

## TEST REPORT

No. : XMIN2109010490CM

Date : Mar 07, 2022

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scan to see the report



XMIN2109010490CM

CUSTOMER NAME: WUXI TEFA DECORATION MATERIAL CO., LTD.  
 ADDRESS: ROOM 501, NO. 5, HUAQING INNOVATION PARK, HUIZHAN DISTRICT, WUXI CITY, JIANGSU PROVINCE


Sample Name : PVC HOMOGENEOUS FLOOR ROLLS  
 Product Specification : 2.0mm\*2m  
 Manufacturer : WUXI TEFA DECORATION MATERIAL CO., LTD.  
 Material and Mark : PVC  
 Other Information : Brand: FARFLY

Above information and sample(s) was/were submitted and confirmed by the client. SGS, however, assumes no responsibility to verify the accuracy, adequacy and completeness of the sample information provided by client.

\*\*\*\*\*

SGS Ref. No. : GZIN2109057494MR; SL82108301677301TX  
 Date of Receipt : Sep 26, 2021  
 Testing Start Date : Sep 26, 2021  
 Testing End Date : Oct 28, 2021  
 Test result(s) : For further details, please refer to the following page(s)  
 (Unless otherwise stated the results shown in this test report refer only to the sample(s) tested)

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



Bryan Hong  
 Authorized signatory

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**XMCCM 055623**



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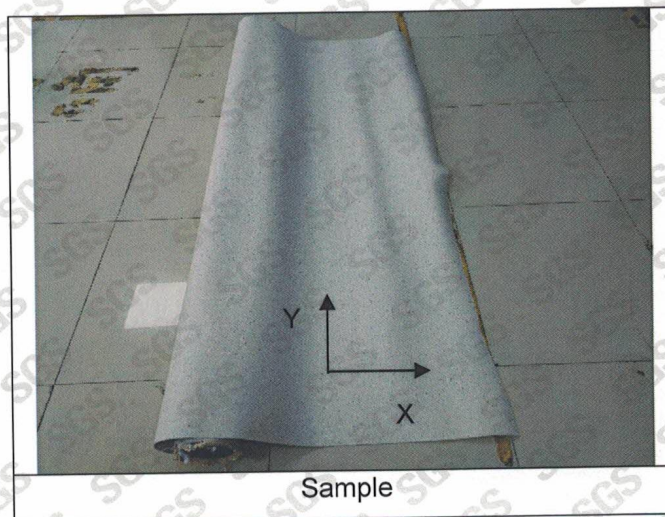
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### Summary of Results:

No.	Test Item	Test Method	Result
1	Overall Thickness	ISO 24346:2006(R2015)	1.93 mm
2	Mass per Unit Area	ISO 23997:2007(R2018)	2541 g/m <sup>2</sup>
3	Width	ISO 24341:2006	2001 mm
4	Effect of a Castor Chair	ISO 4918:2016+Amd.1:2018	No visible damage
5	Dimensional Stability after Exposure to Heat	ISO 23999:2018	X Direction: 0.15 %
	Curling after Exposure to Heat		Y Direction: 0.20 % -0.5 mm
6	Staining and Resistance to Chemicals	ISO 26987:2008	Not affected
7	Binder content*	ISO 10581:2019 Clause 4.1 & FTIR, PGC-MS, GC-MS, EDX and TGA	80% (Comply with Type I)
8	Colour Fastness To Light	ISO 105-B02:2014	6

### Original Sample Photo:



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### 1. Test Item: Overall Thickness

Sample Description: Flooring, See photo

Test Method: ISO 24346:2006(R2015)

Test Condition: Condition the test pieces at a temperature of (23±2) °C and relative humidity (50±5) % for a minimum of 24 h.

Test result:

Ave.: 1.93mm

Max.: 1.99mm

Min.: 1.87mm

Note: All test specimens were cut from the sample.

### 2. Test Item: Mass per Unit Area

Sample Description: Flooring, See photo

Test Method: ISO 23997:2007(R2018)

Test Condition:

Specimen: 100mm×100mm×2.0mm

Test Result:

Mass per Unit Area: 2541g/m<sup>2</sup>

Note: All test specimens were cut from the sample.

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### 3. Test Item: Width

Sample Description: See photo

Test Method: ISO 24341:2006

Test Condition: Condition the test pieces at a temperature of (23±2) °C and relative humidity (50±5) % for a minimum of 24 h.

Test result: 2001mm

### 4. Test Item: Effect of a Castor Chair

Sample Description: See photo

Test Method: ISO 4918:2016+Amd.1:2018

Test Condition:

Cycles: 25000

Load: 90kg

Type of castors: Type W

Type of sample: Resilient floor coverings

Test result:

No visible damage.

Note: Test samples were cut from original samples.

