

TECHNICAL PRODUCT SPECIFICATIONS SUMMARY

CHARACTERISTIC		TECHNOLOGY TARGET			REMARKS
Determination of Geometrical Characteristics		Thickness	5.146		ISO 24337
		Length	1219.291		
		Width	177.915		
		Squareness (out of square)	Max: 0.160 / Avg: 0.073		
		Straightness	0.058		
		Width Flatness	Max: 0.132 (0.074%) / Avg: 0.097 (0.055%) - Convex		
		Length Flatness	Max: 0.172 (0.014%) / Avg: 0.131 (0.011%) - Convex		
		Openings Between Elements	Max: 0.183 / Avg: 0.091		
		Height Difference Between Elements	Max: 0.114 / Avg: 0.075		
Curling after exposure to heat (%)		SPC Length: ≤0.01 (70°C/ 6Hr) SPC Width: ≤0.01 (70°C/ 6Hr)			ISO 23999 ASTM F3261
Wear Layer Thickness of Resilient Floor Coverings by Optical Measurement		Average Total Thickness: 0.011 Inch/ 0.28mm			ASTM F410
Resistance to Chemicals	Chemicals	Surface Dulling	Surface Attack	Color Change	ASTM F925
	5% Acetic Acid	0	0	0	
	70% Isopropyl Alcohol	0	0	0	
	Mineral Oil	0	0	0	
	5% Sodium Hydroxide	0	0	1	
	5% Hydrochloric Acid	0	0	0	
	5% Ammonia	0	0	0	
	Bleach	0	0	0	
	5% Phenol	0	0	0	
	Gasoline	0	0	0	
	Sulfuric Acid	0	0	0	
	Kerosene	0	0	0	
Olive Oil	0	0	0		
Static Load Limit		Specified Load: 250psi		Residual Compression:0.003mm	ASTM F970
Measuring Thickness of Resilient Floor Covering with Foam Layer		Average Total Thickness: 0.202 inch			ASTM F387
Determination of Flexibility		PASSES 115 mm Mandrel			ASTM F137
RESIDUAL INDENTATION AT 75 Lbs		0.000 Inch			ASTM F1914
Squareness Gage		≤0.25mm			ASTM F2421
Length Deviation		≤0.15mm			
Width Deviation		≤0.15mm			
Squareness Deviation		≤0.15mm			



TEST REPORT

DATE: 10-02-2019

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TEST NUMBER: 0260689

CLIENT	Rok Plank
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TEST METHOD CONDUCTED	Test Summary
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DESCRIPTION OF TEST SAMPLE	
IDENTIFICATION	Rok Plank

TEST RESULTS

TEST METHOD	PASS/FAIL
ASTM F137	Meets the requirements of ASTM F137
ASTM F970	Meets the requirements of ASTM F3261
ASTM F925	Meets the requirements of ASTM F925
ASTM F387	Meets the requirements of ASTM F387
ASTM F1914	Meets the requirements of ASTM F1914
ISO 24337	Meets the requirements of ISO 24337
ISO 23999	Meets the requirements of ISO 23999
ASTM F410	Meets the residential requirement for wear layer via ASTM F3261.

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**TEST REPORT**

DATE: 10-01-2019

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TEST NUMBER: 0260689

CLIENT	Rok Plank
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TEST METHOD CONDUCTED	ISO 24337 Laminate Floor Coverings - Determination of Geometrical Characteristics
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DESCRIPTION OF TEST SAMPLE	
IDENTIFICATION	Rok Plank

GENERAL PRINCIPLE

The submitted goods were measured to determine geometrical values for size, squareness, straightness, height deviations, and gapping when applied together. All values listed are in mm.

TEST RESULTS

CHARACTERISTIC	VALUE (mm)
Thickness	5.146
Length	1219.291
Width	177.915
Squareness (out of square)	Max: 0.160 / Avg: 0.073
Straightness	0.058
Width Flatness	Max: 0.132 (0.074%) / Avg: 0.097 (0.055%) - Convex
Length Flatness	Max: 0.172 (0.014%) / Avg: 0.131 (0.011%) - Convex
Openings Between Elements	Max: 0.183 / Avg: 0.091
Height Difference Between Elements	Max: 0.114 / Avg: 0.075

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**TEST REPORT****DATE:** 10-01-2019**Page 1 of 1****TEST NUMBER:** 0260689

CLIENT	Rok Plank
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TEST METHOD CONDUCTED	ASTM F137 Test Method for Flexibility of Resilient Flooring Materials with Cylindrical Mandrel Apparatus
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DESCRIPTION OF TEST SAMPLE	
IDENTIFICATION	Rok Plank

GENERAL PRINCIPLE

The flexibility of a specimen is determined by flexing the material around mandrels of varying sizes. The mandrel sizes range from 6 mm to 120 mm in diameter. The specimen is flexed 180° around the mandrel and then examined for cracking or breaking. If none exists, the procedure is repeated on the next smaller mandrel. The procedure is continued until the material breaks or cracks or until the smallest mandrel is passed.

