ECCO ENTERPRISES LTD.

TEST REPORT

REPORT NUMBER
190712005SHF-BP-1

ISSUE DATE
2019-07-25

PAGES
8

DOCUMENT CONTROL NUMBER
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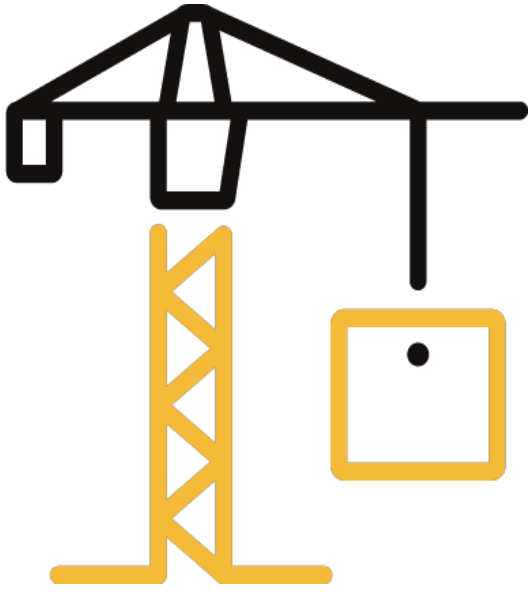

Intertek Testing Services Ltd., Shanghai
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Tel: 021-61136116 Fax: 021-61189921
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Test Report

Issue Date: 2019-07-25 Intertek Report No. 190712005SHF-BP-1

Applicant: ECCO ENTERPRISES LTD

Applicant Address: NO.199 GAOJIA ROAD,WUJIN,DISTRICT,CHANGZHOU,P.R.CHINA

Attn: N/A

SUBJECT: Performance testing
ECCO ENTERPSISE LTD

Dear Sir,
This test report represents the results of our evaluation of the above referenced product(s) to the requirements contained in the following standards:

TEST METHODS AND STANDARDS
Refer to the next following Pages.

SAMPLE ID	MODEL	SPECIFICATION
190712005SHF.001~003	/	Flooring Size: 1220*152*4.5

SAMPLE RECEIEVED: 2019-07-09
TESTED FROM: 2019/07/12 TO 2019/07/25

Test Report

Issue Date: 2019-07-25 Intertek Report No. 190712005SHF-BP-1

Test Items, Method and Results:

Test method: ASTM E492-09 (2016) ε

Temperature: 23 °C

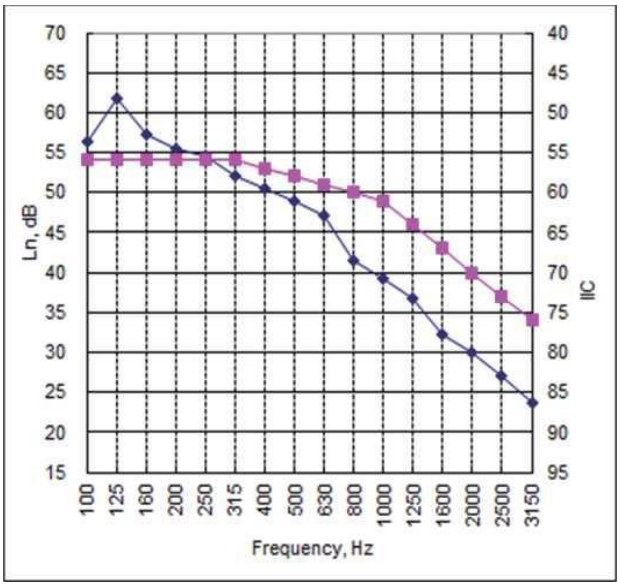
Relative Humidity: 70 %

Specimen area: 11 m^2

Floor assembly:

The system consisted of 150mm thick concrete floor and the 4.5mm PVC Flooring (Backed with underlayment) were placed on the concrete floor.

Frequency (Hz)	Ln (dB)
100	56
125	62
160	57
200	55
250	55
315	52
400	50
500	49
630	47
800	42
1000	39
1250	37
1600	32
2000	30
2500	27
3150	24
IIC=	58



Calculated Impact Insulation Class: IIC 58

Note:

1. Ln = Normalized Sound Pressure Level for Covering over Floor System
2. Classified IIC in accordance with ASTM E989-12, Standard Classification for Determination of Impact Insulation Class.
3. The IIC was for the whole floor assembly system.
4. The thickness, manufacturing technique and raw material among the samples are the same except for colour claimed by the applicant.

Test Report

Issue Date: 2019/07/25 Intertek Report No. 190712005SHF-BP-1

Test Items, Method and Results:

Test method: ASTM E2179-2003(R2016)

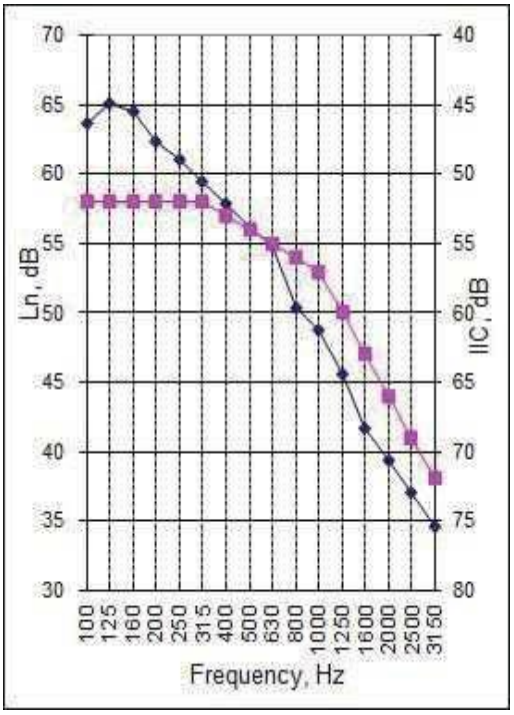
Temperature: 23 °C

Relative Humidity: 70 %

Specimen area: 11 m^2

Floor assembly: The system consisted of 150mm thick concrete floor and the 4.5mm PVC Flooring (Backed with underlayment) were placed on the concrete floor.

