

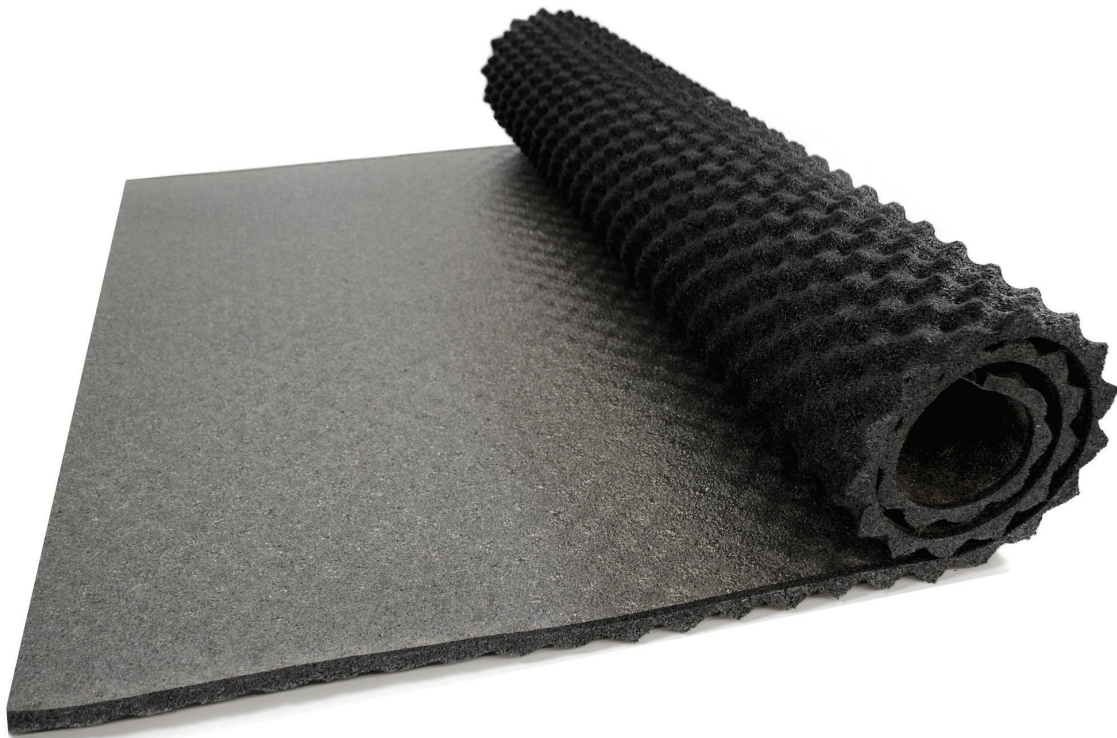


It's not magic, it's engineering.®

Impact Sound Control

GENIEMAT® FF

Continuous Floating Floor Systems for
Airborne & Impact Sound and
Vibration Isolation



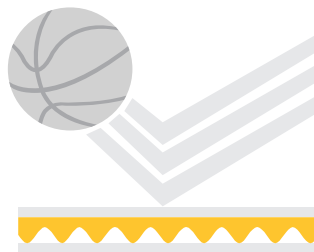
GENIEMAT[®] FF

The next generation of acoustical floating floor

PRODUCT FEATURES

- Continuous underlayment system that limits surface area contact down to 4% at 2 psi
- Can be safely loaded over a wide range up to 1450 psi
- Composed of 92% recycled rubber content
- Qualifies for LEED[®] points
- Mold, bacteria, fungi, and water resistant
- Penetrations for pipes, ductwork, electrical conduits, and drains are easily accommodated
- Rolls out quickly and is easy to install without the need for adhesive
- Can be used directly under gypsum, lightweight, or normal weight concrete with no plywood formwork required

GenieMat FF is used for multiple applications. Contact our engineers for your project specific questions.



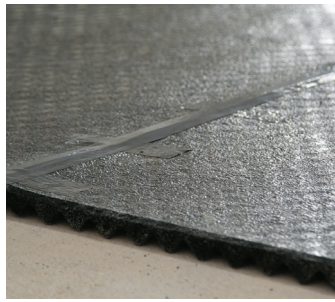
EASY INSTALLATION

ROLL IT OUT - TAPE THE SEAMS - READY TO POUR



Step 1

After installing perimeter isolation strips on the base of the walls, unroll **GenieMat® FF**.



Step 2

Duct tape all joints and seams, including between the perimeter isolation strips and the **GenieMat FF**.



Step 3

Pour gypsum, lightweight or normal weight concrete topping.









Step 4

Prepare concrete surface for floor finish.

SIGNIFICANTLY IMPROVES INSTALLATION EFFICIENCY

STEPS	GENIEMAT® FF ROLL OUT SYSTEM	PLYWOOD FORMWORK ISOLATOR BASED SYSTEMS	SPRING JACK-UP TYPE SYSTEM
1	Install GenieMat PMI	Design isolator layout	Coordinate load requirements with associated trades
2	Roll out GenieMat FF	Install perimeter isolation	Design isolator layout based on equipment placement
3	Tape the seams	Roll out mineral fiber matting with fiberglass isolators	Install perimeter Isolation
4	Layout reinforcement and pour concrete	Install additional isolators based on load design	Verify equipment placement, snap chalk lines and spray paint isolator locations
5		Check isolators orientation and location	Layout clear polyethylene plastic sheathing
6		Cut and install plywood formwork	Layout isolators and place rebar grid
7		Install steel connecting corner plates	Pour concrete and cure to 17.2 MN/m ² minimum
8		Layout reinforcement, waterproof membrane and pour concrete	Remove all isolator cover plates
9			To raise slab 50 mm, complete 2 turns of each isolator 8-10 times
10			Replace cover plates and pour additional floor levelling compound

GENIEMAT[®] FF PHYSICAL PROPERTIES

PLAN VIEW	PRODUCT	THICKNESS	DIMENSION	WEIGHT	AREA
	GenieMat FF06	1/4" (nom. 6 mm)	Rollgood: 4' wide, 30' long (1.2 m wide, 9.1 m long)	80 lb/roll (36 kg/roll)	120 ft ² (11.1 m ²)
	GenieMat FF10	2/5" (nom. 10 mm)	Rollgood: 4' wide, 30' long (1.2 m wide, 9.1 m long)	130 lb/roll (59 kg/roll)	120 ft ² (11.1 m ²)
	GenieMat FF17	2/3" (nom. 17 mm)	Rollgood: 4' wide, 15' long (1.2 m wide, 4.6 m long)	104 lb/roll (47 kg/roll)	60 ft ² (5.6 m ²)
	GenieMat FF25	1" (nom. 25 mm)	Rollgood: 4' wide, 15' long (1.2 m wide, 4.6 m long)	132 lb/roll (60 kg/roll)	60 ft ² (5.6 m ²)
	GenieMat FF50	2" (nom. 51 mm)	Rollgood: 4' wide, 15' long (1.2 m wide, 4.6 m long)	180 lb/roll (82 kg/roll)	30 ft ² (2.8 m ²)
	GenieMat FF75	3" (nom. 75 mm)	Rollgood: 4' wide, 15' long (1.2 m wide, 4.6 m long)	396 lb/roll (180 kg/roll)	20 ft ² (1.9 m ²)

COMPRESSIBLE ELASTOMER TECHNOLOGY ALLOWS FOR LOW NATURAL FREQUENCY AT LOW LOADS

Typical vulcanized, natural, and neoprene rubber isolators are defined as incompressible. They require heavy mass loading in order to obtain adequate deflection, and consequently, vibration isolation. For applications where minimum loading criteria are not met, data shows the systems do not perform well.

