

No. : XMIN180901877CCM Date : Oct.12, 2018

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CUSTOMER NAME:		DECNO GROUP LTD
ADDRESS:		ZAOYUAN INDUSTRIAL PARK, ZHANGQIU CITY, JINAN CITY, SHANDONG PROVINCE, CHINA
Sample Name	:	SFC102
Material	:	SPC
Spec.	:	1800*230*5MM
Buyer	:	Australia
Manufacturer	:	DECNO GROUP LTD

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.

		~~~~~~
Test Required	:	Selected test(s) as requested by applicant
SGS Ref. No.	:	SHIN1809069611MR
Date of Receipt	:	Sep.21, 2018
Testing Start Date	:	Sep.21, 2018
Testing End Date	:	Oct.11, 2018
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) ********* To be continued******

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

Civi Huang

Authorized Signatory



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### Sample Information:

Flooring, See the photographs. Lab environment condition: (23±2)℃, (50±5)%RH Preconditioning: (23±2)℃, (50±5)%RH for a minimum of 24h

## Test Result(s):

No.	Test item(s)	Test method(s)	Test condition	Test result(s)	
1	Side Length			Average: 1800mm	
2	Width			Average: 227.80mm Deviation range: X Direction: 0.00mm~+0.15mm Y Direction: 0.00mm~+0.10mm	
3	Squareness	ISO 24342:2007	Specimen: 1800mm×228mm×5.0mm, 5pcs		
4	Straightness			Deviation range: X Direction: 0.00mm~+0.10mm Y Direction: 0.00mm~+0.05mm	
5	Overall thickness	ISO 24346:2006	Specimen: 200mm×200mm×5.0mm, 5pcs Mass applied: 0.40±0.02kg Diameter of upper plate: 8.00±0.05 mm Load time: 5s	Ave.: 4.97mm Max.: 5.03mm Min.: 4.94mm	
6	Thickness of wear layer	ISO 24340:2006	Specimen: 25mm×10mm×5.0mm, 5pcs	Ave.: 0.577mm Max.: 0.592mm Min.: 0.568mm	
7	Density	ISO 23996:2007	Specimen: 50mm×50mm×5.0mm, 3pcs	Average: 2135 kg/m ³	
8	Dimensional stability (see note 2)	Refer to ISO	Specimens: 240mm×228mm×5.0mm, 3pcs Condition: (23+2)% (50+5)% BH	Average: X Direction: 0.02% Y Direction: -0.04%	
9 Curling (see note 3)		23999:2008	$24h \rightarrow 80\pm 2^{\circ}$ C, $360min \rightarrow (23\pm 2)^{\circ}$ C, $(50\pm 5)^{\circ}$ RH, $24h$	Average: 0.07mm	

*** To be continued****



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No.	Test item(s)	Test method(s)	Test condition	Test result(s)
10	Residual indentation	ISO 24343- 1:2007	Specimen: 50mm×50mm×5.0mm, 3pcs Applied load: 500N Load time: 150min Recovery time: 150min	Average: 0.01mm
11	Flatness	ISO 10582:2017 Annex B	Specimen: 1800mm×228mm×5.0mm, 5pcs	Length flatness(X): concave 0.13% convex 0.19% Width flatness(Y): concave 0.08% convex 0.02%
12	Openings	ISO 10582:2017	Specimen:	Ave.: 0.00mm Max.: 0.05mm
13	Height difference	Annex C	1800mm×228mm×5.0mm, 8pcs	Ave.: 0.00mm Max.: 0.05mm
14	Wear resistance	EN 13329:2016 Annex E	Specimens: 3pcs 100mm×100mm×5.0mm, Type of wheel: CS-0 Load: 5.4±0.2N/wheel Abrasive paper: S-42	Average abrasion cycles: 9600 revolutions
15	Peel strength	ISO 24345:2006	Specimens: 10 pieces of long side specimens (X Direction) 200mm×50mm×5.0mm, 10 pieces of short side specimens (Y Direction) 200mm×50mm×5.0mm Loading rate: 100 mm/min	X Direction: 95 N/50mm Y Direction: 110 N/50mm
16	Micro-scratch resistance	BS EN 16094:2012	See Annex A	Procedure A: MSR-A2, Procedure B: MSR-B2, (see Annex A)

Note: 1. All test specimens were cut from the samples, see the photographs.

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 Dimensional stability, % = (Dimension before exposure to heat - Dimension after exposure to heat)/ Dimension before exposure to heat ×100. Reference distance of Y direction is 188mm.

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

4. Micro-scratch resistance was carried out by SGS-CSTC Standards Technical Services(Shanghai) Co., Ltd..

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



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#### Annex B

Test Item: Determination of micro-scratch resistance

Sample Description: Panel

Test Method: BS EN 16094:2012

Test Condition:

Rubbing finger: Φ90mm

## Procedure A:

Rubbing material: SB 7447

Load: (612±2)g

Cycles: 80

## Procedure B:

Rubbing material: SB 7440

Load: (413±2)g

Cycles: 160

#### Test Result:

Procedure	Sample	Gloss change ΔR' (60°) (See note 1)	Micro-scratch resistance class (See note 2)
А	1	10.1%	MSR-A2

Procedure	Sample	Appearance	Resistance class (See note3)			
В	1	Only few scratches.	MSR-B2			

Note:

1.  $\Delta R' = (R_I - R_F)/RI \times 100\%$ ,  $R_I$  is the mean value at initial state,  $R_F$  is the mean value after finishing the test.

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



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2. Classification of mean values of gloss change:

Micro-scratch resistance class according to procedure A	I Change of gloss I
MSR-A1	≤10%
MSR-A2	> 10 % to 30 %
MSR-A3	> 30 % to 50 %
MSR-A4	> 50 % to 70 %
MSR-A5	> 70 %

3. According to BS EN 16094:2012 Table B.1, MSR-B1 is the best while MSR-B5 is the worst.

Test Photo:



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



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Specimen photograph(s):



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