

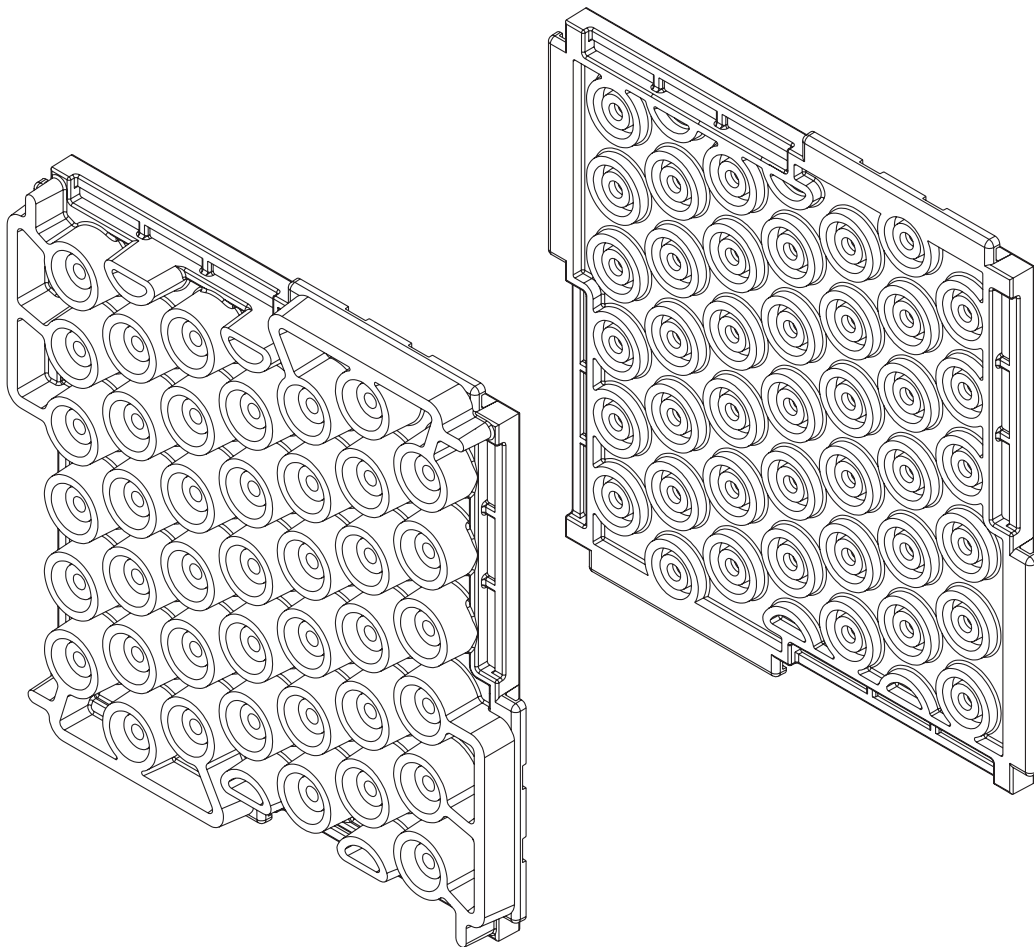


**It's not magic, it's engineering.®**

Impact and Airborne Sound Control

# GENIEMAT<sup>®</sup> FIT

For Weight Drop Impact Insulation



ASIA PACIFIC & NZ EDITION

Patent Pending


# GENIEMAT<sup>®</sup> FIT

## All-in-one fitness flooring

### PRODUCT FEATURES

**GenieMat FIT** is an all-in-one fitness floor made from recycled rubber, engineered to reduce structure-borne sound and vibration transmission in concrete, wood frame and metal deck construction.

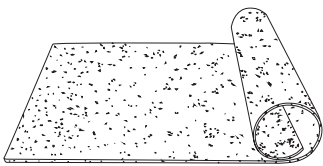
**GenieMat FIT** floors dramatically reduce low frequency impact noise in free weight areas, under cardio equipment and in fitness studios.

	<b>GenieMat FIT08</b>		<b>GenieMat FIT30</b>	<b>GenieMat FIT70</b>
Weight per tile/roll	77 kg/roll		9.4 kg/tile	16.7 kg/tile
Thickness	8 mm		30 mm	70 mm
Installed Dimension	1220 mm x 7620 mm	587 mm x 581 mm	607 mm x 607 mm	607 mm x 607 mm
Product Type	Roll	Puzzle	Interlocking Tile	Interlocking Tile

All listed dimensions are nominal.

**GenieMat FIT30** and **GenieMat FIT70** have a product and installed dimension tolerance of +/- 3 mm.

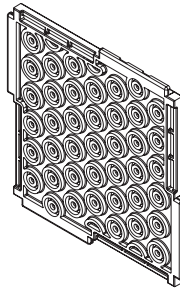




## GenieMat® FIT08

### APPLICATIONS

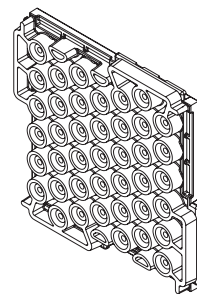
- Entryways/corridors
- Group fitness areas
- Locker rooms
- Spinning studios



## GenieMat FIT30

### APPLICATIONS

- Cardio studios
- Personal training areas
- Machine areas



## GenieMat FIT70

### APPLICATIONS

- High impact studios
- Free weight/dumbbell areas

# ENGINEERED FOR PERFORMANCE

## GenieMat® FIT DESIGN CRITERIA

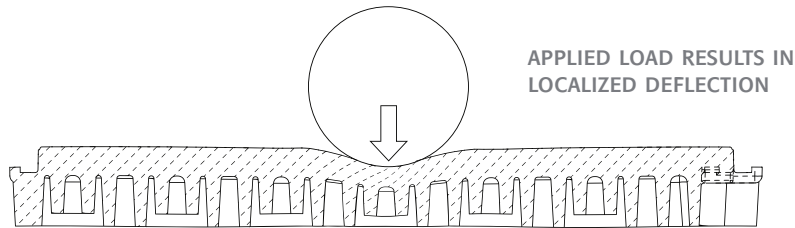
### SIGNIFICANTLY REDUCES STRUCTURE-BORNE VIBRATION