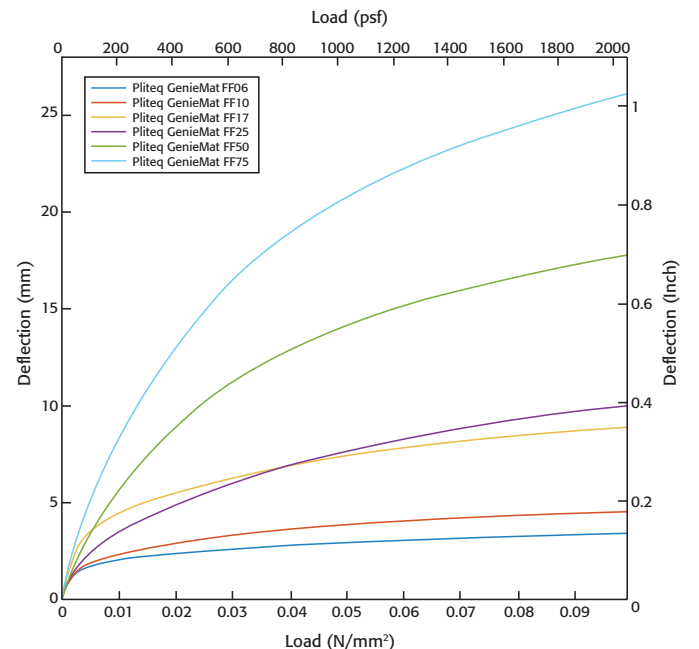
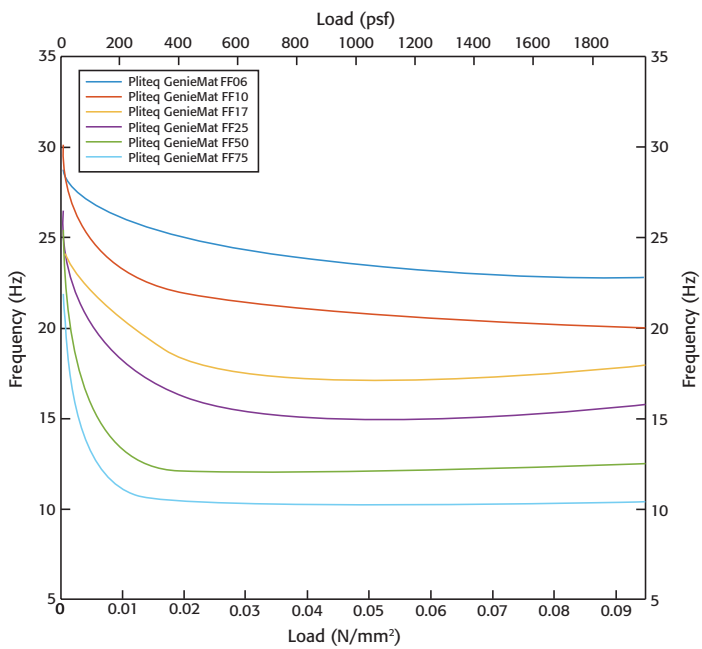
Fiberglass isolators are comprised of rigid particles that lose elasticity when compressed. Data shows a dramatic performance degradation over time.

GENIEMAT[®] FF PROPERTIES

PRODUCT	4" CONCRETE (50 PSF DEAD LOAD)			TYPICAL LOADING (400 PSF DEAD + LIVE LOAD)		
	NATURAL FREQUENCY (HZ)	10 HZ DYNAMIC STIFFNESS (LB/IN/IN ²)	CRITICAL DAMPING RATIO	NATURAL FREQUENCY (HZ)	10 HZ DYNAMIC STIFFNESS (LB/IN/IN ²)	CRITICAL DAMPING RATIO
GenieMat FF06	27	25.0	9.5%	25	173.8	8.4%
GenieMat FF10	25	21.9	9.7%	22	138.0	9.6%
GenieMat FF17	23	19.4	12.5%	18	91.7	11.2%
GenieMat FF25	22	16.5	11.5%	16	72.8	10.8%
GenieMat FF50	18	11.2	10.2%	12	40.2	9.7%
GenieMat FF75	16	8.2	9.6%	10	28.5	9.1%

DESIGN PARAMETERS OF GENIEMAT FF SYSTEMS

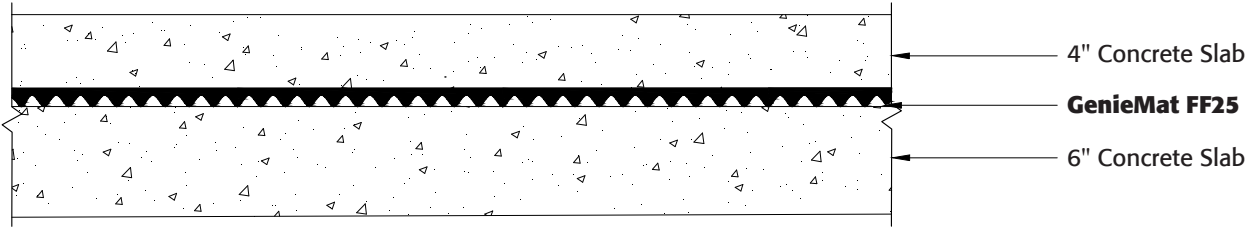
System Natural Frequency vs. Load Deflection vs. Load