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5. Test Item: Dimensional Stability and Curling after Exposure to Heat

Sample Description: Flooring, See photo

Test Method: ISO 23999:2018

Test Condition:

Specimen: 240mmx240mmx2.0mm

Condition: (23±2)°C, (50±5)%RH, 24h→(80±2)°C, 360<sup>+15</sup><sub>0</sub> min→(23±2)°C, (50±5)%RH, 24h

Lab Environment Condition: (23±2)°C, (50±5)%RH

Test Result:

Test Item	Test Result	
Dimensional Stability	X Direction	0.15%
	Y Direction	0.20%
Curling	-0.5mm	

Note: 1. All test specimens were cut from the original samples.

2. Dimensional Stability, % = (Dimension before heating - Dimension after heating) / Dimension before heating × 100.

3. Curling, mm = Dimension after exposure to heat - Dimension before exposure to heat.

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6. Test Item: Staining and resistance to chemicals

Sample Description: Flooring, See photo

Test Method: ISO 26987:2008

Test Condition:

Specimen: 100mm×100mm×2.0mm, 3pcs

Precondition: at (23±2)°C, (50±5)%RH for 24h.

Procedure: 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	Black shoe polish	2h	0	-	-

Expression of results

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

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7. Test Item: Binder content\*

Sample Description: Flooring, See photo

Test Method:

Fourier Transform Infrared Spectrometer (FTIR)

Pyrolysis-Gas Chromatography Mass Spectrometry (PGC-MS)

Gas Chromatography Mass Spectrometry (GC-MS)

Energy dispersive X-ray fluorescence spectrometer (EDX)

Thermogravimetric Analyzer (TGA)

Test Result:

No.	Composition	Content, Wt%
1	Poly(vinyl chloride) (PVC)	57
2	Dinonyl phthalate (DINP)	23
3	Calcium carbonate	17
4	Titanium dioxide	3

Note:

1. Wt% - weight percent.
2. Quantitative data is for reference only.
3. The sample contains some stearate, which is lower than 1%.
4. According to ISO 10581:2019 Clause 3.4, Binder Content is 80%

**Binder content: 82%**

Remark: Binder content is portion of the flooring composition, consisting of poly(vinyl chloride) resin, plasticizers and stabilizers. Binder content is expressed as a percentage mass fraction of the total composition.

**Conclusion:** When assessed to the requirements in ISO 10581:2019 Clause 4.1 Table 1, the flooring is classified as **Type I**.

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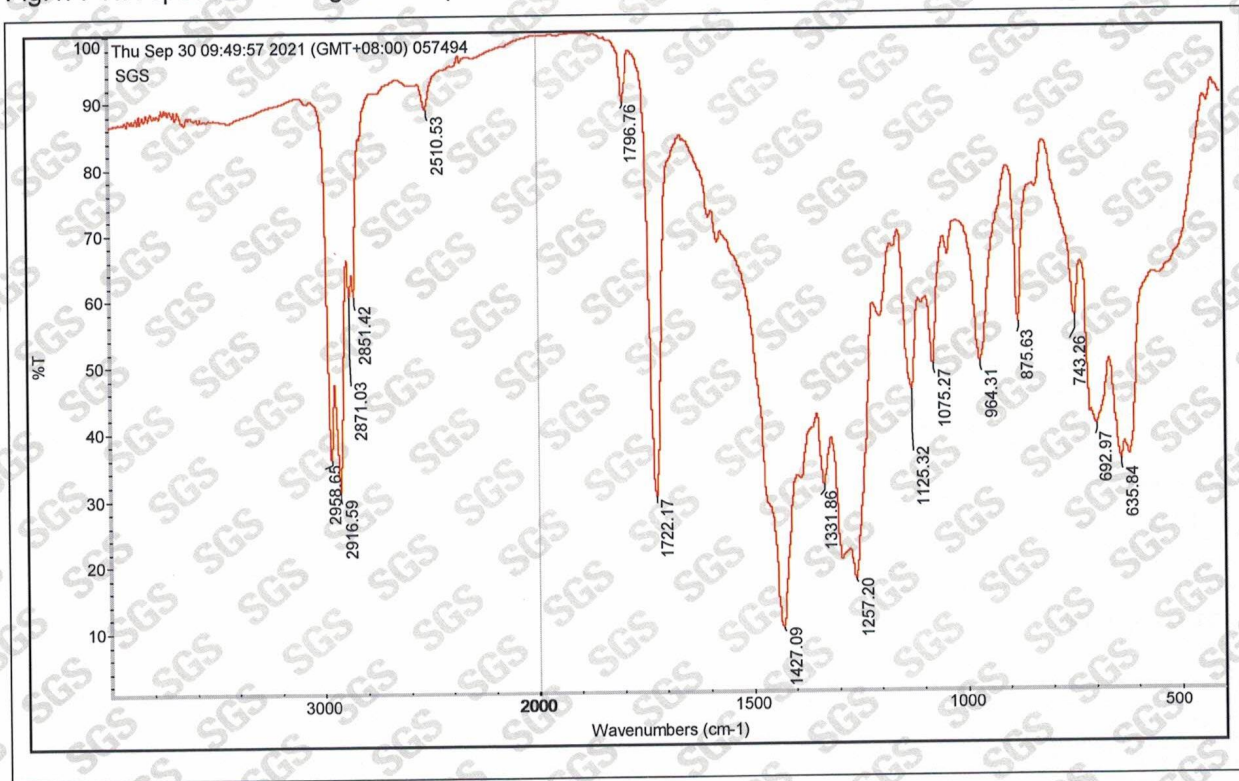
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Requirements in ISO 10581:2019 Clause 4.1 Table 1 — Identification requirements