- Low dynamic stiffness for improved low frequency response
- Engineered dual cylinder pedestals reduce vibration transmission
- Decreased impact force exposure level as measured using heavy/hard impact sources

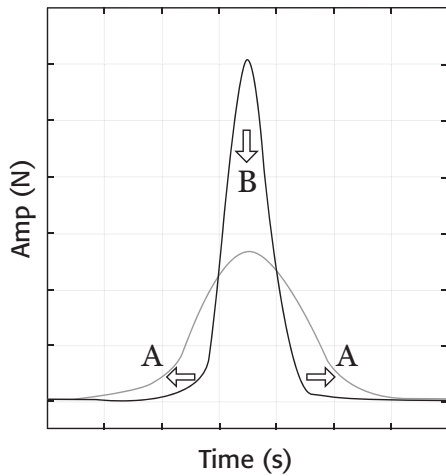
### SEAMLESS, INTERLOCKING FIT

- Tiles are installed in compression to have a seamless aesthetic and eliminate seam separation over time
- Seam compression of 10.3 N/mm (59 lbf/in)

### DESIGN OBJECTIVES OF A LOCALLY REACTIVE TILE

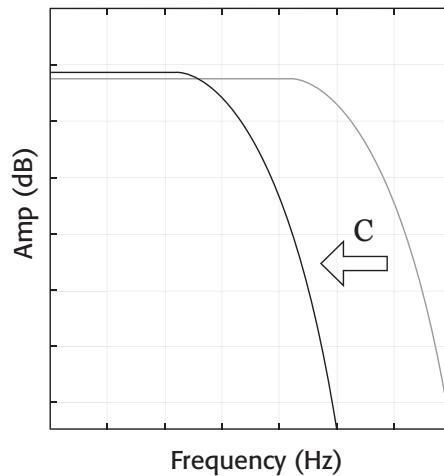


TIME DOMAIN FORCE PULSE



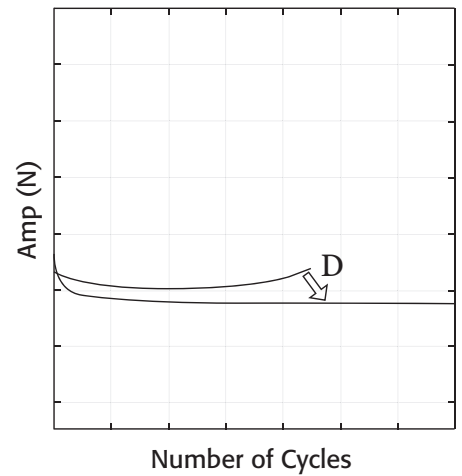
- A. Extending contact time improves lower frequency attenuation
- B. Reducing peak force value reduces overall sound pressure level

FREQUENCY DOMAIN FORCE PULSE



- C. Reducing 3 dB down point frequency improves lower frequency attenuation

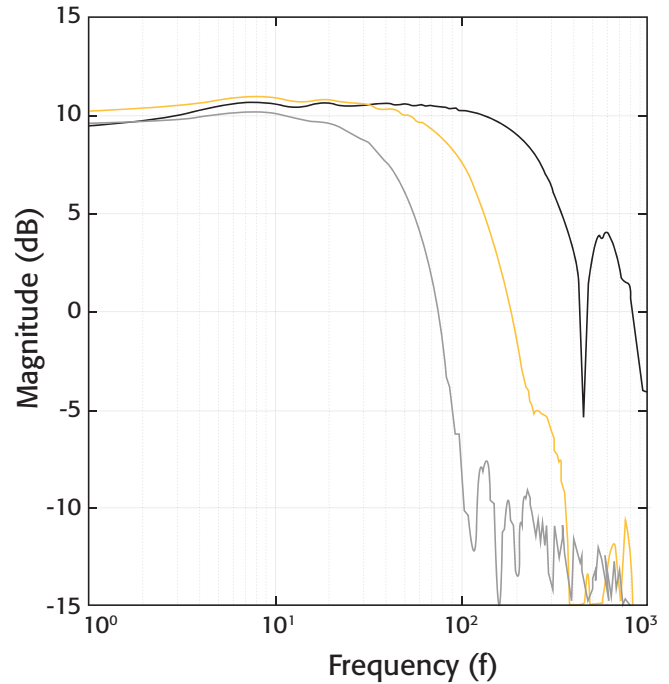
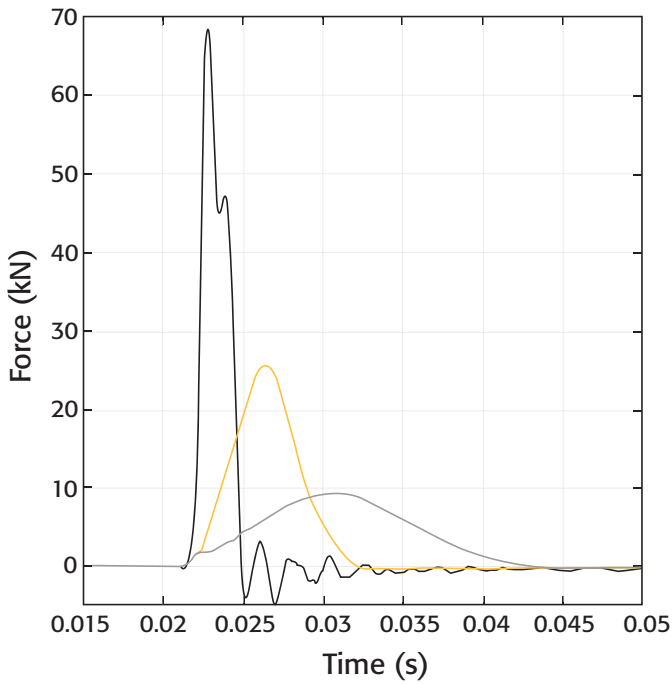
DURABILITY



- D. Flattening out durability curve equates to improved product lifetime
- Plot of peak force values taken from repeated force pulse measurements