GENIEMAT® FF ACOUSTICAL TEST DATA

6" STRUCTURAL SLAB WITH FLOATING CONCRETE TOPPING

4" Concrete Topping on GenieMat FF25 on 6" Structural Slab



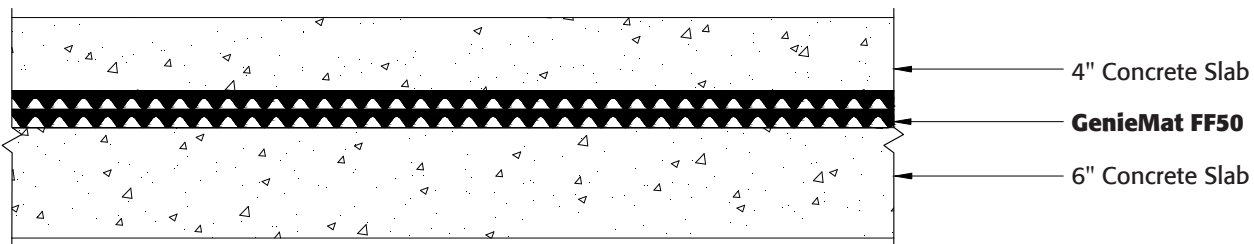
70
STC

65
IIC

16
Hz

F943-41992 F536-41779 F_n

4" Concrete Topping on GenieMat FF50 on 6" Structural Slab



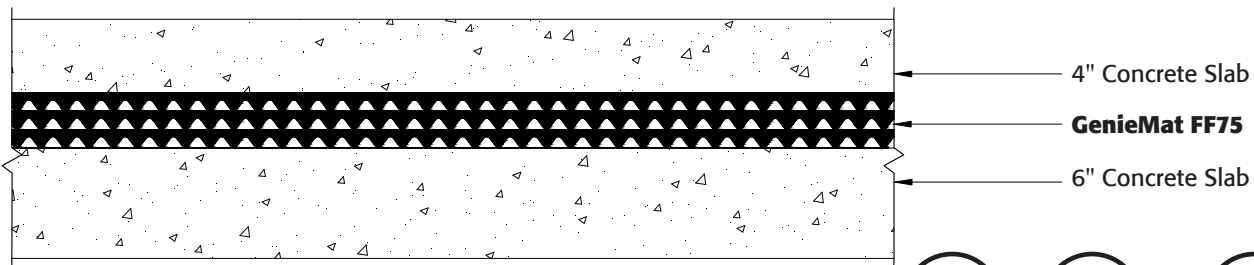
72
STC

67
IIC

12
Hz

F920-41970 F539-41780 F_n

4" Concrete Topping on GenieMat FF75 on 6" Structural Slab



73
STC

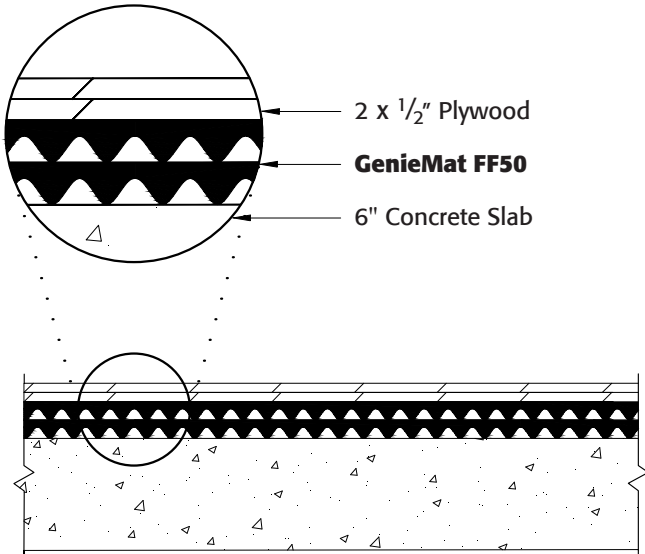
69
IIC

10
Hz

F921-41970 F540-41780 F_n

GENIEMAT® FF ACOUSTICAL TEST DATA

2 Layers of Plywood on GenieMat FF50