TEST RESULTS

RESULT	PASSES 115 mm Mandrel
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**TEST REPORT****DATE:** 10-01-2019**Page 1 of 1****TEST NUMBER:** 0260689

CLIENT	Rok Plank
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TEST METHOD CONDUCTED	ASTM F387 Standard Test Method for Measuring Thickness of Resilient Floor Covering with Foam Layer
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DESCRIPTION OF TEST SAMPLE	
IDENTIFICATION	Rok Plank

GENERAL PRINCIPLE

The total thickness of a resilient flooring material is determined through measurements made using a .250 inch presser foot and a dial micrometer. The average of 5 total measurements is reported as the average total thickness.

TEST RESULTS

		THICKNESS
	SPECIMEN 1	0.202 Inch
	SPECIMEN 2	0.204 Inch
	SPECIMEN 3	0.201 Inch
	SPECIMEN 4	0.202 Inch
	SPECIMEN 5	0.203 Inch
AVERAGE TOTAL THICKNESS		0.202 Inch

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**TEST REPORT**

DATE: 10-01-2019

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TEST NUMBER: 0260689

CLIENT	Rok Plank
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TEST METHOD CONDUCTED	ASTM F410 Standard Test Method for Wear Layer Thickness of Resilient Floor Coverings by Optical Measurement
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DESCRIPTION OF TEST SAMPLE	
IDENTIFICATION	Rok Plank

GENERAL PRINCIPLE

The thickness of the wear layer of resilient non-textile floor coverings is determined by microscopic optical measurement. The specimen is examined in five areas and measurements are made on the outer most layer of the composite material. The measurements are recorded to the .001 inch and averaged.

TEST RESULTS

		THICKNESS	
	SPECIMEN 1	0.012 inch	0.30 mm
	SPECIMEN 2	0.009 inch	0.24 mm
	SPECIMEN 3	0.011 inch	0.29 mm
	SPECIMEN 4	0.010 inch	0.25 mm
	SPECIMEN 5	0.011 inch	0.28 mm
AVERAGE TOTAL THICKNESS		0.011 Inch	0.27 mm

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**TEST REPORT**

DATE: 10-01-2019

Page 1 of 1

TEST NUMBER: 0260689

CLIENT	Rok Plank
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TEST METHOD CONDUCTED	ASTM F925 (Regular) Standard Test Method for Resistance to Chemicals of Resilient Flooring
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DESCRIPTION OF TEST SAMPLE	
IDENTIFICATION	Rok Plank

TEST RESULTS

5 MINUTE RATINGS	24 HOUR RATINGS
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STAINING AGENT	SURFACE DULLING	SURFACE ATTACK	COLOR CHANGE	SURFACE DULLING	SURFACE ATTACK	COLOR CHANGE
5% Acetic Acid	0	0	0	0	0	0
70% Isopropyl Alcohol	0	0	0	0	0	0
Mineral Oil	0	0	0	0	0	0
5% Sodium Hydroxide	0	0	0	0	0	1
5% Hydrochloric Acid	0	0	0	0	0	0
5% Ammonia	0	0	0	0	0	0
Bleach	0	0	0	0	0	0
5% Phenol	0	0	0	0	0	0
Gasoline	0	0	0	0	0	0
Sulfuric Acid	0	0	0	0	0	0
Kerosene	0	0	0	0	0	0
Olive Oil	0	0	0	0	0	0

RATING KEY

0 - No change (----)
1 - Slight change
2 - Moderate change
3 - Severe change

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**TEST REPORT****DATE:** 10-01-2019**Page 1 of 1****TEST NUMBER:** 0260689

CLIENT	Rok Plank
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TEST METHOD CONDUCTED	ASTM F970 Standard Test Method for Static Load Limit
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DESCRIPTION OF TEST SAMPLE	
IDENTIFICATION	Rok Plank

GENERAL PRINCIPLE

This test determines the recovery properties of resilient floor covering after long term indentation test (24 hours) under a specified load.