## FORCE PULSE MEASUREMENTS OF GENIEMAT® FIT SYSTEMS

- Can be used to predict in-situ performance. Contact **Pliteq** for *Internoise 2018* paper and methodology



■ **GenieMat FIT08**  
■ **GenieMat FIT30**  
■ **GenieMat FIT70**

■ **GenieMat FIT08**  
■ **GenieMat FIT30**  
■ **GenieMat FIT70**

## ENGINEERING DESIGN CHARACTERISTICS

TEST RESULTS				
TEST DESCRIPTION	STANDARD REFERENCE	<b>GenieMat® FIT08</b>	<b>GenieMat® FIT30</b>	<b>GenieMat® FIT70</b>
Slip Resistance	ASTM D2047	0.90	0.81	0.81
Tensile Strength	ASTM D412	1.72 N/mm <sup>2</sup>	0.74 N/mm <sup>2</sup>	0.63 N/mm <sup>2</sup>
CHPS Section 01350	ASTM D5116	Pass	Pass	Pass
Chemical Resistance	ASTM F925	No Change	No Change	No Change
Impact Force Exposure Level	ISO 10140 - Part 5	43 dB	41 dB	39 dB
Critical Radiant Flux	ASTM E648	Class I /Class II*	Class I /Class II*	Class I /Class II*

\*Class I available upon request.

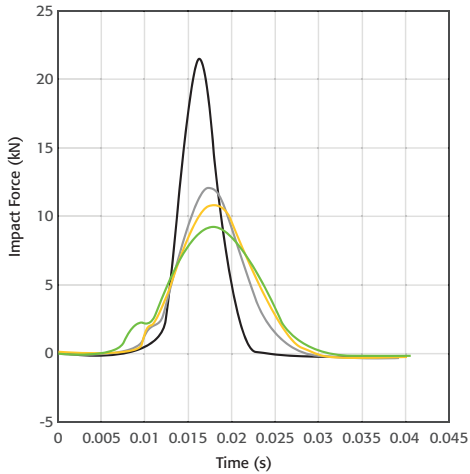


# GENIEMAT<sup>®</sup> xFIT

## GenieMat xFIT TESTING

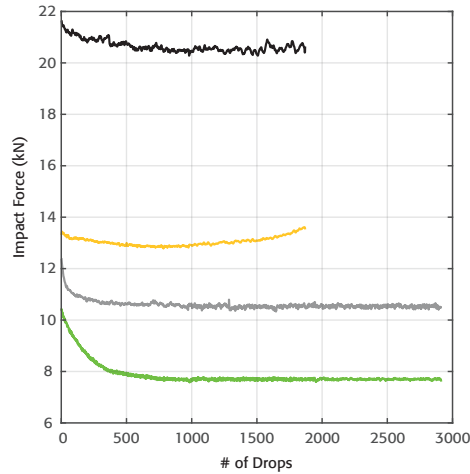
US Patent: US 10,676,920 B2

### FORCE PULSE



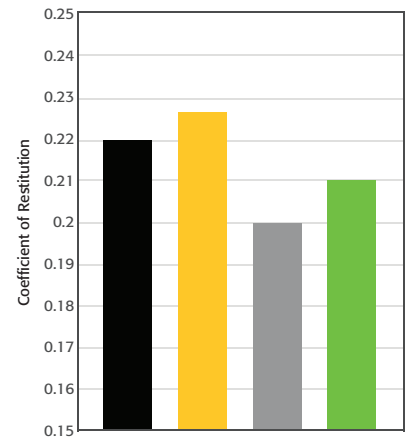
- GenieMat FIT30
- GenieMat FIT70
- GenieMat xFIT70
- GenieMat xFIT100