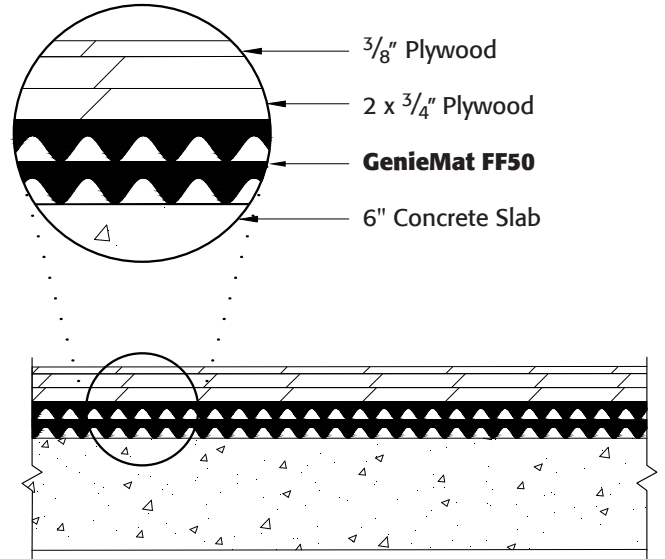


59
STC

56
IIC

B3498.13

3 Layers of Plywood on GenieMat FF50

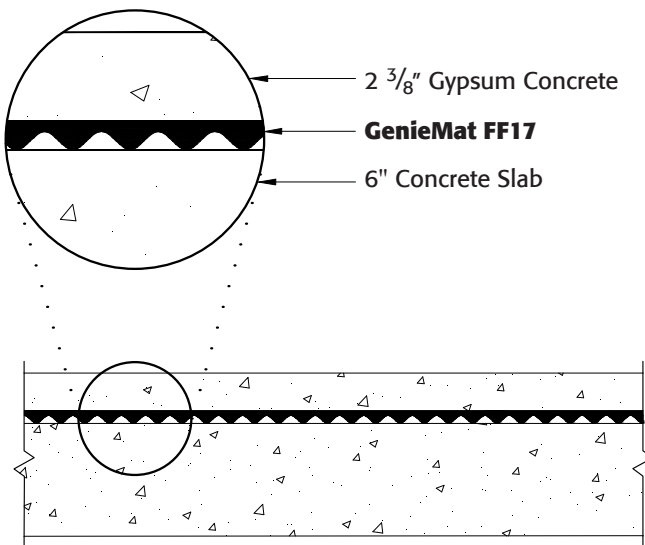


59
STC

58
IIC

5014148 7014204

2 3/8" Gypsum on GenieMat FF17

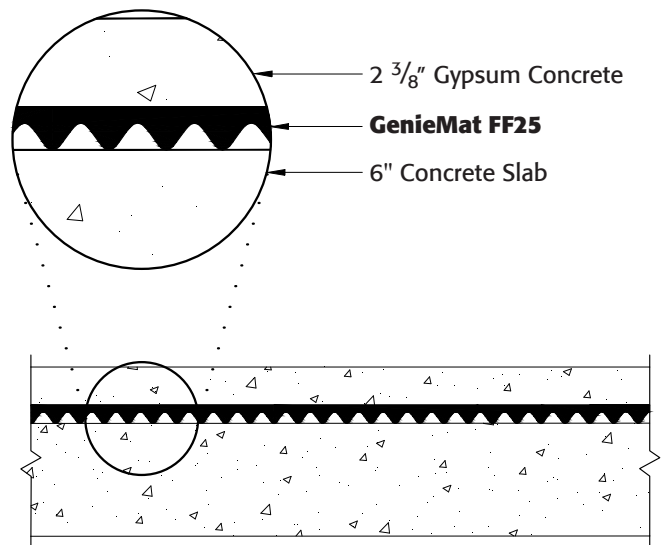


60
STC

61
IIC

F293-41702 F294-41702

2 3/8" Gypsum on GenieMat FF25



61
STC

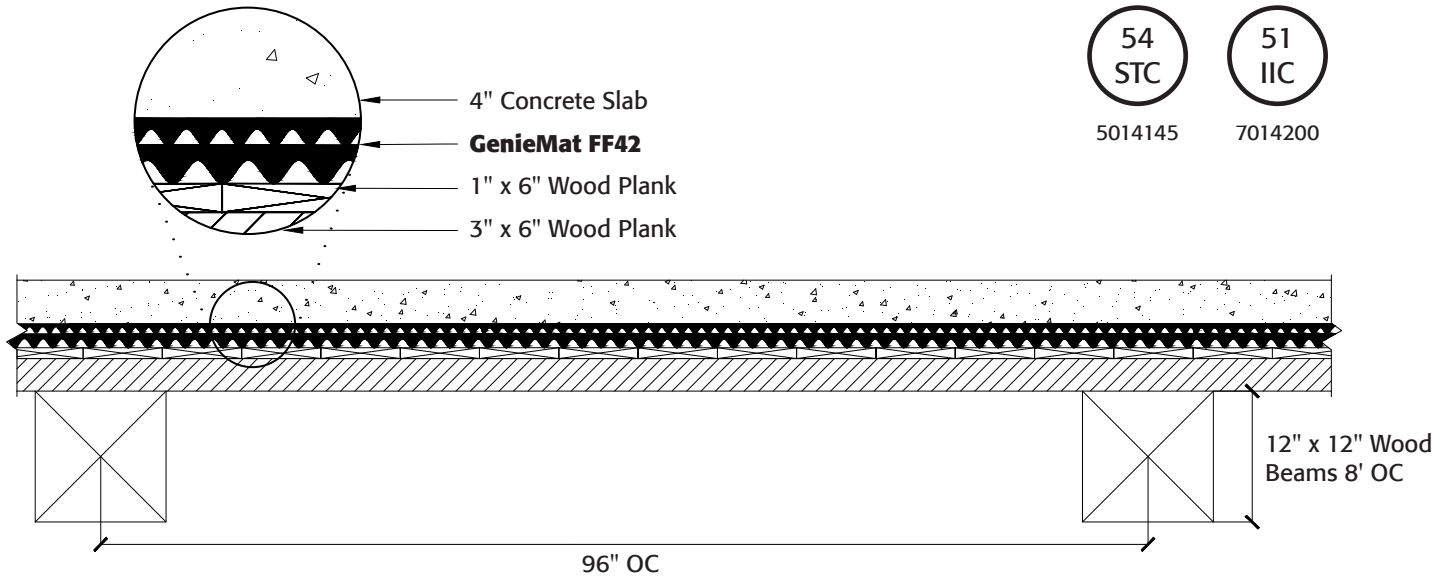
63
IIC

F296-41702 F295-41702

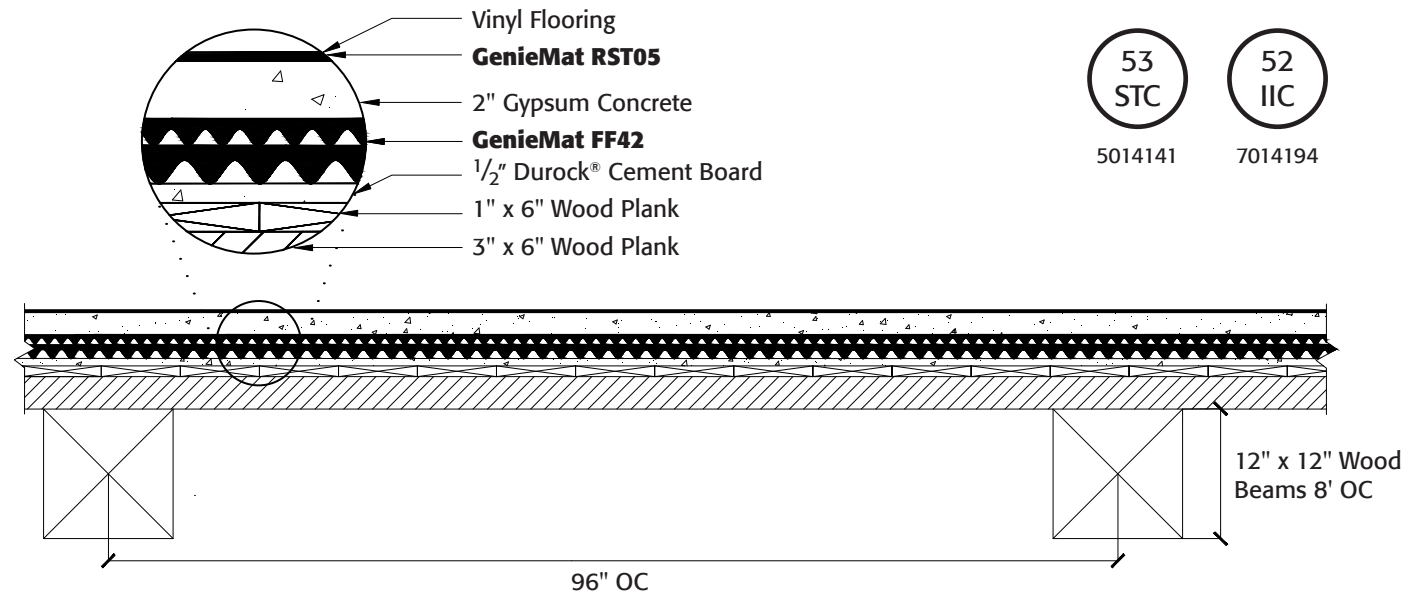
GENIEMAT® FF ACOUSTICAL TEST DATA

HEAVY TIMBER ASSEMBLIES

4" Concrete Over GenieMat FF42



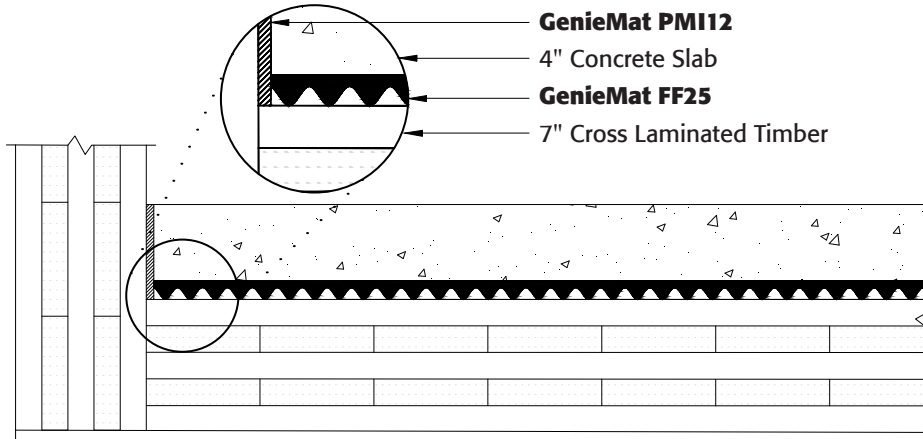
2" Gypsum Concrete Over GenieMat FF42 Over 1/2" Cement Board



GENIEMAT® FF ACOUSTICAL TEST DATA

CROSS LAMINATED TIMBER ASSEMBLIES

7" Cross Laminated Timber with 4" Concrete Topping on GenieMat FF25

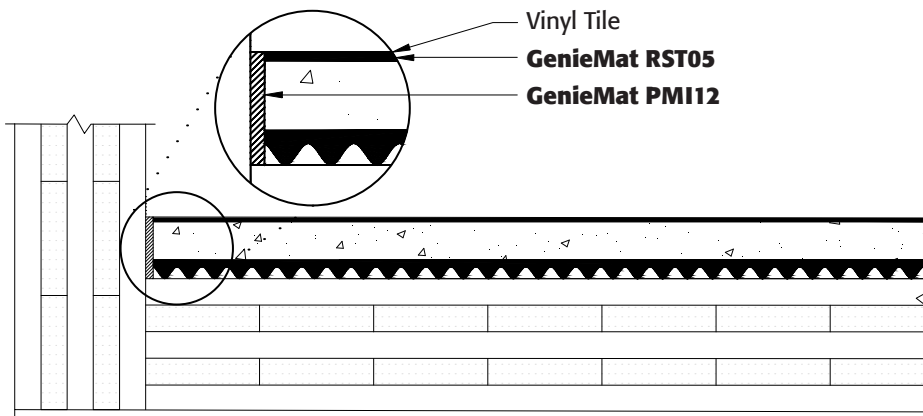


57
STC

50
IIC

F5500.08

7" Cross Laminated Timber with 2" Gypsum Concrete Topping on GenieMat FF25

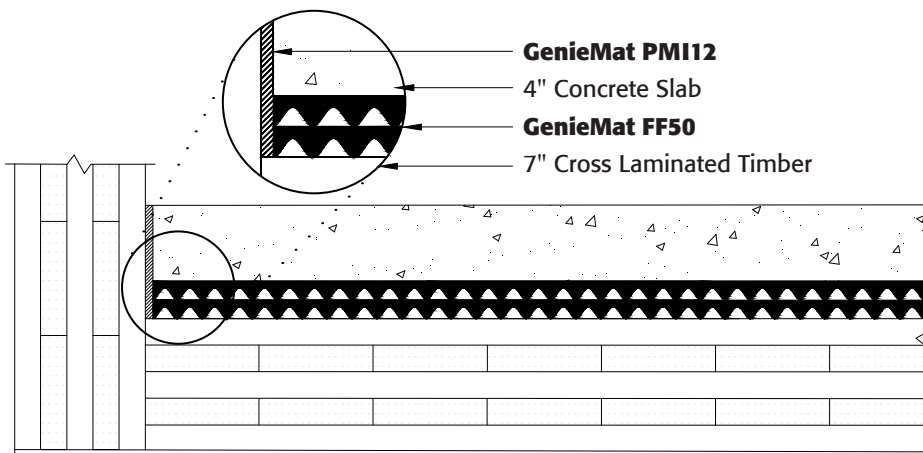


53
STC

51
IIC

F6279.14

7" Cross Laminated Timber with 4" Concrete Topping on GenieMat FF50



59
STC

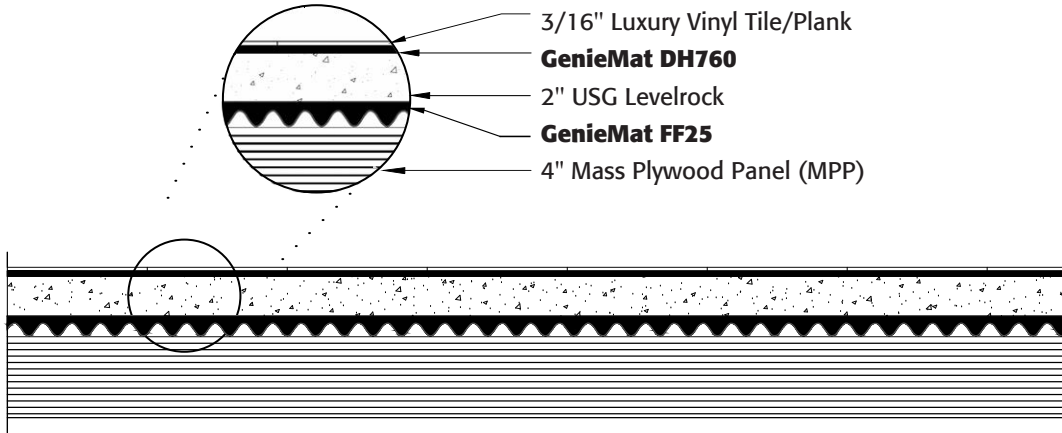
54
IIC

F5500.10

GENIEMAT® FF ACOUSTICAL TEST DATA

CROSS LAMINATED TIMBER ASSEMBLIES

4" Mass Plywood Panel (MPP) with 2" USG levelrock on GenieMat FF25

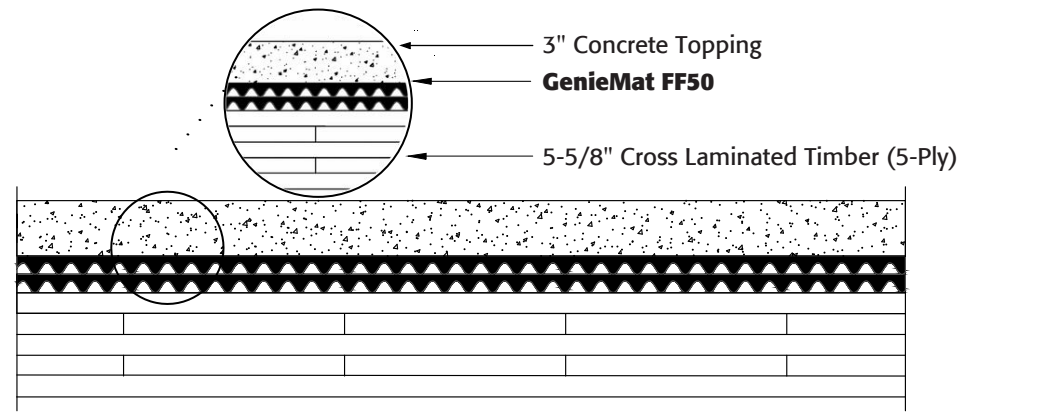


51
STC

51
IIC

FC21-0360R1

