

1. PRODUCT NAME

- APOLLO FITNESS TILES

2. MANUFACTURER/SUPPLIER

Edgewood Matting Ltd
18120 – 109 Avenue
Edmonton Alberta Canada T5S 2K2
Tel: 780.466.2084
Toll Free: 800.668.1776
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E-mail: inquires@edgewoodgroup.ca
www.edgewoodgroup.ca

3. PRODUCT DESCRIPTION

Composition & Materials

Apollo Fitness Tiles are made from a combination of 100% post-consumer recycled SBR (styrene butadiene rubber) and EPDM (ethylene propylene diene monomer) rubber, bonded with a water-based polymer. Colored toppings are made from EPDM granules. All colored toppings are approximately 1/2" (12 mm) thick with the SBR granules making up the remainder of the tile.

Apollo Fitness Tiles meet standards specified under the LEED® (Leadership in Energy and Environmental Design) criteria developed by both the U.S. Green Building Council (USGBC) and Canada Green Building Council (CaGBC).

Apollo Fitness Tiles are FloorScore(R) certified under the criteria developed by the Resilient Floor Covering Institute (RFCI) and certified by Scientific Certification Systems (SCS), Inc. Registration # SCS-FS-04063.

Special Considerations:

Fitness Centers: 1 1/2" Tile not recommended for use under cardio equipment.

Apollo Fitness Tiles and accessories:

A. Apollo Fitness Tiles

Tile Size:

24" x 24" = 4 ft²

61 cm x 61 cm = 0.37 m²
(2' x 2' square tile)

Thickness:

• 1" / 25 mm

• 1 1/2" / 38 mm

NOTE: All measurements are subject to nominal variation.

B. Wedges & Wedge Tiles are used around the perimeter of an area to create a transition. They can be adhered with adhesive to the edge of the tile and/or glued to the sub-surface.

Dimensions:

1" / 25mm transition wedge: 36" long x 12" wide = 3.0 sq.ft.
91.5 cm long x 30.5 cm wide = 0.28 m²

1½" / 38mm transition wedge: 36" long x 18" wide = 4.5 sq. ft.
91.5 cm long x 45.7 cm wide = 0.42 m²

C. Corner wedges, designed for use on all 90° angles.
(Note: corners for 1" tiles must be fabricated on site from 36" 1" wedge piece)

Dimensions: (available in outside and inside format)

1½" / 38mm outside corner wedge: 9¾" long (inside edge) x 12" wide = .81 sq. ft.
24.8 cm long x 30.5 cm wide = 0.075 m²

1½" / 38mm inside corner wedge: 9¾" long (outside edge) x 18" wide = 1.22 sq. ft.
24.8 cm long x 45.7 cm wide = 0.113 m²

1½" outside corner 1½" inside corner

D. Half Tiles are designed so that the area can be installed in a staggered layout.

E. Interlocking Pins are included with every order, four per tile:

- **1" Tiles** : 2.5" long and ¼" in diameter
- **1 ½" Tiles:** 3.5" long and 5/8" in diameter.

COLORS:

Standard Colors (no minimum order required):

Includes: 100% Black

Low Color 25 % colour speckle

High Color 70 % colour speckle

Custom Colors:

Custom colors available upon request using a combination of the 26 EPDM colors below. Create your own custom blend in concentrations up to 75% color. Minimum order of 24 tiles, order in 4 tile multiples.

- | | | | | | |
|--------------|-----------------|-------------|----------|---------------|------------|
| • RED FLOWER | • IMPERIAL BLUE | • BEIGE | • GREY | • CREAM | • BROWN |
| • GREEN | • OCEAN GREEN | • PURPLE | • ORANGE | • PASTEL BLUE | • DENIM |
| • EVERGREEN | • OCEAN BLUE | • BLUE | • RED | • YELLOW | • PUTTY |
| • MUSTARD | • DEEP WATERS | • OFF WHITE | • SAND | • LIGHT GREY | • CHARCOAL |
| • LATTE | • EXPRESSO | | | | |

**NOTE – VARIATION IN UV STABILITY CAN OCCUR IN CUSTOM COLOR MIXES*

4. DESIGN & BASIC USE

Apollo Fitness Tiles are designed for use in sport and fitness facilities. The superior sound reduction qualities of Apollo Fitness Tiles make them the ideal solution for areas where excessive



sound transference between floors, or from room to room has been identified. Apollo Fitness Tiles should be considered in fitness facilities which are located over occupied spaces in schools, hotels, health care, residential and commercial sports facilities.

a) Apollo Fitness Tile's "interlocking system" provides an easy, self-aligning installation feature that does not require adhesive. Interlocking pins or tubes are included with every order, four per tile.

b) Apollo Fitness Tiles can be installed over sub-surfaces which include concrete and wood. Other sub-surfaces shall be approved by Edgewood.

Limitations

The following chemicals may cause damage to the surface and should be avoided: kerosene, solvents, grease, auto oil, animal or vegetable oil/fat, and highly concentrated acids and bases. This product is not suitable for service environments that have heavy vehicular traffic, rolling or sliding machinery, or similar uses.

5. INSTALLATION METHODS

Apollo Fitness Tiles should be installed by experienced floor covering installer. Refer to **Apollo Fitness Tile Installation & Maintenance Guidelines** for information relating to sub-surfaces listed:

- Concrete sub-surface
- Wooden sub-surface

6. INSTALLATION CONDITIONS

a) All other finishing work such as sanding, painting and overhead work must be completed prior to installing Apollo Fitness Tiles.

b) Lay out all the tiles on or near the sub-surface for installation the next day. Allow tiles to acclimatize to average ambient temperature.

c) Materials shall be protected from weather and extreme temperatures, solvents, and sources of damage prior to and during installation.

7. TECHNICAL DATA

Test Standards for: American Society for Testing and Materials (ASTM)

- **ASTM C423** Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method
- **ASTM D395B** Standard Test Methods for Rubber Property-Compression Set under force
- **ASTM D412** Standard Test Methods for Vulcanized Rubber and Thermoplastic Rubbers and Thermoplastic Elastomers -Tension
- **ASTM D2047-04** Standard Test Method for Coefficient of Friction of Polish-Coated Floor Surfaces as Measured by the James Machine
- **ASTM D2240** Standard Test Method for Rubber Property-Durometer Hardness
- **ASTM D4060** Standard Test Method for Abrasion resistance of Organic Coatings by the Taber Abrader
- **ASTM E492** Standard Test Method for Laboratory Measurement of Impact Sound Transmission Through Floor-Ceiling Assemblies Using the Tapping Machine.
- **ASTM E648-10** Standard Test Method for Critical Radiant Flux of Floor-Covering Systems Using a

Radiant Heat Energy Source.

- **ASTM E1007** Standard Test Method for Field Measurement of Impact Sound Transmission
- **ASTM F970-00** Standard Test Method for Static Load Limit (1000 lbs)
- **California Specification 01350 (CHPS Compliant for VOC Emissions)** - Emission tests are performed following California Dept. of Health Services Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers, CA/DHS/EHLRB/R-174, 07/15/04 (http://www.cal-iaq.org/VOC/Section01350_7_15_2004_FINAL_PLUS_ADDENDUM-2004-01.pdf).

PHYSICAL / CHEMICAL PROPERTIES

A) Apollo Fitness Tile – Black and Low color – Citrine, Amber, Topaz, Emerald, Ruby

TEST PROCEDURE	DESCRIPTION	ACHIEVED VALUES (Subject to nominal variation)
ASTM C423	Noise Reduction Coefficient	Sound Absorption 0.34 NRC 0.35
ASTM D2047.04	Static Coefficient of Friction (James Machine)	Dry 0.65, Wet 0.67
ASTM D2240	Hardness Shore A Durometer	65
ASTM D395	Compression Set Under Force (method B)	97.8% Recovered
ASTM D412	Tensile Strength	124.5 lbs/square inch
ASTM D4060	Taber Abrasion (H-19) 1000 g load	0.18% wt. loss
ASTM E492	Lab Measurement - Impact Sound Transmission	IIC = 58
ASTM E1007	Field Measurement - Impact Sound Transmission Apollo 1.5" Tile	FIIC 61 – Pass Code Requirement: FIIC 45
ASTM E648	Critical Radiant Flux of Floor-covering systems Using a Radiant Heat Energy Source	Contact Edgewood for results
ASTM F970	Static Load Limit (1000 lbs)	0.006 inch residual compression
CA 01350	VOC Emissions – Section 01350	Pass

B) Apollo Fitness Tile – High Color – Garnet, Jade, Jasper, Quartz, Sapphire

TEST PROCEDURE	DESCRIPTION	ACHIEVED VALUES (Subject to nominal variation)
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ASTM C423	Noise Reduction Coefficient	N/A
ASTM D2047.04	Static Coefficient of Friction (James Machine)	Dry 0.65, Wet 0.67
ASTM D2240	Hardness Shore A Durometer	68
ASTM D395	Compression Set under Force (method B)	98.1% Recovered
ASTM D412	Tensile Strength	174.31 lbs/square inch
ASTM D4060	Taber Abrasion (H-19) 1000 g load	0.21% wt. loss
ASTM E492	Lab Measurement - Impact Sound Transmission	N/A
ASTM E1007	Field Measurement - Impact Sound Transmission	N/A
ASTM E648	Critical Radiant Flux of Floor-covering systems Using a Radiant Heat Energy Source	Contact Edgewood for results
ASTM F970	Static Load Limit (1000 lbs)	0.008 inch residual compression
CA 01350	VOC Emissions – Section 01350	Pass

Note: Copies of test reports and additional product information are available upon request.

8. MAINTENANCE PROCEDURES

All Apollo Fitness Tile systems must be maintained as recommended. The type and frequency of maintenance will vary according to maintenance equipment and desired appearance of product. For detailed maintenance instructions refer to:

Apollo Cleaning and Maintenance Brochure

Toll Free Tel: 1.800.668.1776
 Direct Line: 1.780.466.2084
 Fax: 1.780.468.9104
www.edgewoodgroup.ca

9. AVAILABILITY & COST

Please contact the dealer, distributor, or Edgewood for information on availability and pricing.

10. WARRANTY

The standard warranty period is 5 years from date of shipment. Please, see Edgewood limited warranty for particulars of coverage.

11. TECHNICAL SERVICES

Contact Edgewood for more information, where our trained customer service personnel offer design assistance and technical support.

12. FILING SYSTEMS

- www.edgewoodgroup.ca

GENERAL - Cont'd

The sound absorption coefficient is ideally defined as the fraction of the randomly incident sound power absorbed by the material. The greater the coefficient, the greater the sound absorption.

The Noise Reduction Coefficient (NRC) is a single number rating obtained by taking the arithmetic average of the absorption coefficients at 250, 500, 1000, and 2000 Hz rounded to the nearest multiple of 0.05.

The Sound Absorption Average (SAA) is a single number rating obtained by taking the arithmetic average of the one-third octave bands from 200 through 2500 Hz rounded to the nearest 0.01.

DESCRIPTION OF TEST SPECIMEN

The test specimen consisted of an 8 foot wide by 9 foot long test area covered with 1 inch thick Apollo Fitness Tile item number ATA220202 laid on the concrete floor of our 16,640 cu. ft. reverberation room. The rubber tiles weighed 4.44 lbs/sq. ft.



FOR THE SCOPE OF
ACCREDITATION UNDER NVLAP
LAB CODE 100402-0

RESULTS OF TEST

**APOLLO FITNESS TILE– 1 INCH THICK ITEM
NUMBER ATA220202**

<u>One Third Octave Band Center Frequency, Hz</u>	<u>Absorption Coefficients Sabins/ft²</u>	<u>Percent Uncertainty</u>
100	0.00	4
125	0.00	4
160	0.00	4
200	0.09	4
250	0.17	2
315	0.20	2
400	0.32	2
500	0.37	2
630	0.41	2
800	0.43	2
1000	0.40	2
1250	0.41	2
1600	0.42	2
2000	0.40	2
2500	0.43	2
3150	0.42	2
4000	0.47	2
5000	0.47	2
<u>Sound Absorption Average (SAA)</u>	0.34	

<u>IDENTIFICATION</u>	<u>Absorption Coefficients – Sabins/ft.²</u>						<u>NRC</u>
	<u>125</u>	<u>250</u>	<u>500</u>	<u>1000</u>	<u>2000</u>	<u>4000</u>	
	0.00	0.17	0.37	0.40	0.40	0.47	0.35
Precision ±	0.05	0.02	0.02	0.01	0.01	0.02	

MOUNTING: Type “A” per ASTM Designation E795-05, “Standard Practices for Mounting Test Specimens During Sound Absorption Tests”.



FOR THE SCOPE OF
ACCREDITATION UNDER NVLAP
LAB CODE 100402-0.

REMARKS

1. Aging Period: None
2. Ambient Temperature: 70°F
3. Relative Humidity: 44%

CONCLUSION

The test method employed for this test has no pass-fail criteria; therefore, the evaluation of the test results is left to the discretion of the client.

This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

Date of Test: October 12, 2011

Report Approved by:

Brian Cyr
Engineer
Acoustical Testing

Report Reviewed By:

James R. Kline
Engineer/Quality Supervisor
Acoustical Testing

Attachments: None



REPORT

3933 US ROUTE 11 CORTLAND, NEW YORK 13045

Order No. 100543525

Date: November 16, 2011

REPORT NO. 100543525CRT-001

**IMPACT SOUND TRANSMISSION TEST ON 1 INCH THICK APOLLO
FITNESS TILE PLATINUM ITEM NUMBER 420FT3025180 OVER A
SIX INCH CONCRETE SLAB WITH A DROP CEILING**

RENDERED TO

**Edgewood Matting Ltd.
18120 - 109 Ave Edmonton AB T5S2K2
780-466-2084**

INTRODUCTION

This report gives the result of an Impact Sound Transmission test on 1 inch thick Apollo Fitness Tile item number ATA200202. The underlayment was selected and supplied by the client and received at the laboratories on November 10, 2011. The sample appeared to be in new, unused condition upon arrival.

AUTHORIZATION

Intertek Quote No. 500338996

TEST METHOD

The floor system was tested in general accordance with the American Society for Testing and Materials designation ASTM E492-09, "Standard Test Method for Laboratory Measurement of Impact Sound Transmission through Floor-Ceiling Assemblies Using the Tapping Machine". It was classified in accordance with ASTM E989-06, entitled, "Standard Classification for Determination of Impact Insulation Class (IIC)".



GENERAL

The test method is designed to measure the impact sound transmission performance of a floor-ceiling assembly, in a controlled laboratory environment. A standard tapping machine (Bruel & Kjaer Type 3207) was placed at four positions on the test floor that forms the horizontal separation between two rooms, one directly above the other. The data obtained was normalized to a reference room absorption of 10 square meters in accordance with the test method.

The standard also prescribes a single-figure classification rating called "Impact Insulation Class, IIC" which can be used by architects, builders and code authorities for acoustical design purposes in building construction.

The IIC is obtained by matching a standard reference contour to the plotted normalized one-third octave band sound pressure levels at each test frequency. The greater the IIC rating, the lower the impact sound transmission through the floor-ceiling assembly.

DESCRIPTION OF THE FLOOR/CEILING ASSEMBLY

The floor/ceiling assembly system consisted of a 6 inch 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 14 inch deep steel bar joists spaced 38 inches on center. The ceiling construction consisted of 2 x 4 inch wood bolted to the bar joists. The 2 x 4 inch wood was spaced 24 inches on center. Resilient channels (1/2 inch single leaf) were positioned on 16 inch centers between the furring strips and the 1/2 inch gypsum board. Sound attenuation batts (U.S.G. Thermofiber), four (4) inches in thickness were placed between the joists in the formed cavity. The receiving room below measured 1440 cubic feet.

DESCRIPTION OF TEST SPECIMEN

The test specimen consisted of 1 inch thick Apollo Fitness Tile item number ATA220202. The flooring weighed 4.44 lbs per sq ft



RESULTS OF TEST

The data obtained in the room below the panel normalized to $A_0 = 10$ square meters, is as follows:

<u>1/3 Octave Band Center Frequency Hertz</u>	<u>1/3 Octave Band Sound Pressure Level dB re 0.0002 Microbar</u>
100	62
125	58
160	55
200	56
250	52
315	49
400	41
500	39
630	35
800	30
1000	26
1250	21
1600	15
2000	9
2500	5
3150	1
Impact Insulation Class (IIC)	58