### FATIGUE TESTING



- GenieMat FIT30
- GenieMat FIT70
- GenieMat xFIT70
- GenieMat xFIT100

### REBOUND PLOTS

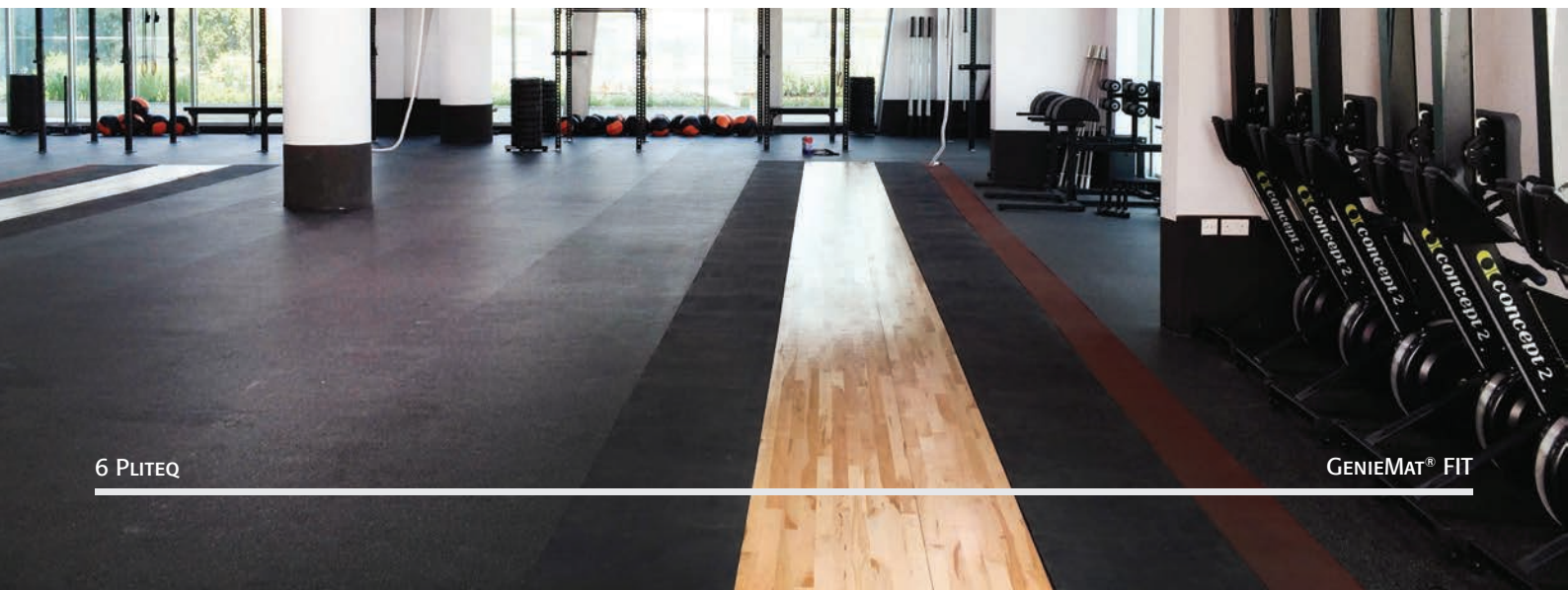


- GenieMat FIT30
- GenieMat FIT70
- GenieMat xFIT70
- GenieMat xFIT100

## ENGINEERING DESIGN CHARACTERISTICS

	GenieMat xFIT70	GenieMat xFIT100
Weight/sf	4.2 kg/sf	5.3 kg/sf
Thickness	70 mm	100 mm
Product Finish	Interlocking Tile	Interlocking Tile

## PLATFORMS

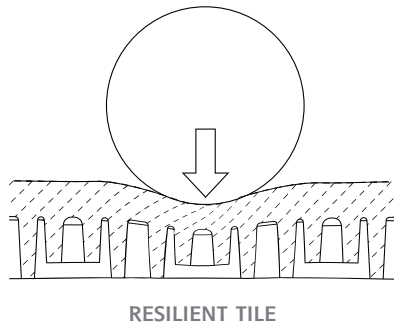


# HYBRID SYSTEM

WITH **GenieMat® FIT** AND **GenieMat FF**

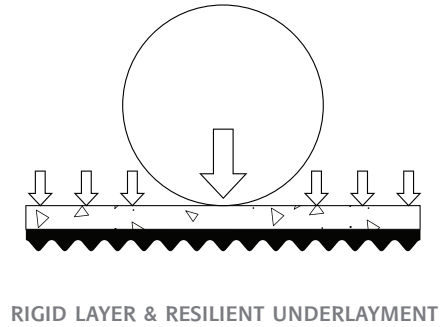
## LOCALLY REACTIVE

APPLIED LOAD RESULTS IN LOCALIZED DEFLECTION

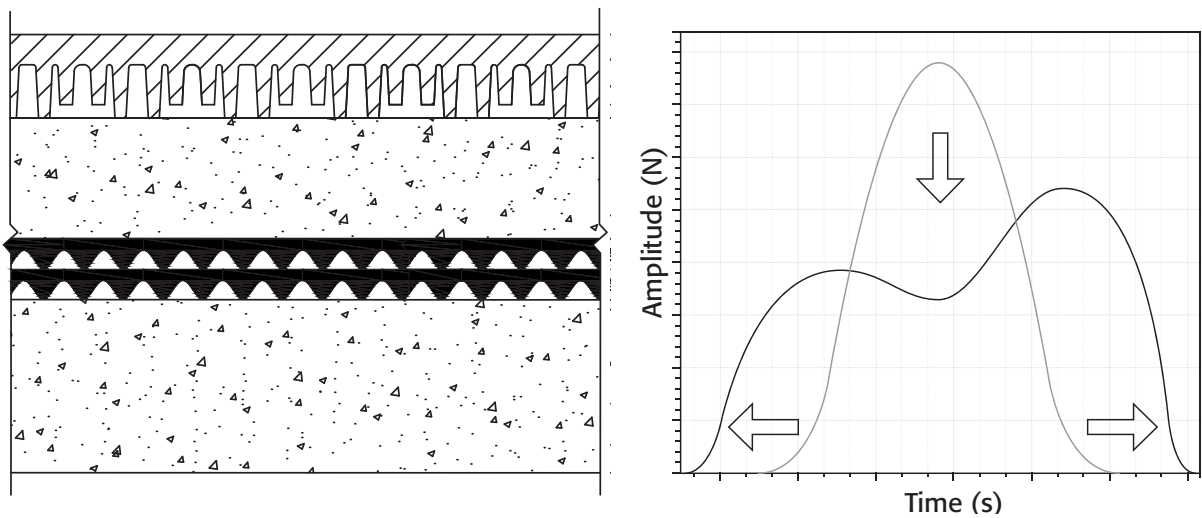


## RESONANTLY REACTIVE

APPLIED LOAD RESULTS IN DISTRIBUTED DEFLECTION



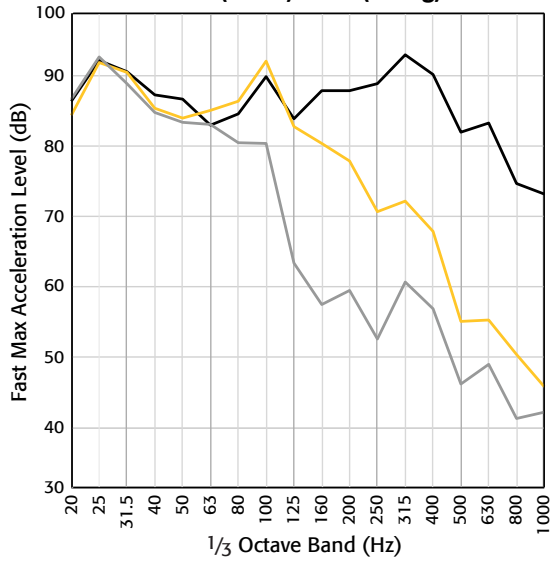
LOCALLY REACTIVE ABOVE RESONANTLY REACTIVE CREATES A HYBRID SYSTEM



- Helps reduce impact force amplitude and increase force impulse duration
- Ideal for rhythmic excitation such as dance studios and treadmill bays

