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Customer: LS Cable & System - Greenflor Team
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Korea

SATRA Ref: FLO0195910/1127/7

Report Date: 12 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 EN 424: 2002

Your reference:

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 It must not be published, for example by including it in advertisements, without the prior, written permission of SATRA.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

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FLOCKED FLOORING SAMPLES REFERENCED BY THE CUSTOMER AS 'PURGOTEX 2-1' IN ACCORDANCE WITH EN 424: 2002

As requested by LS Cable & System, SATRA has conducted an assessment of the effect of a simulated movement of a furniture leg on a sample referenced 'Purgotex 2-1' as detailed below.

SUMMARY

The sample submitted referenced 'Purgotex 2-1' demonstrated no damage when subjected to the movement of a simulated furniture leg.

SAMPLE SUBMITTED

Sample reference: 'Purgotex 2-1' ⁽¹⁾
Colour: Orange and Blue
Description: Flocked Floor covering
Appearance:



Date received: 7th July 2011
Conditioning commenced: 7th July 2011
Testing commenced: 10th August 2011
Testing completed: 10th August 2011
Testing conducted by: Mandy De Wet

WORK REQUESTED:

- EN 424: 2002 – Resilient floor coverings – Determination of the effect of simulated movement of a furniture leg

Notes:

(1) – Information Supplied by customer. Not verified by SATRA.

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Signed:



RESULTS:

EN 424: 2002 – Resilient floor coverings – Determination of the effect of simulated movement of a furniture leg

		Direction of manufacture	90° to the direction of manufacture
Type 0 with an applied mass of 32 kg	Flatness Deterioration	None	None
	Damage which partially destroys surface	None	None
	Cuts of varying depth	None	None
	Penetrating Edges	None	None
	Transfer of brass	None	None
Type 2 with an applied mass of 100 kg	Flatness Deterioration	None	None
	Damage which partially destroys surface	None	None
	Cuts of varying depth	None	None
	Penetrating Edges	None	None
	Transfer of brass	None	None
Type 3 with an applied mass of 70 kg	Flatness Deterioration	None	None
	Damage which partially destroys surface	None	None
	Cuts of varying depth	None	None
	Penetrating Edges	None	None
	Transfer of brass	None	None

COMMENTS

The test is a method for determining the resistance of an installed resilient floorcovering to the mechanical stress resulting from the simulated movement of a furniture leg with rounded edges and different loadings.

The test floor is first adhered to a substrate to represent final installation, in this case a 6 mm cement fibre board was selected as the substrate, which the floor surface was adhered to using an appropriate adhesive. The board is then conditioned at 23°C / 50% rh for a minimum period of five days prior to testing.

In accordance with the test method three test situations have been assessed (see table 2)

Table 2. Test Feet

Type	Applied Mass (kg)	Horizontal Edge radius RH (mm)	Vertical Edge Radius RV (mm)	Distance between opposite vertical faces (mm)
3	70 ± 0.5%	3 ± 0.05	0.1 ± 0.05	34.6 ± 0.05
2	100 ± 0.5%	2 ± 0.05	0.1 ± 0.05	33.6 ± 0.05
0	32 ± 0.5%	0.1 ± 0.05	0.1 ± 0.05	31.7 ± 0.05

The simulated furniture leg with the applied test load and foot is then placed in contact with the test floor surface. After a dwell time of at least 60 seconds the loaded foot is then moved 700 mm across the test surface at a specified speed. After completion of the testing the sample is inspected for any deterioration in surface flatness, surface damage, cut's of varying depth and / or penetrating edges.

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.
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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.
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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 our 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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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 client 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.
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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

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Signed:


