

Customer: R - Tek Manufacturing Limited
Unit 1
Hamiltownsbawn Industrial Estate
Armagh
County Armagh
BT60 1HW

SATRA Ref: FLO0182952/1009/3

Report Date: 20 April 2010

Samples received: 1 March 2010

Contact: Peadar Hurson

TECHNICAL SERVICES REPORT

Subject: Testing of materials to BS EN 423:2002

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 It must not be published, for example by including it in advertisements, without the prior, written permission of SATRA.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: Business area manager
Department: Flooring

TESTING ACORDING TO BS EN 423: 2002 RESILIENT FLOOR COVERINGS - DETERMINATION OF RESISTANCE TO STAINING .

As requested by R- Tek Manufacturing Limited, we have assessed the samples submitted for resistance to stains, as detailed below.

SUMMARY

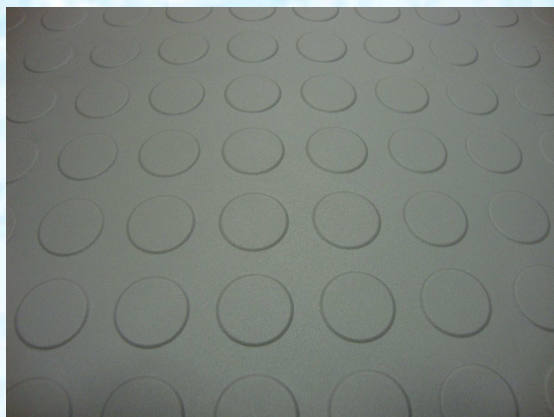
After completion of the stain testing, the flooring submitted referenced '5mm Studded' exhibited no effect in relation to some of the staining agents applied (Hydrochloric Acid, Ethanol, Methanol, Sulphuric Acid, Engine Oil, Urine) after 2 hours contact time, when cleaned with a standard floor cleaning solution (Flash 60ml/5l)

After completion of the stain testing, the flooring submitted referenced '7mm Textured' exhibited no effect in relation to the staining agents applied (Ethanol, Methanol, Acetic Acid, Sulphuric Acid, Gasoline, Engine Oil, Urine) after 2 hours contact time, when cleaned with a standard floor cleaning solution (Flash 60ml/5l)

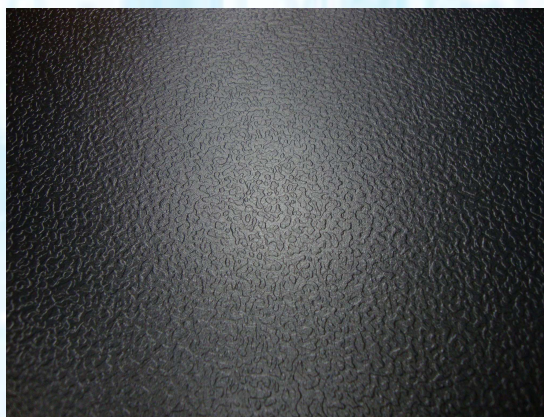
SAMPLE SUBMITTED

Sample reference: 5mm Studded, 7mm Textured
Description: Profiled PVC floor covering
Colour: Grey, Black
Manufacturer: LS Cable Ltd

Appearance:



5mm Studded



7mm Textured

Date received: 1st March 2010
Testing completed: 31st March 2010
Testing conducted by: Mandy De Wet

TESTS CARRIED OUT

- BS EN 423: 2002, Resilient floor coverings – Determination of resistance to staining

Test Conditions:

Specimen: Tested as received

Cleaning: Flash (dilution 60ml/5l) applied with a soft clean white cotton cloth

RESULTS

Table 1. Stain Resistance (BS EN 423) – Individual results for marking by liquid staining agents

5mm Studded

Property	Effect of sample after cleaning	Rating (2 hours)	Rating (30mins, if applicable)
Resistance to marking by liquids:			
Hydrochloric Acid (96%)	Not Affected	0	-
Ethanol (95%)	Not Affected	0	-
Methanol (96%)	Not Affected	0	-
Acetic Acid (100%)	Affected	3	2
Sulphuric Acid (69%)	Not Affected	0	-
Chromic Sulphuric Acid	Affected	3	3
Gasoline	Very Slightly Affected	1	-
Toluene (100%)	Very Slightly Affected	1	-
Trichloroethylene (99%)	Very Slightly Affected	1	-
Acetone (100%)	Very Slightly Affected	1	-
Engine Oil	Not Affected	0	-
Urine	Not Affected	0	-

7mm Textured

Property	Effect of sample after cleaning	Rating (2 hours)	Rating (30mins, if applicable)
Resistance to marking by liquids:			
Hydrochloric Acid (96%)	Very Slightly Affected	1	-
Ethanol (95%)	Not Affected	0	-
Methanol (96%)	Not Affected	0	-
Acetic Acid (100%)	Not Affected	0	-
Sulphuric Acid (69%)	Not Affected	0	-
Chromic Sulphuric Acid	Affected	3	2
Gasoline	Not Affected	0	-
Toluene (100%)	Very Slightly Affected	1	-
Trichloroethylene (99%)	Very Slightly Affected	1	-
Acetone (100%)	Very Slightly Affected	1	-
Engine Oil	Not Affected	0	-
Urine	Not Affected	0	-

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Signed:

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COMMENTS

This method is intended to determine the resistance of a resilient floor covering to those chemical substances it is likely to experience in service. The test consists of subjecting the samples submitted to the chemical substances, in either liquid or paste form, as specified in table 1. The sample was subjected to the specified chemical for a period of 2 hours. After the test period the substance was removed utilising a specified cleaning agent.

In order to clean the floor coverings submitted correctly, the flooring was cleaned using a floor cleaner supplied by SATRA. After cleaning, each of the test subject areas was assessed for any changes in appearance under specific lighting conditions. A rating was applied according to those specified below.

Rating	Effect of test after cleaning/abrasion	SATRA Supplementary information
0	Not affected	No visible changes (no damage or marks visible)
1	Very slightly affected	Slight change in lustre, visible only when the light source is mirrored in the test surface or near the mark and is reflected towards the observer's eye, or a few isolated marks just visible.
2	Slightly affected	Slight mark visible in several viewing directions, for example almost complete disc of circle just visible
3	Affected	Strong mark, such as ring or circle distinctly visible, or region of slight discolouration. The structure of the surface being largely unchanged – ie no worse than slight disturbance over no more than a third of the tested area
4	Severely affected	Strong mark, or region of distinct discolouration, the structure of the surface being changed or the surface of the material being wholly or partially removed.

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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.
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 - 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