PROCEDURE

The test sample is conditioned to equilibrium at 73° F and 50% relative humidity. The initial thickness of the sample is determined using a dial micrometer with a flat presser foot .250 inches in diameter. A specified load is applied to the sample over a 1.125 inch diameter indenter foot for 24 hours. After removal of the load, the sample is allowed to recover for 24 hours. The sample is regauged using the .250 inch diameter presser foot. The difference between the two measurements is reported as the residual compression.

TEST RESULTS

SPECIFIED LOAD	RESIDUAL COMPRESSION
250 psi	0.003 Inch

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TEST REPORT

DATE: 10-01-2019

Page 1 of 1

TEST NUMBER: 0260689

CLIENT	Rok Plank
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TEST METHOD CONDUCTED	ASTM F1914 Test Method for Short-Term Indentation and Residual Indentation of Resilient Floor Covering
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DESCRIPTION OF TEST SAMPLE	
IDENTIFICATION	Rok Plank

PROCEDURE

A test sample is loaded with 75 lbs. on a presser foot .250 inches in diameter for 15 minutes. After 60 minutes of recovery time the indentation is measured again and compared to the original thickness of the sample.

TEST RESULTS

RESIDUAL INDENTATION AT 75 Lbs.	0.000 Inch
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**Surface Integrity – No puncture through wear layer/décor into rigid core.*

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**TEST REPORT****DATE:** 10-01-2019**Page 1 of 3****TEST NUMBER:** 0260689

CLIENT	Rok Plank
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TEST METHOD CONDUCTED	ASTM F2421 Test Method for Size and Squareness of Resilient Floor Tile by Dial Gage Method
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DESCRIPTION OF TEST SAMPLE	
IDENTIFICATION	Rok Plank

GENERAL PRINCIPLE

This test method covers the determination of both dimensions (length and width) and squareness of resilient floor tile. The gage dials were set and reported as deviation from the zero point of the specified size. Results are listed in inches.

TEST RESULTS

Specified Size in Inches	
Length	Width
48.000	7.000

#1		Squareness Gage	Gage B	Gage C	Gage D	Gauge E
First Set	1	0.000	7.006	7.008	7.008	48.010
Rotation 1	2	0.001	7.008	7.008	7.006	48.010
Flip 1	3	0.002				
Rotation 2	4	0.006				

		Per Linear Ft
Length Deviation	0.010	0.002
Width Deviation Left	0.006	0.010
Width Deviation Center	0.008	0.014
Width Deviation Right	0.008	0.014

Squareness Deviation	
Corner 1	0.000
Corner 2	0.001
Corner 3	0.002
Corner 4	0.006

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**TEST REPORT**

DATE: 10-01-2019

Page 3 of 3

TEST NUMBER: 0260689

CLIENT	Rok Plank
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TEST METHOD CONDUCTED	ASTM F2421 Test Method for Size and Squareness of Resilient Floor Tile by Dial Gage Method
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DESCRIPTION OF TEST SAMPLE	
IDENTIFICATION	Rok Plank

#4		Squareness Gage	Gage B	Gage C	Gage D	Gauge E
First Set	1	0.001	7.003	7.005	7.004	48.006
Rotation 1	2	0.000	7.004	7.005	7.003	48.006
Flip 1	3	0.000				
Rotation 2	4	0.005				

		Per Linear Ft
Length Deviation	0.006	0.002
Width Deviation Left	0.003	0.005
Width Deviation Center	0.005	0.009
Width Deviation Right	0.004	0.007

Squareness Deviation	
Corner 1	0.001
Corner 2	0.000
Corner 3	0.000
Corner 4	0.005

#5		Squareness Gage	Gage B	Gage C	Gage D	Gauge E
First Set	1	0.004	7.001	7.004	7.003	48.014
Rotation 1	2	0.001	7.003	7.004	7.001	48.014
Flip 1	3	0.005				
Rotation 2	4	0.002				

		Per Linear Ft
Length Deviation	0.014	0.004
Width Deviation Left	0.001	0.002
Width Deviation Center	0.004	0.007
Width Deviation Right	0.003	0.005

Squareness Deviation	
Corner 1	0.004
Corner 2	0.001
Corner 3	0.005
Corner 4	0.002

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**TEST REPORT****DATE:** 10-01-2019**Page 1 of 1****TEST NUMBER:** 0260689

CLIENT	Rok Plank
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TEST METHOD CONDUCTED	ISO 23999 ASTM F3261 Standard Specification for Resilient Flooring in Modular Format with Rigid Polymeric Core
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DESCRIPTION OF TEST SAMPLE	
IDENTIFICATION	Rok Plank

GENERAL PRINCIPLE

This International Standard specifies a method for determining dimensional stability and curling of resilient floor coverings, in the form of sheets and tiles, in linear dimensions after exposure to heat. The vertical deformations are measured in the test specimen after the specified heat treatment. Test specimens are placed in an oven at an elevated temperature, after which curl and dimensional stability are determined. In the case of domed material, turn the test specimen over to measure inverted or with the back of the sample facing up.