Type	Minimum Binder Content %	Maximum Binder Content %
I	>55	—
II	35	55
III	25	<35

Fig. 1: FTIR spectrum of original sample



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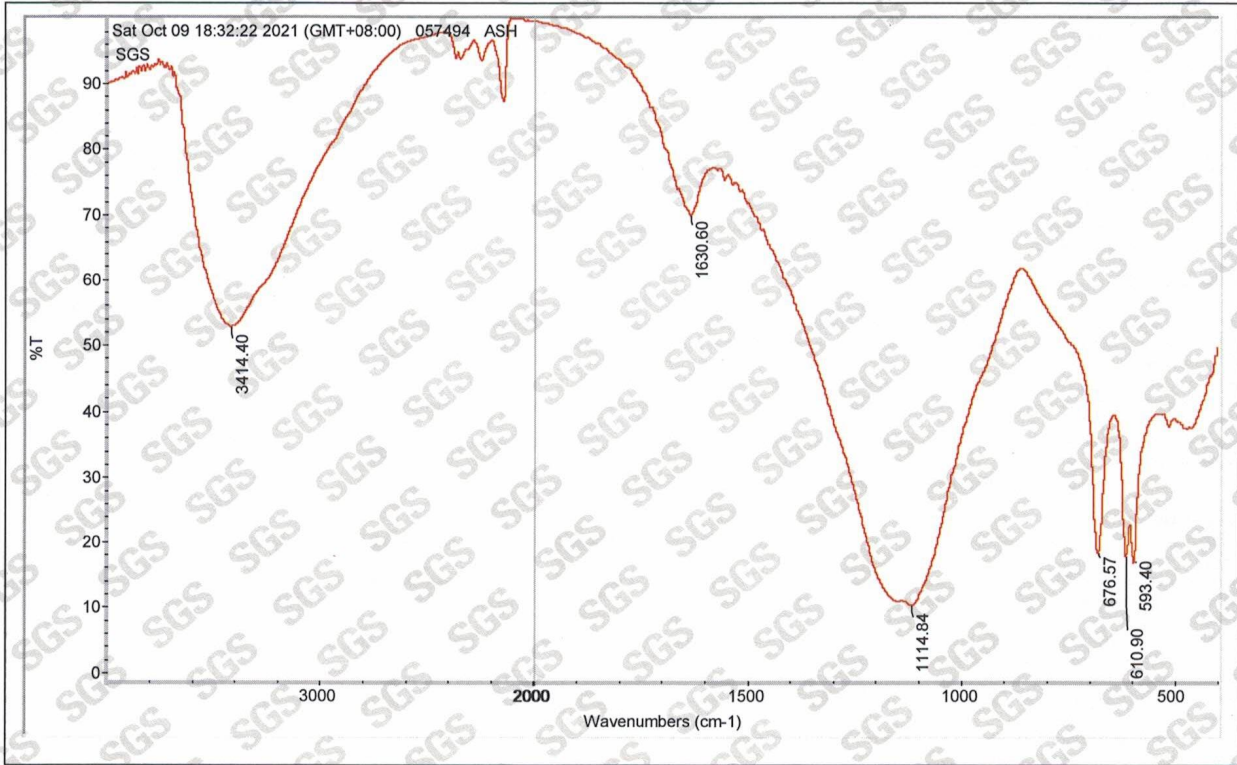
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Fig.2: FTIR spectrum of sample sulfate ash



Note: \* test project/method was carried out by subcontractors.

### 8. Test Item: Colour Fastness To Light

Sample Description: Flooring, See photo

Test Method: ISO 105-B02:2014; Method 3, use Xenon arc lamp, Exposure Cycle: A1, no flip-flop mode was used

Test Result:

Comparison upto blue wool reference 6

Grade(B.W.S)	Unit	A	Requirement
		6	Min.6

\*\*\*\*\* End of report\*\*\*\*\*

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