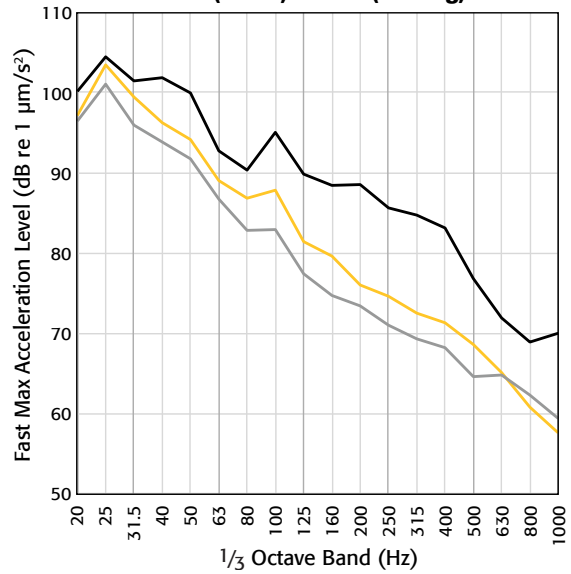
# TILE DATA

**Heavy Weight Drop - Acceleration  
39" (1.0 m) 15 lb (6.8 kg)**



- E5600.12 **GenieMat FIT08**
- E5600.14 **GenieMat FIT30**
- E5600.15 **GenieMat FIT70**

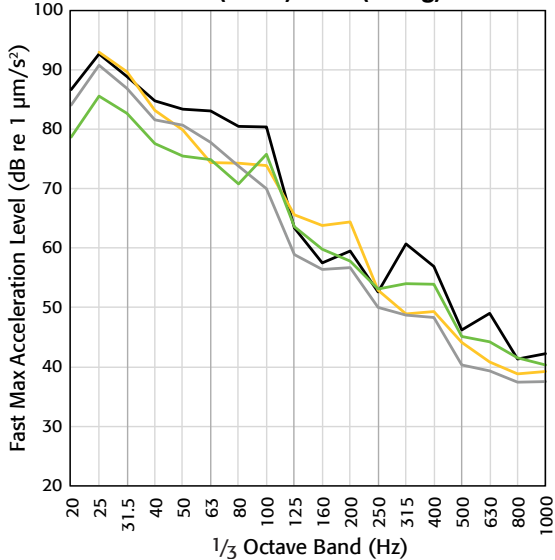
**Heavy Weight Drop - Acceleration  
39" (1.0 m) 100 lb (45.4 kg)**



- E5600.15 **GenieMat FIT70**
- E5600.16 **GenieMat xFIT70**
- E5600.17 **GenieMat xFIT100**

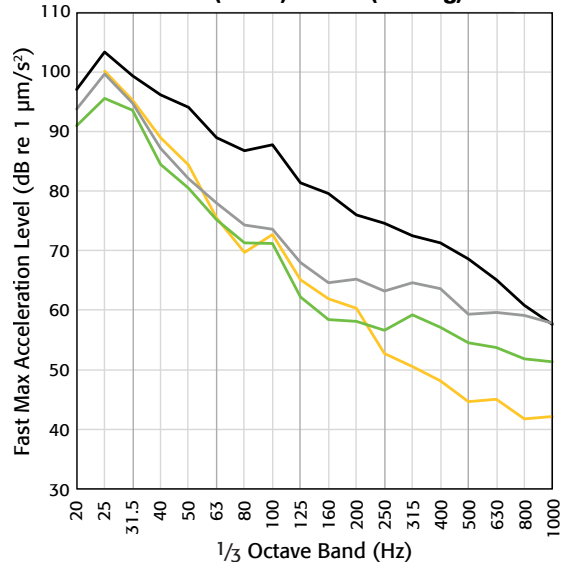
# PLYWOOD HYBRID

**Heavy Weight Drop - Acceleration  
39" (1.0 m) 15 lb (6.8 kg)**



- E5600.15 **GenieMat FIT70**
- E5600.26 **GenieMat FIT70, 12.7 mm Cement Board, GenieMat FF25**
- E5600.29 **GenieMat FIT70, 19 mm Plywood, GenieMat FF70**
- E5600.31 **GenieMat FIT70, 19 mm Plywood, GenieMat FF70LDM**

**Heavy Weight Drop - Acceleration  
39" (1.0 m) 100 lb (45.4 kg)**

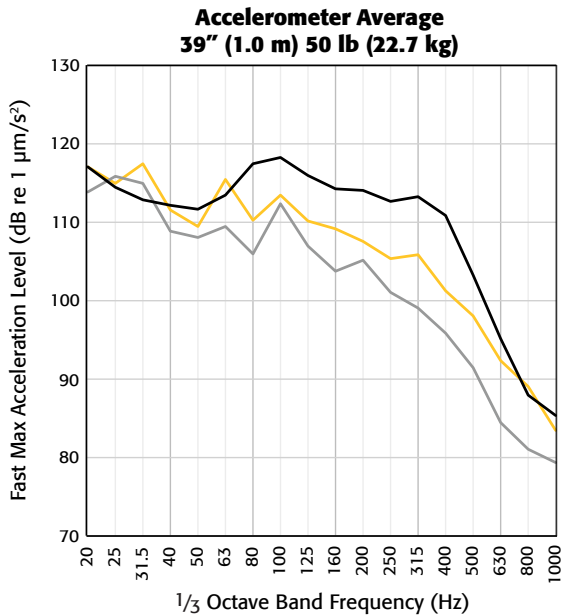


- E5600.16 **GenieMat xFIT70**
- E5600.27 **GenieMat xFIT70, 12.7 mm Cement Board, GenieMat FF25**
- E5600.30 **GenieMat xFIT70, 19 mm Plywood, GenieMat FF70**
- E5600.32 **GenieMat xFIT70, 19 mm Plywood, GenieMat FF70LDM**