TEST RESULTS

IDENTIFICATION	TEMPERATURE	RESULT	INITIAL CURL	FINAL CURL
Length mean	70° C	-0.025 mm (0.01%)	0 mm	0 mm
Width mean	70° C	-0.380 mm (0.12%)		

IDENTIFICATION	TEMPERATURE	RESULT	INITIAL CURL	FINAL CURL
Length mean	70° C	-0.127 mm (0.04%)	0 mm	0 mm
Width mean	70° C	-0.169 mm (0.06%)		

IDENTIFICATION	TEMPERATURE	RESULT	INITIAL CURL	FINAL CURL
Length mean	70° C	+0.025 mm (0.01%)	0 mm	0 mm
Width mean	70° C	+0.042 mm (0.01%)		

NOTE: LVT/LVP-ISO 23999 Resilient Floor Covering – Determination of Dimensional Stability and Curling after Exposure to Heat

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**TEST REPORT**

DATE: 10-18-2019

Page 1 of 1

TEST NUMBER: 0260689

CLIENT	Rok Plank
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TEST METHOD CONDUCTED	ASTM F1514 Measuring Heat Stability of Resilient Flooring by Color Change
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DESCRIPTION OF TEST SAMPLE	
IDENTIFICATION	Rok Plank

GENERAL PRINCIPLE

The test specimens are exposed to heat for 7 continuous days in an air circulating chamber. The materials are read using a spectrophotometer for the baseline color value and then read after the exposure. The Delta E is listed to show the color value change resulting from each exposure.

TEST RESULTS

	DELTA E (ΔE) Rating	Gray Scale Rating
Heat Aged Sample 1	0.04	5.0
Heat Aged Sample 2	0.11	5.0
Heat Aged Sample 3	0.04	5.0

Test requirements of < 8.0 Delta E were met by the tested samples.

AATCC RATING KEY	
5	No change
4	Slight change
3	Noticeable change
2	Considerable change
1	Severe change

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**TEST REPORT**

DATE: 10-18-2019

Page 1 of 1

TEST NUMBER: 0260689

CLIENT	Rok Plank
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TEST METHOD CONDUCTED	ASTM F1515 Measuring Light Stability of Resilient Flooring by Color Change
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DESCRIPTION OF TEST SAMPLE	
IDENTIFICATION	Rok Plank

GENERAL PRINCIPLE

The test specimens are exposed to accelerated light via xenon light using the standard irradiance as listed in the method. The materials are read using a spectrophotometer for the baseline color value and then read after 100, 200, and 300 hours of exposure. The Delta E is listed to show the color value change resulting from each exposure.

TEST RESULTS

	DELTA E (ΔE) Rating	Gray Scale Rating
100 AFU Exposed Sample	0.21	5.0
200 AFU Exposed Sample	0.30	5.0
300 AFU Exposed Sample	0.24	5.0

Test requirements of < 8.0 Delta E MEETS specified criteria.

AATCC RATING KEY	
5	No change
4	Slight change
3	Noticeable change
2	Considerable change
1	Severe change

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Test Report

Report Number: 140606001SHJ-BP-1

Test Items, Method and Results:

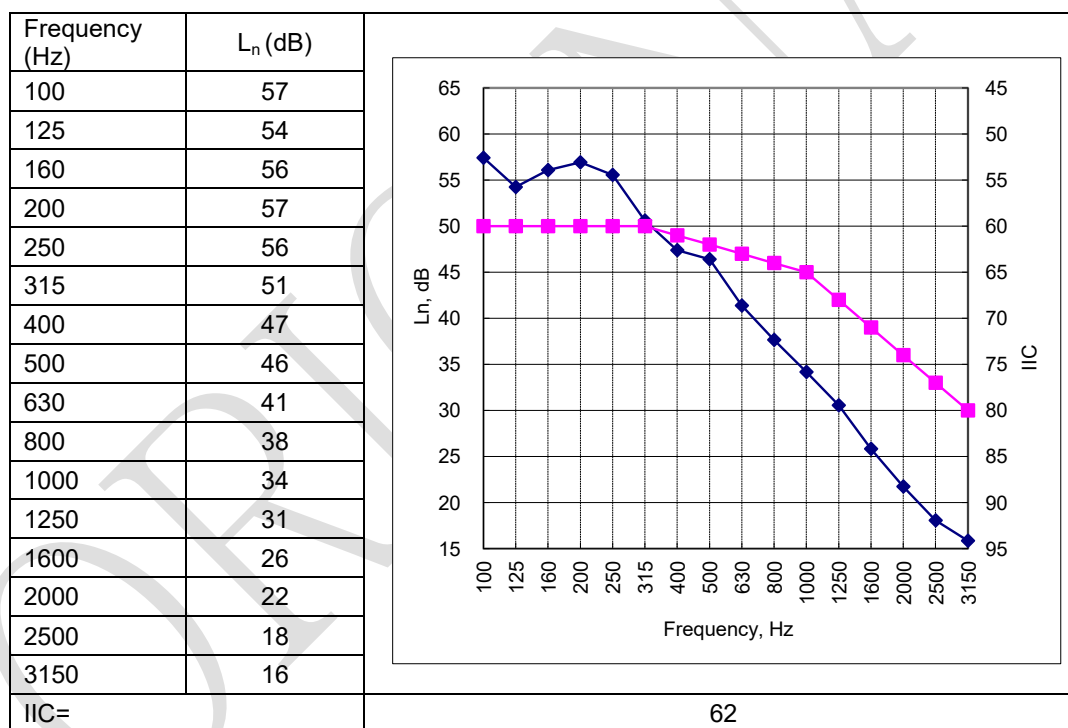
Test Method: ASTM E492-09

Temperature: 25°C

Relative Humidity: 63%

Specimen area: 10.5m²Volume of the receiving room: 111m³

Floor/ceiling Assembly: The system consisted of 150mm thick concrete floor with a drop ceiling below forming the horizontal separation between two rooms, one directly above the other. The drop ceiling consisted of 350mm deep light steel bar joists spaced 1200mm on centre. The 12mm thick gypsum boards were fixed on the bar. 100mm thick fibre glass sound batts were placed in the 350mm space. A high density cross-link polyethylene underlayment was placed upon the concrete and the 5.5mm thick PVC flooring specimens were placed on the top of the whole system.

**Calculated Impact Insulation Class: IIC 62**

Note:

1. L_n = Normalized Sound Pressure Level for Covering over Floor/ceiling 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/ceiling assembly system.

Test Report

Report Number: 140606001SHJ-BP-1

Appendix A: Sample photos



Test sample

The End of Report

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PRODUCT SOUND QUALITY RESULTS

CALCULATED IMPACT INSULATION CLASS: IIC 62

TEST METHOD: ASTM E492-09

TEMPERATURE: 25 C

RELATIVE HUMIDITY: 63%

SPECIMEN AREA: 10.5m²

VOLUME OF THE RECEIVING ROOM: 111m³

- NORMALIZED SOUND PRESSURE LEVEL FOR COVERING OVER THE FLOOR / CEILING SYSTEM
- CLASSIFIED IIC IN ACCORDANCE WITH E989-12, STANDARD CLASSIFICATION FOR DETERMINATION OF IMPACT INSULATION
- THE IIC WAS FOR THE WHOLE FLOOR / CEILING ASSEMBLY SYSTEM.

CALCULATED SOUND TRANSMISSION CLASS: STC 60

TEST METHOD: ASTM E90-09

TEMPERATURE: 25 C

RELATIVE HUMIDITY: 63%

SPECIMEN AREA: 10.5m²

VOLUME OF THE RECEIVING ROOM: 111m³

- 1 TRANSMISSION LOSS, THE PARTITION WAS THE FLOOR / CEILING ASSEMBLY SYSTEM
- CLASSIFIED STC IN ACCORDANCE WITH ASTM E413-10, CLASSIFICATION FOR RATING SOUND INSULATION
- THE STC WAS FOR THE WHOLE FLOOR / CEILING ASSEMBLY SYSTEM

****RESULTS BASED ON PRODUCTS WITH 1MM IXPE UNDERPADS WITH 100KG/M3 DENSITY. SUPPLIED BY RUNYANG****

****1.5MM UNDERPADS AVAILABLE FOR SPECIAL ORDER FOR PROJECTS THAT REQUIRE HIGHER RATINGS****