5-Ply Cross Laminated Timber with 3" Concrete Topping on GenieMat FF50

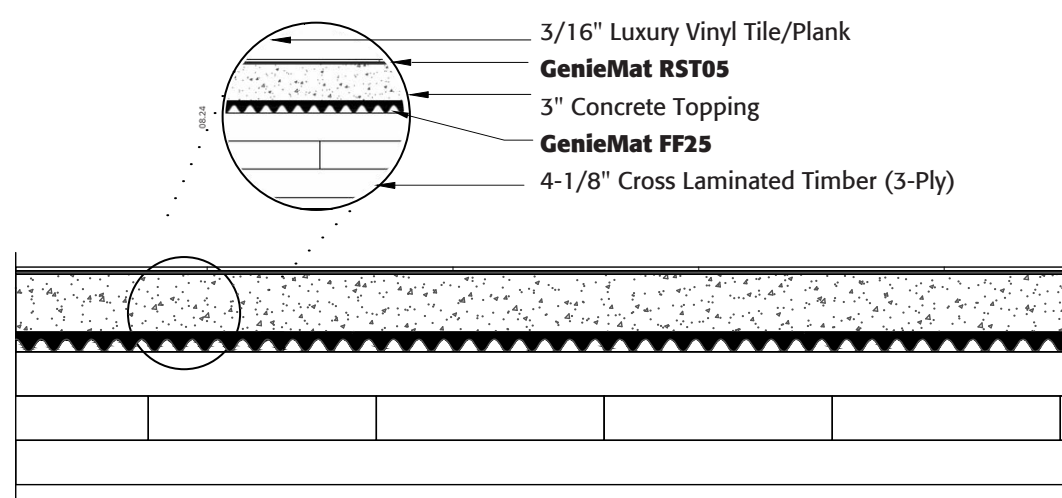


59
STC

56
IIC

n1516.02-113-11-r0

3-Ply Cross Laminated Timber with 3" Concrete Topping on GenieMat FF25



52
STC

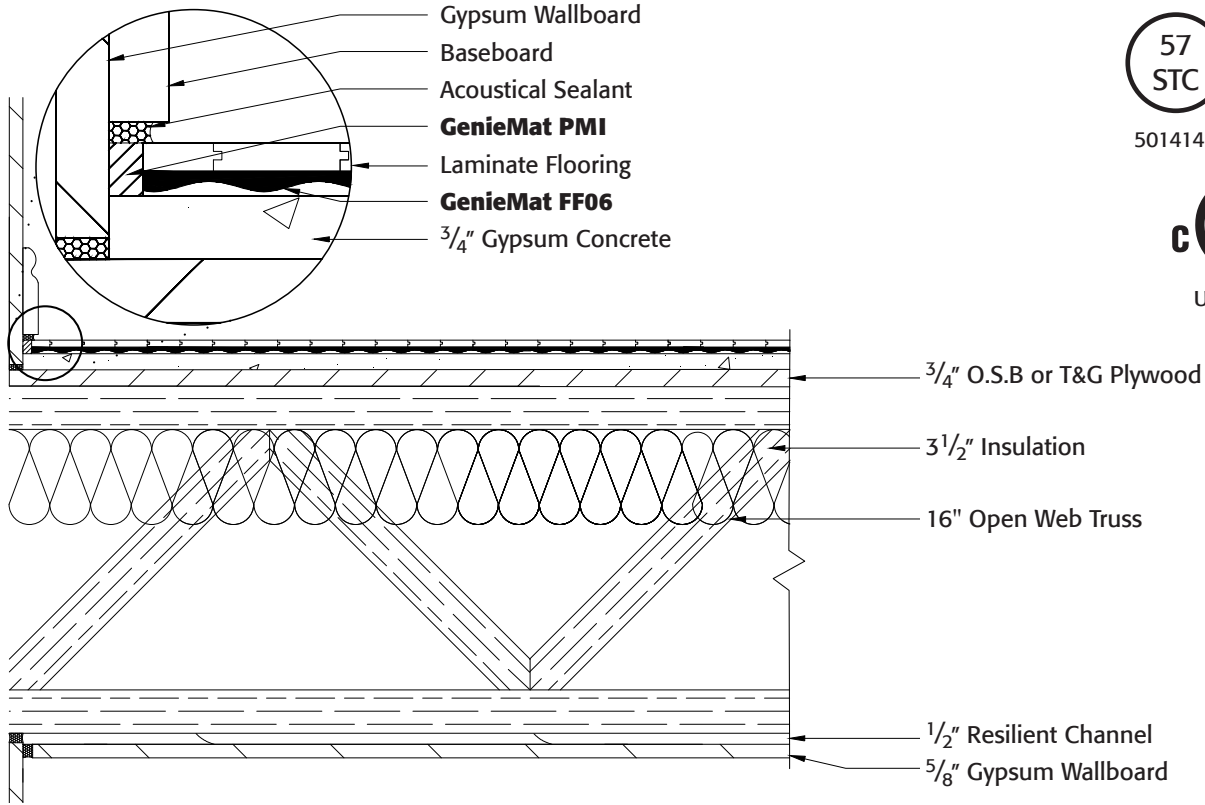
51
IIC

P2557.07

GENIEMAT® FF ACOUSTICAL TEST DATA

LIGHTWEIGHT WOOD FRAME ASSEMBLIES

16" Open Web Truss with Floating Wood Floor on GenieMat FF06



57
STC

5014142

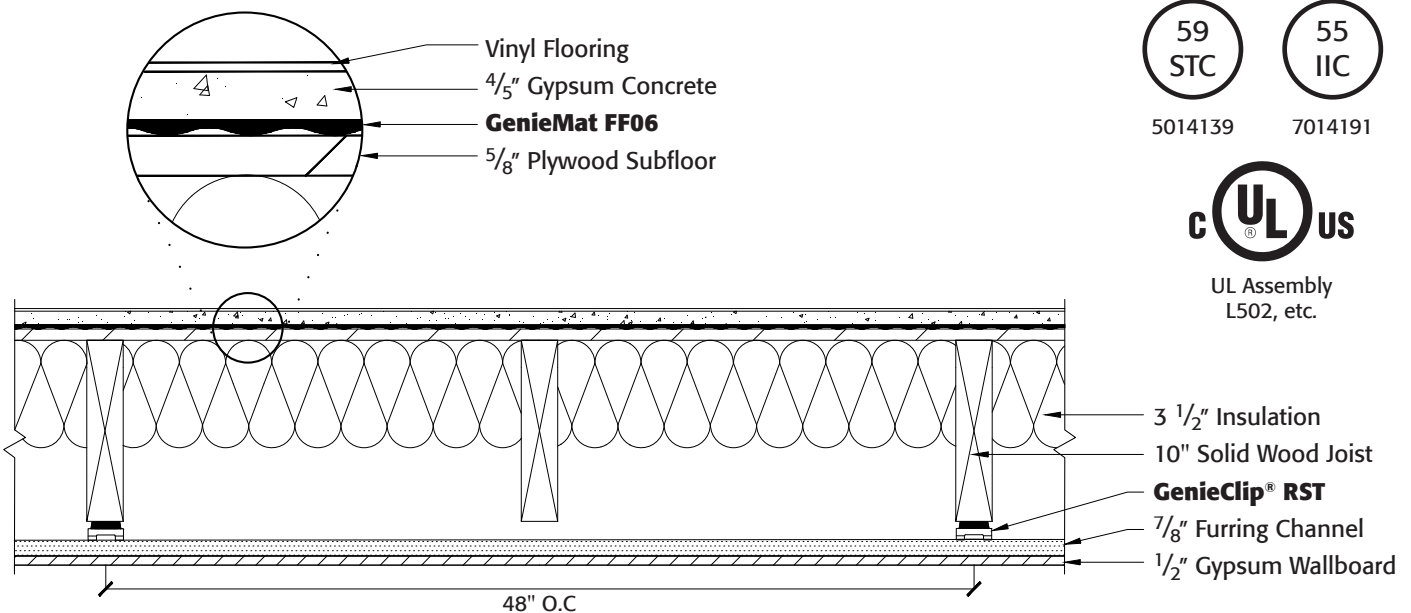
53
IIC

7014195



UL Assembly
L546, etc.

2 x 10 Wood Joist with 4/5" Gypsum Concrete Topping on GenieMat FF06



59
STC

5014139

55
IIC

7014191

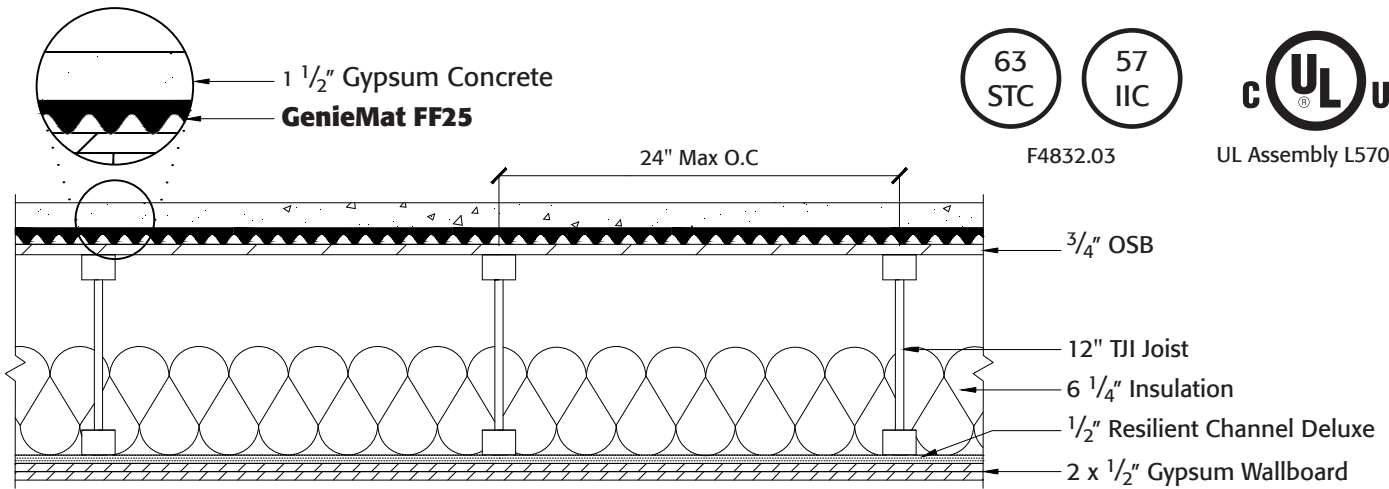


UL Assembly
L502, etc.

