

TEST REPORT

No. : XMCCM151201393

Date : Dec.24, 2015

Page: 1 of 6

JIN YI YUAN (JIANGSU) NEW MATERIAL CO., LTD
NEW NORTH INDUSTRIAL ZONE, DAIBU TOWN, LIYANG CITY, JIANGSU PROVINCE, CHINA

The following sample(s) was/ were submitted and identified on behalf of the client as:

Sample Name : HOMOGENOUS PVC FLOORING
SGS Ref. No. : XMSL1512010605TX, GZIN151201827CCM, SHCCM151203943, CANMLC1521333901
Material : POLYVINYL CHLORIDE
Spec. : 2.0M×20M
Manufacturer : JIN YI YUAN
Test required : Selected test(s) as requested by applicant
Date of Receipt : Dec.07, 2015
Test Period : Dec.07, 2015 to Dec.24, 2015

Test result(s) : For further details, please refer to the following page(s)

***** To be continued*****

Signed for
SGS-CSTC Standards Technical
Services Co., Ltd. XM Branch Testing Center

Civi Huang
Authorized Signatory



SGS-CSTC Standards Technical Services Co., Ltd.
Xiamen Branch / Xiamen Standards Laboratory

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TEST REPORT

No. : XMCCM151201393

Date : Dec.24, 2015

Page: 2 of 6

Sample Information:

PVC Flooring, See the photo

Test Result(s):

No.	Test item(s)	Test method(s)	Test condition	Test result(s)
1	Residual indentation	ISO 24343-1:2007	Specimen: 60mm×60mm×2.2mm, 3pcs Condition: 23±2°C, 50±5%RH, 24h → 500N, 150min → Recovery time: 150min	0.07mm
2	Resistance to staining	ISO 26987:2008	See Annex A	Index 0: Not affected See Annex A
3	Colour Fastness To Light	ISO 105-B02:2014	Use Xenon arc lamp, exposure cycle A1, no flip-flop mode was used	After standard 6 grade blue wool: 5(white) & 6(others)
4	Effect of a castor chair	ISO 4918:2009	Cycles: 25000 Load: 90kg	No visible damage
5	Wear resistance	EN 660-2:1999 +A1:2003; EN 649:2011	See Annex B	1.6mm ³ /100revolutions Wear group: T See Annex B
6	Slip resistance	EN 13893:2002	Specimen thickness: 2.2mm Testing speed: 0.26m/s	Dynamic coefficient of friction: 0.35
7	Formaldehyde emission	With reference to EN 717-1:2004	Analysis was performed by UV-Vis.	ND Class E1 See Annex C
8	Thermal conductivity	EN 12667:2001 Heat flow meter method	Specimen: 300mm×300mm×2.2mm, 1pcs, density is about 1360 kg/m ³ Mean temperature: 25.45°C Temperature difference: 9.16°C	0.057 W/(m·K)
9	Thermal resistance			0.038 (m ² ·K)/W

- Note: 1. All test specimens were cut from the samples, see the photo.
 2. ND=Not Detected (<MDL)
 3. The test results of test items 8~9 cannot be compared with other results obtained from different test conditions, and should not be cited to the use condition directly.
 4. All the test items were carried out by SGS internal laboratories.
 ***** To be continued*****



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TEST REPORT

No. : XMCCM151201393

Date : Dec.24, 2015

Page: 3 of 6

Annex A: Result of the staining resistance

Test Method:

ISO 26987:2008 Resilient floor coverings – Determination of staining and resistance to chemicals

Pretreatment condition: 23±2°C, 50±5%RH, 24h

The main duration of contact shall be 2h. If a stain appears on the test piece after 2h, a new test shall be conducted for a period of 30 min. Examine the residual staining.

Test Result:

NO.	Stain agent	Contact time	Result	Contact time	Result
1	Acetone	2h	0	-	-
2	Coffee (120g coffee per litre of water)	2h	0	-	-
3	Sodium hydroxide 25% solution	2h	0	-	-
4	Hydrogen peroxide 30% solution	2h	0	-	-
5	Shoe Polish	2h	0	-	-
6	Lodine: 13g/L solution in alcohol	2h	0	-	-
7	Animal blood (blood of chicken)	2h	0	-	-
8	Urine	2h	0	-	-
9	Citric acid 10% solution	2h	0	-	-
10	Acetic acid 30% solution	2h	0	-	-

Note: The above stain agents were selected as requested by client.

Expression of results:

Index	Effect of the test after cleaning / abrasion
0	Not affected
1	Slightly
2	Moderate
3	Severe

***** To be continued*****



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TEST REPORT

No. : XMCCM151201393

Date : Dec.24, 2015

Page: 4 of 6

Annex B: Wear resistance

Test Method:

EN 660-2:1999+A1:2003 and EN 649:2011

Test Condition:

Weigh the specimens to an accuracy of ± 0.1 mg after conditioning. Load each wheel with a weight of (1 ± 0.01) kg. The flow of abrasive is (21 ± 3) g/min. Abrade one specimen during 5000 revolutions, with a break for weighing after each cycle of 1000 revolutions, and then test the two remaining specimens. If, however, the first specimen is abraded through before 5000 revolutions, discard it and test the two remaining specimen in cycles of 200 revolutions stopping the test after 2000 revolutions or when the specimen is abraded through.

Calculate the average mass loss. F_m , in milligrams per 100 revolutions for each specimen as follows:

$$F_m = \frac{F_{tot}}{n} \times 100$$

Calculate the loss of volume for each specimen for 100 revolutions as follows:

$$F_v = \frac{F_m}{\rho}$$

Requirement of EN 649:2011:

Characteristic	Requirements for wear group			
	T	P	M	F
Volume loss $F_v(\text{mm}^3)/100\text{revolutions}$	$F_v \leq 2.0$	$2.0 < F_v \leq 4.0$	$4.0 < F_v \leq 7.5$	$7.5 < F_v \leq 15.0$

Test Result:

Test result	Wear group
$F_v = 1.6 \text{mm}^3/100\text{revolutions}$	T

*****To be continued*****



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TEST REPORT

No. : XMCCM151201393

Date : Dec.24, 2015

Page: 5 of 6

Annex C

Formaldehyde

Test Method:

With reference to EN 717-1:2004, analysis was performed by UV-Vis.

Specimen: see the photo

Remarks:

- (1) 1 mg/kg = 1 ppm = 0.0001%
- (2) MDL = Method Detection Limit
- (3) ND = Not Detected (<MDL)
- (4) “-“ = Not Regulated

Test Result:

<u>Test Item(s)</u>	<u>Unit</u>	<u>MDL</u>	<u>Result</u>
Formaldehyde Emission (In air)	mg/m ³	0.080	ND

Note: (1) mg/m³ = milligram per cubic meter

(2) Reference Limit: EN 13986:2004

Formaldehyde class E1: ≤0.124 mg/m³ air

Formaldehyde class E2: >0.124 mg/m³ air

***** To be continued*****



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TEST REPORT

No. : XMCCM151201393

Date : Dec.24, 2015

Page: 6 of 6

Specimen photograph:



SGS authenticate the photo on original report only
*****End of report*****