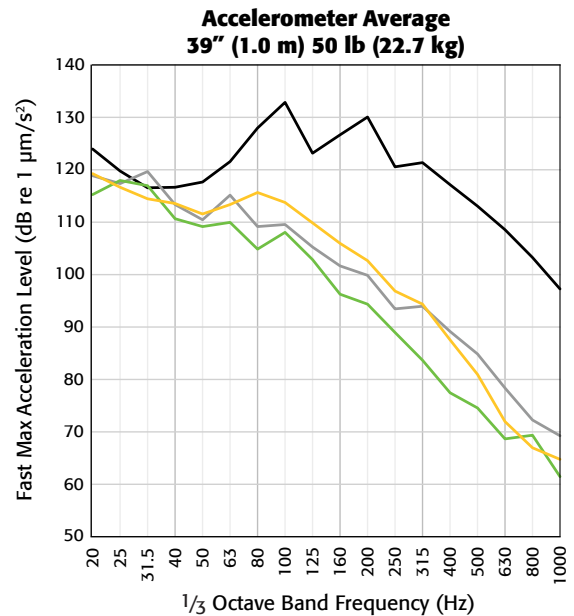


# CONCRETE HYBRID

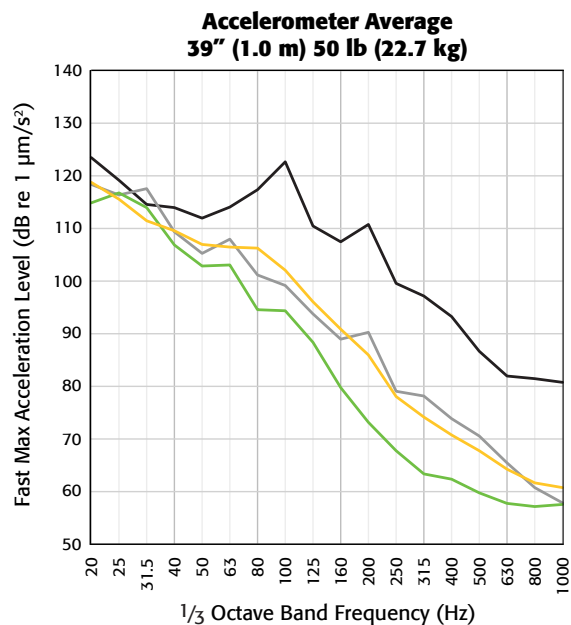
NOTE: FCS - Floating Concrete Slab



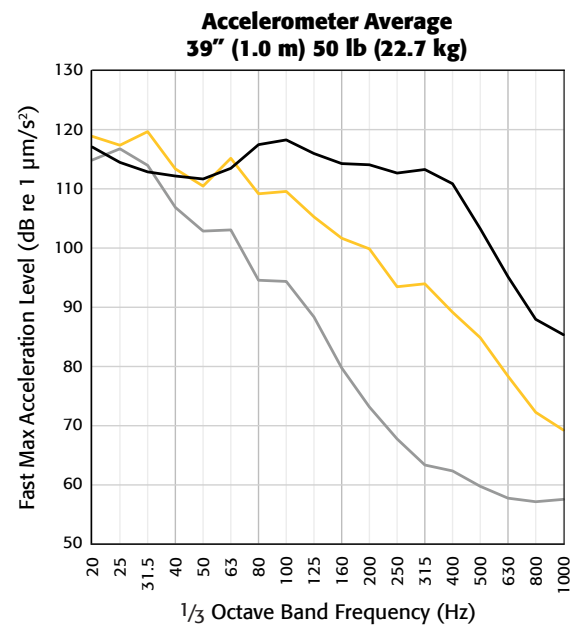
- A1-008867-01F **GenieMat FIT08**, 101.6 mm FCS, **GenieMat FF50**
- A1-008867-04F **GenieMat FIT08**, 101.6 mm FCS, **GenieMat FF70**
- A1-008867-05F **GenieMat FIT08**, 101.6 mm FCS, **GenieMat FF70LDM**



- A1-008867-00F **GenieMat FIT30**
- A1-008867-01F **GenieMat FIT30**, 101.6 mm FCS, **GenieMat FF50**
- A1-008867-04F **GenieMat FIT30**, 101.6 mm FCS, **GenieMat FF70**
- A1-008867-05F **GenieMat FIT30**, 101.6 mm FCS, **GenieMat FF70LDM**



- A1-008867-00F **GenieMat FIT70**
- A1-008867-01F **GenieMat FIT70**, 101.6 mm FCS, **GenieMat FF50**
- A1-008867-04F **GenieMat FIT70**, 101.6 mm FCS, **GenieMat FF70**
- A1-008867-05F **GenieMat FIT70**, 101.6 mm FCS, **GenieMat FF70LDM**



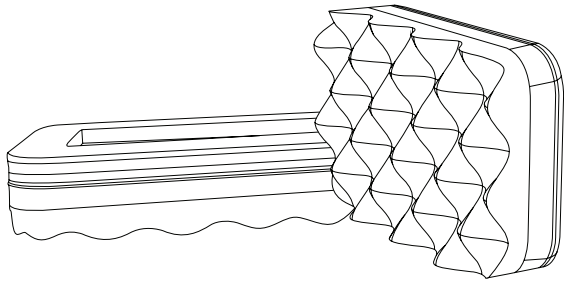
- A1-008867-01F **GenieMat FIT08**, 101.6 mm FCS, **GenieMat FF50**
- A1-008867-04F **GenieMat FIT30**, 101.6 mm FCS, **GenieMat FF70**
- A1-008867-05F **GenieMat FIT70**, 101.6 mm FCS, **GenieMat FF70LDM**

