

Customer: LS Cable & System - Greenflor Team  
643, Jinpyeong - Dong  
Gumi - Si  
Gyeongbuk 730 - 360  
Korea

SATRA Ref: FLO0195910/1127/1

Report Date: 18 August 2011

Samples received: 7 July 2011

Contact: Yong - Taek Kim

## TECHNICAL SERVICES REPORT

Subject: Flocked flooring samples referenced by the customer as "Purgotex 2-1" in accordance with ISO 8302: 1991

Your reference:

### Conditions of Issue:

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

Tests marked † 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.**

Report signed by: Jacqueline Glasspool  
Position: Department Head  
Department: Furniture & Flooring

## FLOCKED FLOORING SAMPLES REFERENCED BY THE CUSTOMER AS 'PURGOTEX 2-1' IN ACCORDANCE WITH ISO 8302: 1991

As requested by LS Cable & System, we have determined the thermal resistance of the flocked floor covering submitted, as detailed below.

### SUMMARY:

With regard to the property assessed, the textile floor covering submitted referenced 'Purgotex 2-1' has achieved a thermal resistance of 0.0651 m<sup>2</sup>K/W for a single pile (based on a thermal resistance of 0.4558 m<sup>2</sup>K/W for 7 layered piles).

### SAMPLE SUBMITTED:

Sample reference: Purgotex 2-1 <sup>(1)</sup>  
Description: Flocked Floorcovering  
Colour: Orange and Blue

Appearance:



Intended application: Contract / Commercial use  
Date received: 7<sup>th</sup> July 2011  
Date conditioned: 7<sup>th</sup> July 2011  
Testing completed: 25<sup>th</sup> July 2011  
Testing conducted by: David Mckeown



## TESTS CARRIED OUT:

- ISO 8302: 1991 Thermal insulation – Determination of steady –state thermal resistance and related properties – Guarded hot plate apparatus <sup>(2)</sup>

**Heat flux direction:** Horizontal and vertical heat flow

**Chamber:** Enclosed chamber

**Sample Area:** 500 x 500 mm

**Measuring Area:** 250 x 250 mm

**Applicable Standard:** N/A

### Note(s):

- Information as stipulated by the client. Not verified by SATRA.
- In order to reduce the uncertainty of the measured results, the test was completed with multiple plies layered to give a greater total thickness: Flocked Floor covering = 7 plies, thickness 33.3 mm.

## RESULTS:

Sample	Mean specimen temperature (°C)	Thermal resistance of single layer (m <sup>2</sup> K/W)	Density at start of test (Kg/m <sup>3</sup> )	Thickness at start of test (mm)
'Purgotex 2-1'	10.0	0.0651	423.28	33.3

The thermal resistance of a single plank of sample referenced 'Purgotex 2-1' is 0.0651m<sup>2</sup>K/W (based on a thermal resistance of 0.4558m<sup>2</sup>K/W for 7 layered piles).

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2, providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with UKAS requirements.

Note: Full test details can be found in Annex 1.0.

## Annex 1.0

### ISO 8302 - Determination of steady-state thermal resistance and related properties

#### Test Details – Mean Sample Values

Test details	Units	Average values for the seven specimens tested
Specimen thickness*	mm	33.3
Relative thickness change during test	%	0.96
Dimensions	M	0.500 x 0.500
Relative volume change during test	%	0.96
Mass before test	Kg	3.528
Mass after test	Kg	3.525
Relative mass change during test	%	0.10
Relative mass change during drying	%	N/A
Relative mass change during conditioning	%	0.03
Density of conditioned material at start of test	Kg/m <sup>3</sup>	423.28
Mean temperature of test	°C	10.0
Mean temperature difference across specimens	°C	9.7
Density of heat flow rate	W/m <sup>2</sup>	21.37
Duration of test	Hrs	60
Ambient temperature in the test chamber during the test	°C	15.2
Type and pressure of gas surrounding specimens	Air at atmospheric pressure	
Estimated Uncertainty	%	2

Note:

\* Specimen thickness has been measured under a pressure of 1000Pa.



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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

LS Cable & System - Greenflor Team  
Job: FLO0195910/1127/1  
Date: 18 August 2011

Signed:

  
