended and calendered to create individual plies.</li> <li>• Plies thermally laminated together and UV coated</li> <li>• Product then cut to size.</li> </ul>	

### 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 <sup>3</sup>

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	Amtico International	FLO0255470 /1712/1	BS EN ISO 9239-1:2002
SATRA Technology Centre Ltd	Amtico International	FLO0255470 /1712/2	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 <sup>2</sup> ) or HF-30 (kW/m <sup>2</sup> )	3	9.49 10.32 10.00 Mean = 9.94	<b>Compliant</b>
	Smoke (%.min)		206.50 203.39 208.04 Mean = 205.98	<b>Compliant</b>
EN ISO 11925-2 (15s exposure - surface)	F <sub>s</sub> (mm)	6	53	<b>Compliant</b>
	Flaming Droplets / particles		None	<b>Compliant</b>

## 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 'Amtico Form Stone', in relation to its reaction to fire behaviour is classified:

**B<sub>fl</sub>**

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>B<sub>fl</sub></b>	<b>s 1</b>

i.e **B<sub>fl</sub> – s1**

**Reaction to Fire classification: B<sub>fl</sub> – 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  $1800 \text{ Kg/m}^3$ , 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:	'Amtico From Stone'
Product thickness:	2.5 mm
Product weight per unit area:	$3.55 \text{ kg/m}^2$
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.
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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.
8. **GUARANTEE**  
All goods manufactured by SATRA are guaranteed both as regards material and workmanship. Any part returned carriage paid, within twelve months from date of supply and found defective, will be repaired or replaced at SATRA's option free of charge. SATRA admits no liability for loss, damage or delay consequent on any defect in any goods supplied by SATRA.
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.
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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