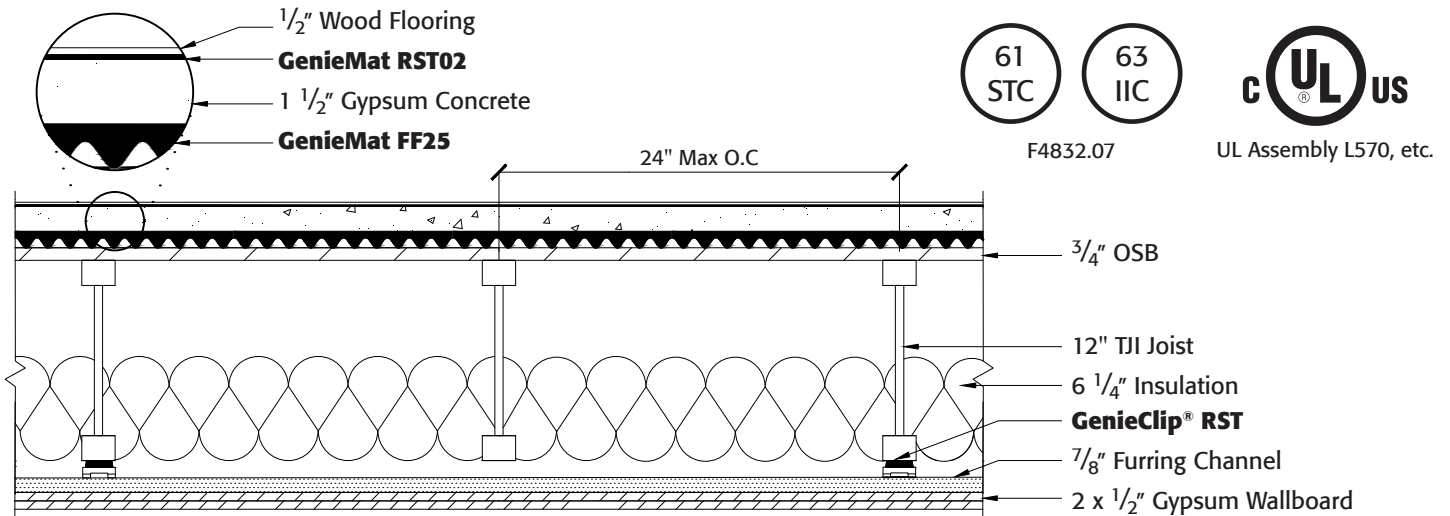
GENIEMAT® FF ACOUSTICAL TEST DATA

12" ENGINEERED JOIST WOOD FRAME ASSEMBLIES

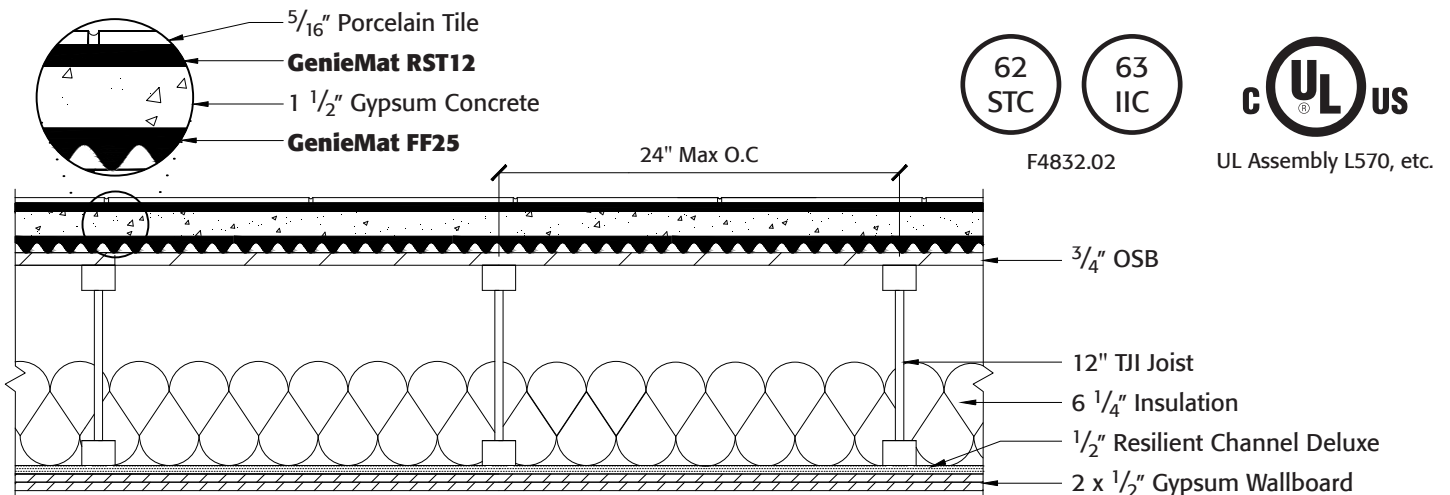
1 1/2" Gypsum Concrete Topping on GenieMat FF25



Wood Flooring on GenieMat RST02 on 1 1/2" Gypsum Concrete Topping on GenieMat FF25



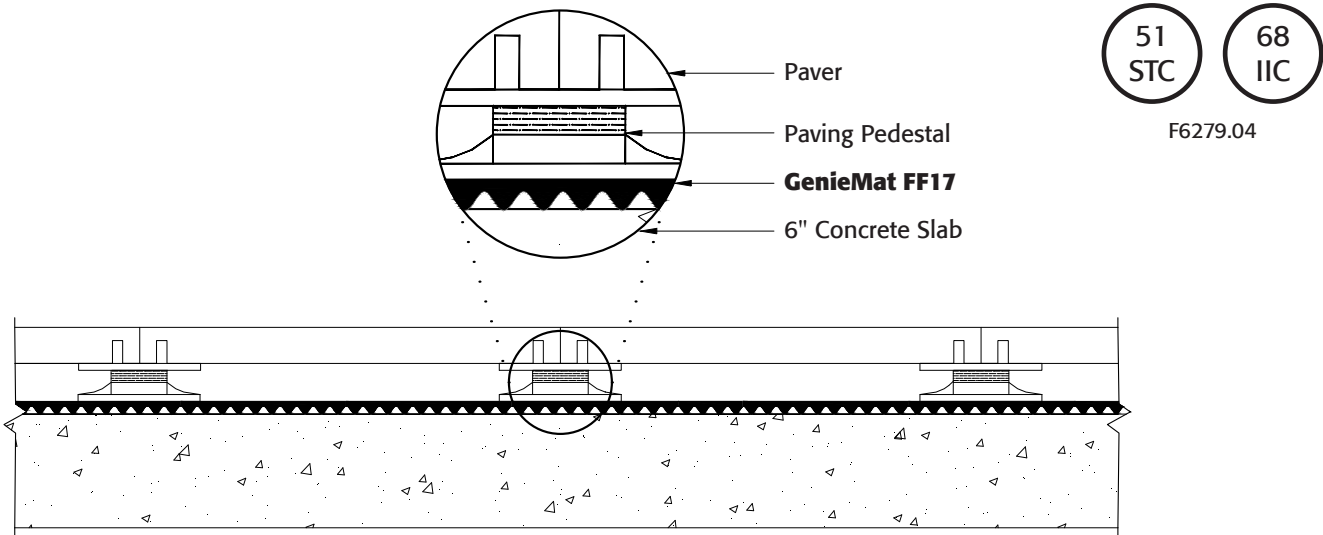
Tile Floor on GenieMat RST12 with 1 1/2" Gypsum Concrete Topping on GenieMat FF25



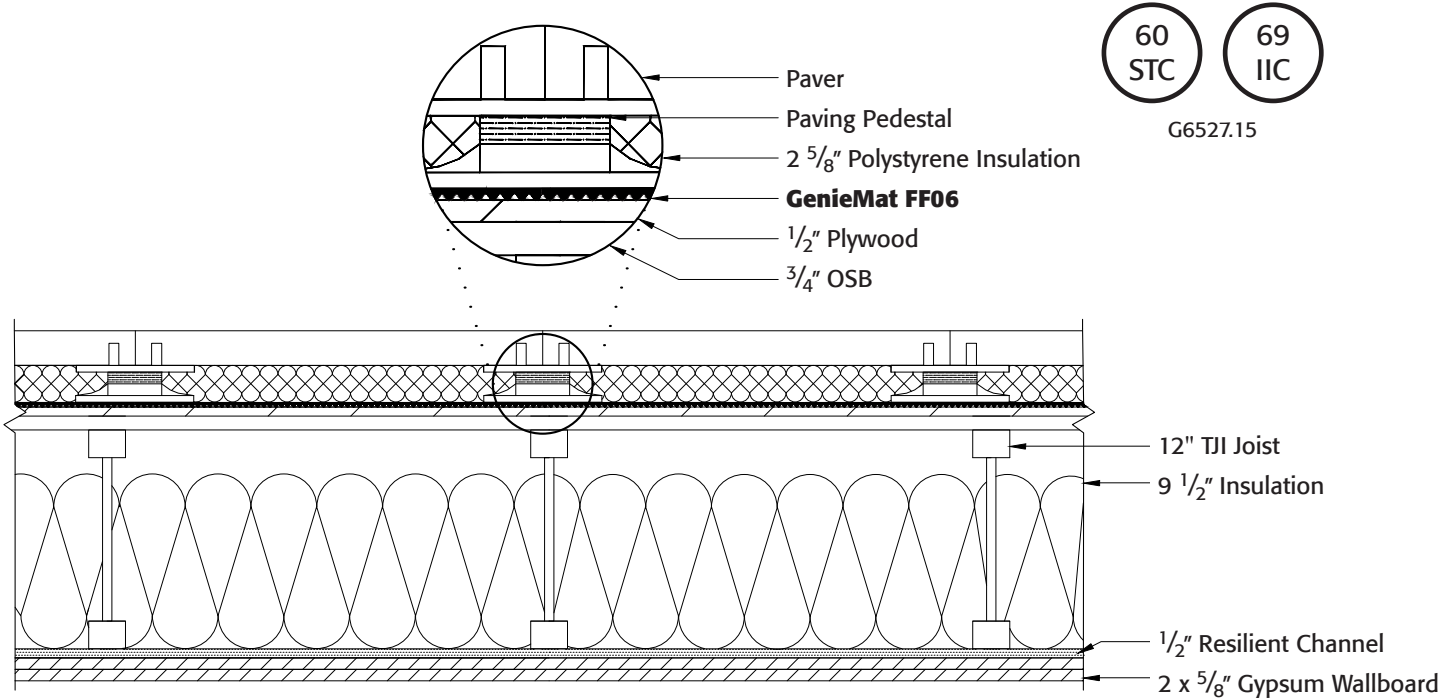
GENIEMAT® FF ACOUSTICAL TEST DATA

ROOFTOP AND DECK ASSEMBLIES

Stone Pavers and Adjustable Pedestals on GenieMat FF17



Stone Pavers and Adjustable Pedestals on GenieMat FF06



FINITE ELEMENT ANALYSIS (FEA)

WHAT IS FEA?