# GENIEMAT<sup>®</sup> TMIP

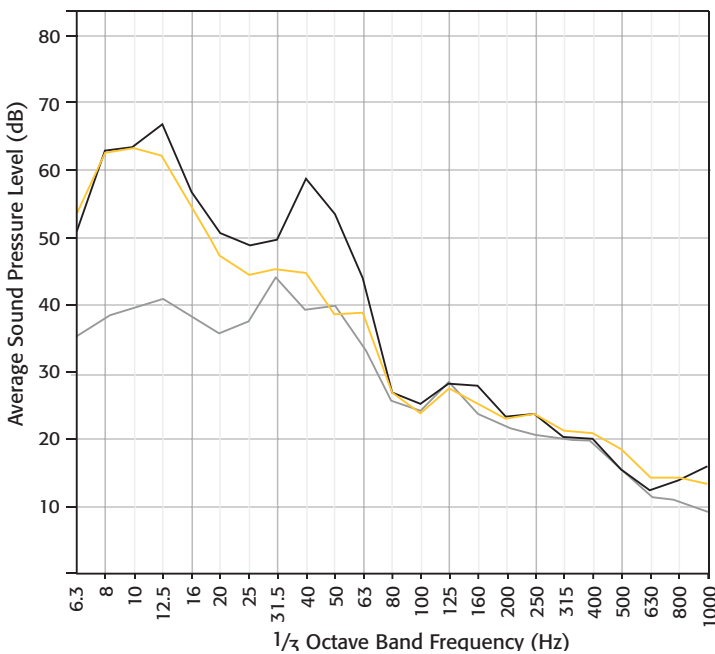
## TREADMILL ISOLATION PADS

U.S Patent No.: 8,113,495  
 Canadian Patent No.: 2,505,938

**GenieMat TMIP** are inherently non-slip. Custom sizes are available for other special applications.



STANDARD THICKNESS	51 mm
STANDARD SIZES	127 mm x 457 mm – Front Mounts 127 mm x 178 mm – Rear Mounts
STATIC DEFLECTION	Lightweight case: 45 kg user (10.1 kPa load deflection): 1 to 2 cm Heavyweight case: 136 kg user (19.0 kPa load deflection): 2 to 3 cm



### ENGINEERED TO REDUCE LOW FREQUENCY IMPACT

Field Measured Average Sound Pressure Levels

- Running with 1 layer of 18 mm rubber
- Running with **GenieMat<sup>®</sup> TMIP** on 1 layer of 18 mm rubber
- Ambient sound level, no running

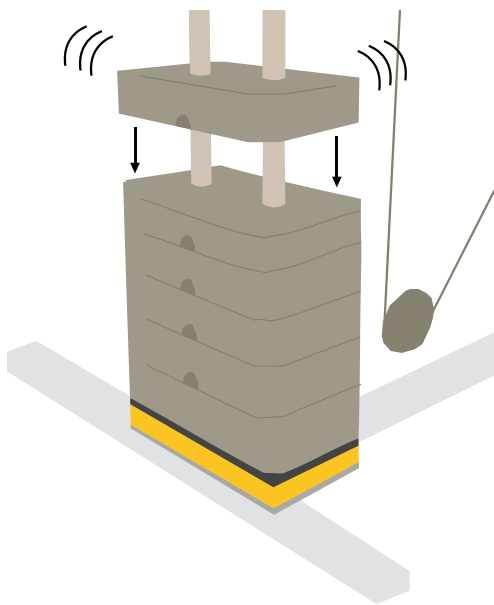
# GENIEMAT<sup>®</sup> WSI

## WEIGHT STACK ISOLATORS

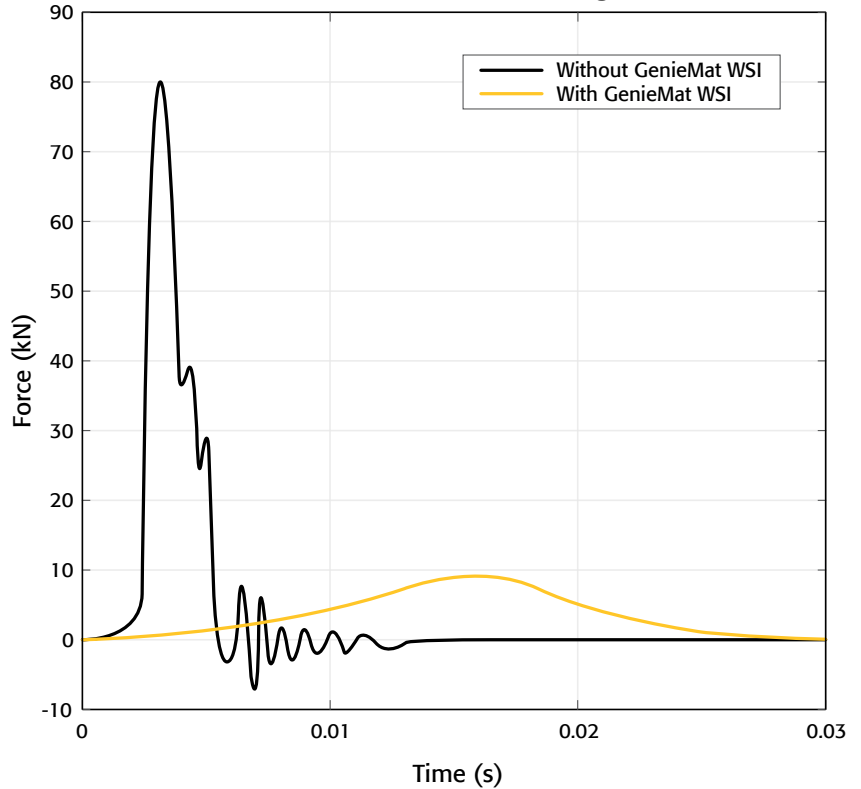
Patent pending

GenieMat WSI isolates impact noise from selectorized machines.

- Reduce impact noise at the source
- Customized size to fit every weight stack
- Installation does not require machine disassembly



**Force Pulse Comparison**  
20" (0.5 m) 50 lb (22.7 kg)



## GENIEMAT<sup>®</sup> FIT ACCESSORIES

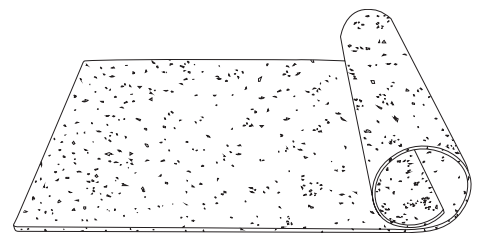
- Customized on site to accommodate any threshold
- Accessories for all installation types
- Corner transitions created in the field
- **GenieMat FASHM** adhesive
- ADA compliant ramps available
- Load plates available to accommodate high point loads



# GENIEMAT<sup>®</sup> FIT08

## Fitness Flooring Rolls

A protective, wear-resistant finished floor used in entryways, corridors, group fitness areas, locker rooms and spinning studios.