PRECISION

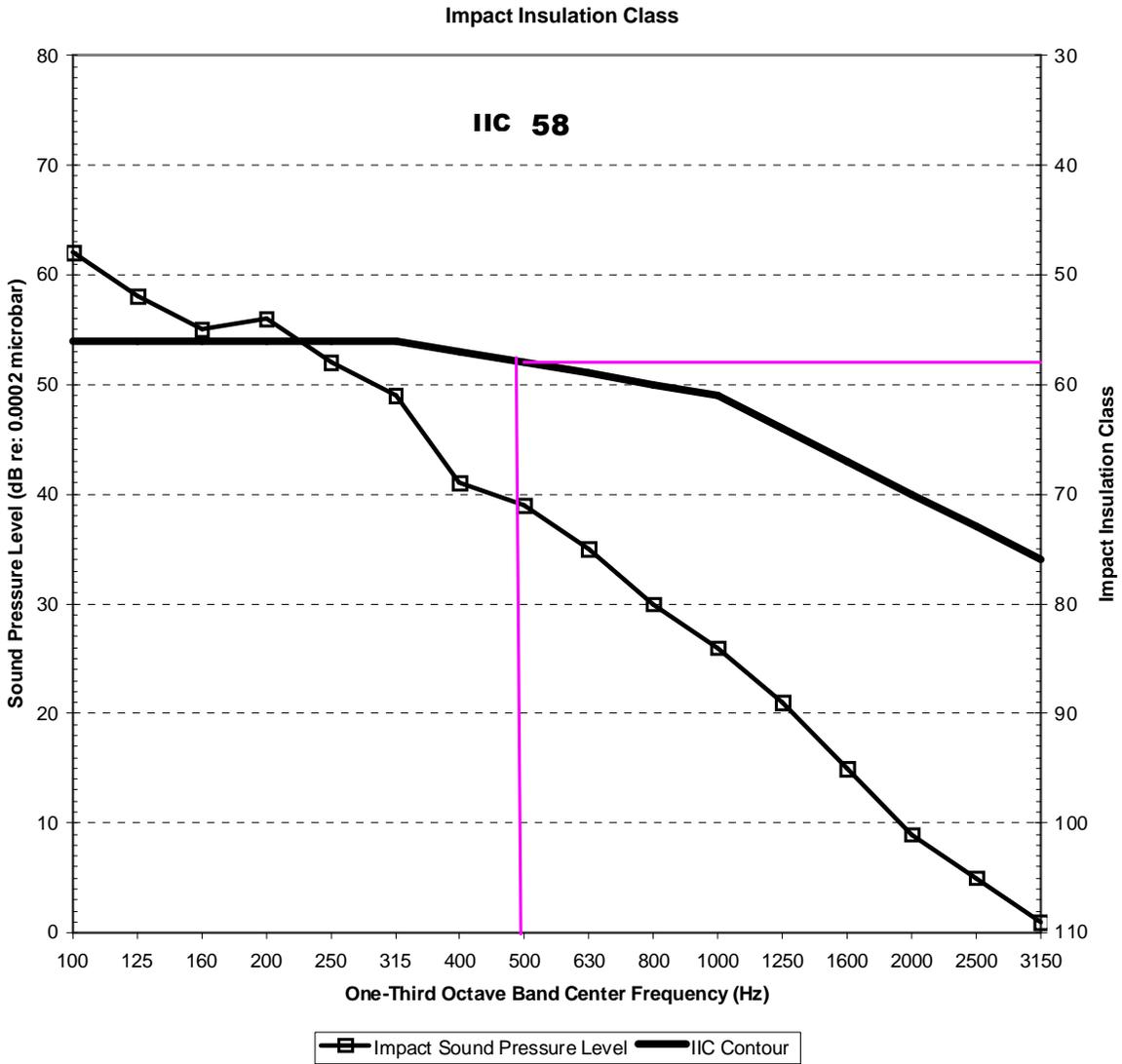
The 95% uncertainty level for each tapping machine location is less than 3 dB for the 1/3 octave bands centered in the range from 100 to 400 Hz and less than 2.5 dB for the bands centered in the range from 500 to 3150 Hz.

For the floor/ceiling construction, the 95% uncertainty limits (ΔL_n) for the normalized sound pressure levels were determined to be less than 2 dB for the 1/3 octave bands centered in the range from 100 to 3150 Hz.



1 INCH THICK APOLLO FITNESS TILE

ITEM NUMBER ATA220202



Edgewood Matting Ltd.



REMARKS

1. Ambient Temperature: 70 °F
2. Relative Humidity: 46%

CONCLUSION

The test method employed for this test has no pass-fail criteria; therefore, the evaluation of the test results is left to the discretion of the client.

Date of Test: November 16, 2011

Report Approved by:

Brian Cyr
Engineer
Acoustical Testing

Report Reviewed By:

James R. Kline
Engineer/Quality Supervisor
Acoustical Testing

Attachments: None