Frequency (Hz)	L0 (dB)	Lc (dB)	Ld (dB)	Lref (dB)	Lref,c (dB)
100	59.6	56.3	3.3	67.0	63.7
125	64.2	61.8	2.4	67.5	65.1
160	60.7	57.2	3.5	68.0	64.5
200	61.5	55.4	6.1	68.5	62.4
250	62.5	54.6	7.9	69.0	61.1
315	62.1	52.0	10.1	69.5	59.4
400	62.7	50.5	12.2	70.0	57.8
500	63.3	48.9	14.4	70.5	56.1
630	63.4	47.2	16.2	71.0	54.8
800	62.7	41.6	21.1	71.5	50.4
1000	62.6	39.3	23.3	72.0	48.7
1250	63.2	36.8	26.4	72.0	45.6
1600	62.6	32.3	30.3	72.0	41.7
2000	62.7	30.1	32.6	72.0	39.4
2500	61.9	27.0	34.9	72.0	37.1
3150	61.1	23.7	37.4	72.0	34.6
IICc=		54			
ΔIIC=IICc-28=		26			



Calculated improvement in Impact Insulation Class: IICc –28 = IIC 26

Note:

1. L0 = Normalized Sound Pressure Level for Bare standard concrete floor
   Lc = Normalized Sound Pressure Level for Covering over concrete floor
   Ld = L0 - Lc
   Lref = Reference floor average Normalized Impact Sound Pressure Level
   Lref,c = Lref – Ld

2. Classified IIC in accordance with ASTM E989-12, “Standard Classification for Determination of Impact Insulation Class”.

3. The thickness, manufacturing technique and raw material among the samples are the same except for colour claimed by the applicant.

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Test Photos:

Test set up

Note:
The applicant claimed that the specimens were the same samples except color.

Test Report

Issue Date: 2019-07-25 Intertek Report No. 190712005SHF-BP-1

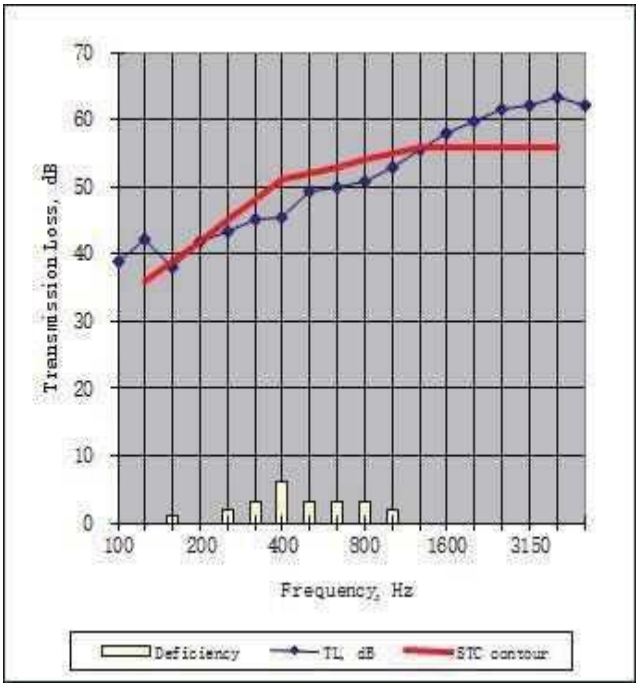
Test Items, Method and Results:

Test method: ASTM E90-2009(R2016)

Temperature:	23	°C	Relative Humidity:	70	%
Volume of the source room:	77	m^3	Volume of the receiving room:	112	m^3
Specimen area:	11	m^2			

Floor assembly: The system consisted of 150mm thick concrete floor and the 4.5mm PVC Flooring (Backed with underlayment) were placed on the concrete floor.

Frequency (Hz)	TL (dB)
100	39.0
125	42.2
160	38.0
200	41.9
250	43.3
315	45.1
400	45.5
500	49.2
630	49.9
800	50.8
1000	53.0
1250	55.6
1600	58.1
2000	59.6
2500	61.4
3150	62.2
4000	63.4
5000	62.0



Calculated Sound Transmission Class: STC 52

Note:

1. TL= Transmission loss
2. Classified STC in accordance with ASTM E413-10, Classification for Rating Sound Insulation.
3. The STC was for the whole floor assembly system.
4. The thickness, manufacturing technique and raw material among the samples are the same except for colour claimed by the applicant.

Test Report

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Test Photos:

Test set up

Note:
The applicant claimed that the specimens were the same samples except color.

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APPENDIX: SAMPLE RECEIVED PHOTO

REPORT AUTHORIZED

When signed with physical or electronic signature, the contents of this report have been prepared and approved per Intertek's quality process in accordance with ISO 17025.

Name: Jodie Zhou Name: Evyn Cui

Title: Reviewer Title: Project Engineer

Revision:

NO.	DATE	CHANGES	AUTHOR	REVIEWER
190712005SHF-BP-1	2019-07-25	First issue	Evyn Cui	Jodie Zhou