## GenieMat® FIT08 PHYSICAL PROPERTIES

TEST TYPE	ASTM	TEST RESULT
Shore hardness	D2240	>70 +/- 5
Density	D729	>65 lb/ft <sup>3</sup>
Elongation (at break)	D412	>90%
Tensile strength	D412	>300 psi
Taber abrasion	C501	0.45
Critical radiant flux	D395	Class I/II*
Flame spread	E84	135**
Smoke density	E84	<450**
Compression set	ISO 815	5% @ 72 Hrs
Coefficient of friction	D1894-95	Wet 1.20 / Dry 1.20
Tear	D624	5.71 lbf/in
Chemical resistance	F925-02	No Change

\* Class I available upon request.

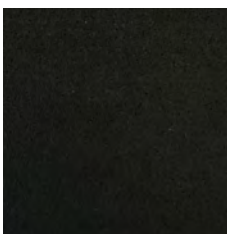
\*\* Same as carpet and wood.

# COLOR SELECTION

## GenieMat® FIT

### STANDARD COLORS

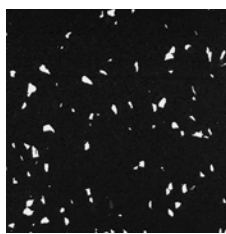
GenieMat FIT tiles are manufactured by fusing a durable wear layer to a recycled rubber crumb base. This provides superior acoustic performance in combination with excellent wear and grip. **GenieMat FIT30** tiles, **GenieMat FIT70** tiles and **GenieMat FITo8** rolls are available in 8 standard color options, see below.



BLACK



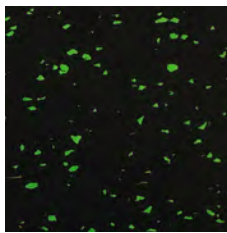
SILVER



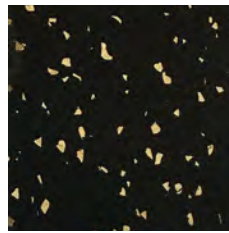
WHITE



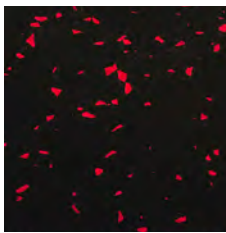
BLUE



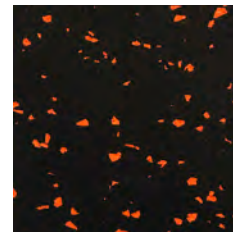
GREEN



CORK



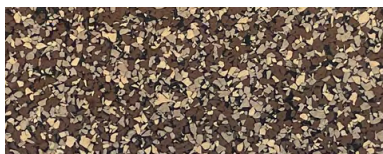
RED



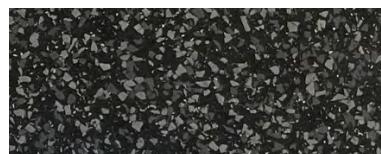
ORANGE

### PREMIUM COLORS

**GenieMat FIT70** tiles and **GenieMat FIT30** tiles are also available in 6 premium color options. For additional custom color formulations please contact your local Pliteq representative (minimum order quantities may apply).



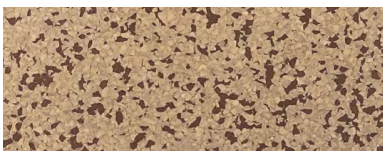
MULCH



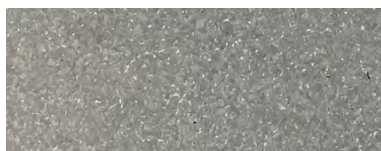
OBSIDIAN



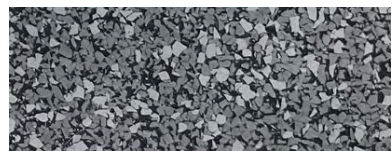
GRANITE



SANDSTONE



CONCRETE



MARBLE

\*Product colors may vary. Images are for representation purpose only.

# TEST RESULTS

TEST RESULTS				
TEST REPORT NUMBER	FINISH FLOOR	SUBFLOOR SYSTEM*	6.8 kg HARD IMPACT SOURCE (SPL OF COMBINED 63 Hz OCTAVE BAND IN dB)	45.4 kg HARD IMPACT SOURCE (SPL OF COMBINED 63 Hz OCTAVE BAND IN dB)
E5600.11	Bare	None		
E5600.12	<b>GenieMat® FIT08</b>	None		
E5600.14	<b>GenieMat FIT30</b>	None	84	95
E5600.15	<b>GenieMat FIT70</b>	None	81	84
E5600.16	<b>GenieMat xFIT70</b>	None	81	88
E5600.17	<b>GenieMat xFIT100</b>	None	80	80
E5600.26	<b>GenieMat FIT70</b>	12 mm Cement Board, <b>GenieMat FF25</b>	80	76
E5600.27	<b>GenieMat xFIT70</b>	12 mm Cement Board, <b>GenieMat FF25</b>	79	82
E5600.28	<b>GenieMat FIT30</b>	18 mm Plywood, <b>GenieMat FF70</b>	82	86
E5600.29	<b>GenieMat FIT70</b>	18 mm Plywood, <b>GenieMat FF70</b>	80	76
E5600.30	<b>GenieMat xFIT70</b>	18 mm Plywood, <b>GenieMat FF70</b>	78	81
E5600.31	<b>GenieMat FIT70</b>	18 mm Plywood, <b>GenieMat FF70LDM</b>	74	72
E5600.32	<b>GenieMat xFIT70</b>	18 mm Plywood, <b>GenieMat FF70LDM</b>	72	75
E5600.33	Bare	18 mm Plywood on 50 x 100 mm Sleepers, Mason MFS Springs	74	89
E5600.34	<b>GenieMat FIT70</b>	18 mm Plywood on 50 x 100 mm Sleepers, Mason MFS Springs	72	80
E5600.35	<b>GenieMat xFIT70</b>	18 mm Plywood on 50 x 100 mm Sleepers, Mason MFS Springs	69	82

\* All assemblies are on 152 mm concrete slab with no ceiling.

## CONTACT US

For Your Project Specific Questions

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**E.** info@pliteq.sg

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