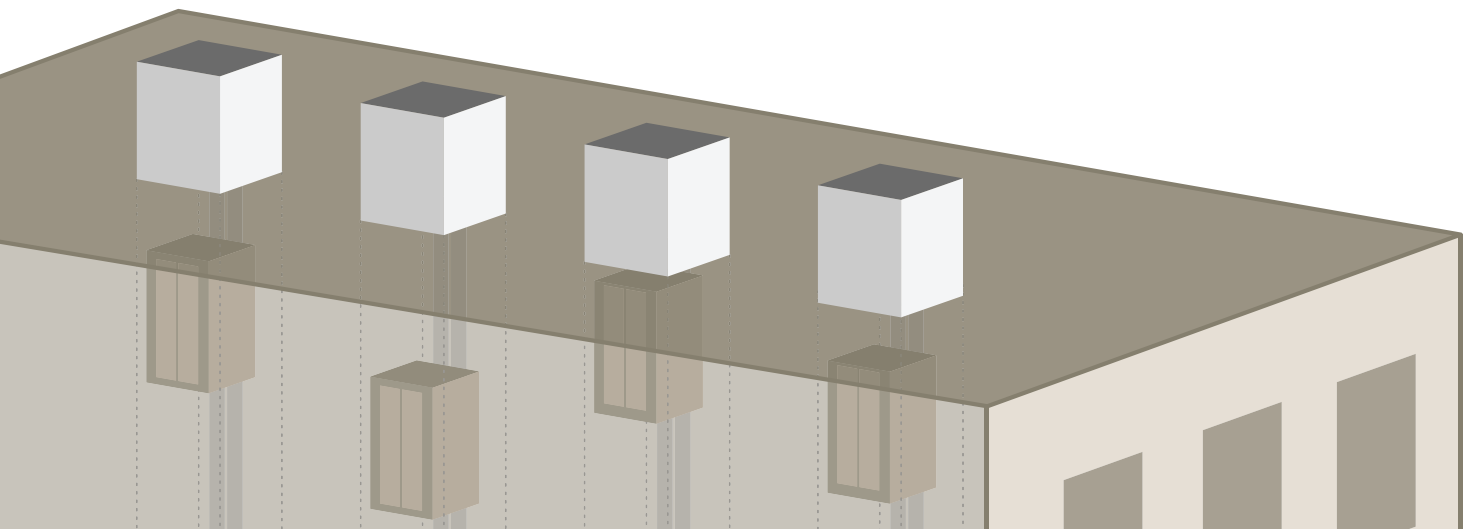
Finite Element Analysis (FEA) is a system to break complex structures into very small parts (finite elements) that can then be more easily modeled and assessed. FEA is done in such a way as to tie all these elements together so the larger motion of the complete structure can be seen and assessed.

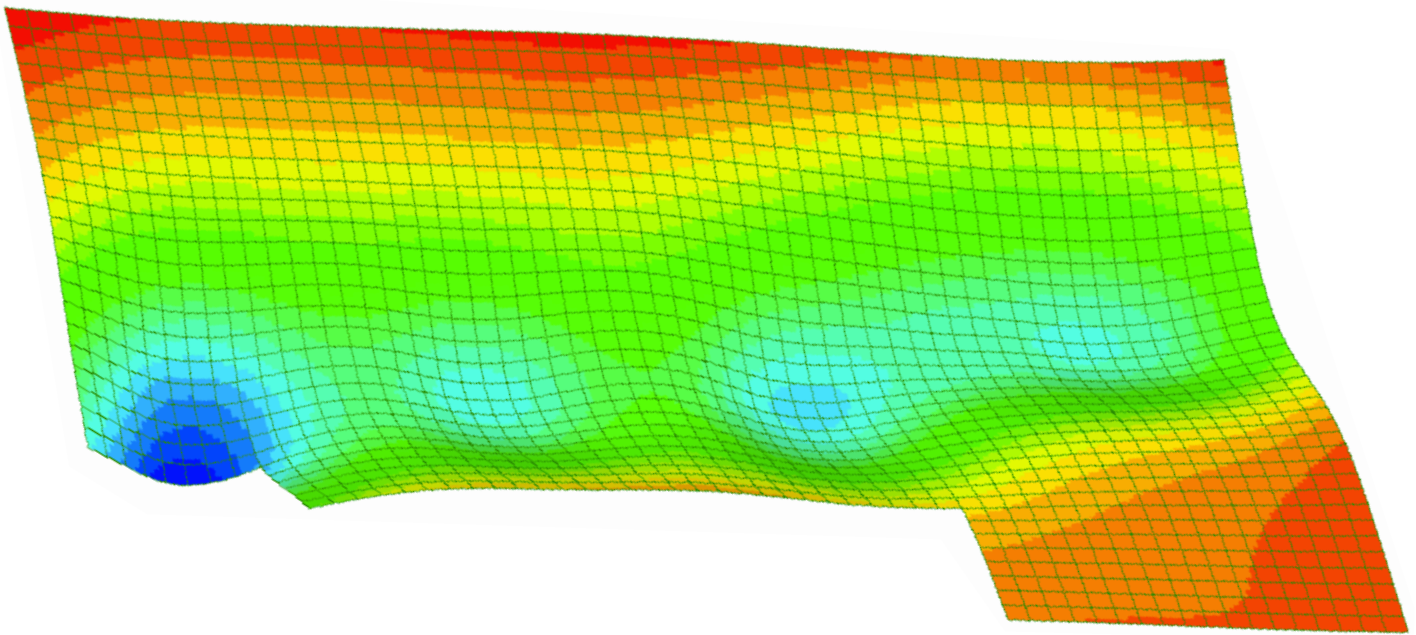
WHY IS FEA USEFUL WHEN DESIGNING YOUR FLOATING FLOOR?

While you may not realize it, the concrete in your floating floor can bend and crack. This can happen when there are very high point loads (large HVAC equipment) or if the floor is only loaded on one side (like a basketball court with a full crowd in the bleachers). Running a FEA can ensure that your floor will not crack. It can also be used to ensure the correct material is used under high load areas and how much the floor will deflect.

SITUATIONS IN WHICH FEA IS USEFUL:

- Non-uniform loading
- Predicting deflections to ensure smooth transitions
- Very high load equipment





This image shows FEA conducted on an elevator machine room floating floor. The various colors show the varying loads and how much they will make the floor deflect.

Analysis requires only the structural drawings and a list of the dead and live loads.

This analysis allows for value engineering solutions to be assessed to find the most cost-effective solution.

TEST RESULTS

TEST RESULTS					
	PRODUCT	FLOOR TOPPING	STRUCTURE	STC RATING (ASTM E90)	IIC RATING (ASTM E492)
B3498.1	None	None	6" Concrete Slab	53	29
F935-41976, F541-41780	GenieMat® FF17	4" Concrete Slab	6" Concrete Slab	70	61
F943-41992, F536-41779	GenieMat FF25	4" Concrete Slab	6" Concrete Slab	70	65
F920-41970, F539-41780	GenieMat FF50	4" Concrete Slab	6" Concrete Slab	72	67
F921-41970, F540-41780	GenieMat FF75	4" Concrete Slab	6" Concrete Slab	73	69
e8117.02	GenieMat FF70	4" Concrete Slab	6" Concrete Slab	64	64
F289-41701, F290-41701	GenieMat FF06	2 3/8" Lightweight Concrete	5 1/2" Concrete Slab	59	58
F292-41702, F291-41702	GenieMat FF10	2 3/8" Lightweight Concrete	5 1/2" Concrete Slab	59	59
F293-41702, F294-41702	GenieMat FF17	2 3/8" Lightweight Concrete	5 1/2" Concrete Slab	60	61
F296-41702, F295-41702	GenieMat FF25	2 3/8" Lightweight Concrete	5 1/2" Concrete Slab	61	63
F297-41702, F298-41702	GenieMat FF50	2 3/8" Lightweight Concrete	5 1/2" Concrete Slab	63	66
F6279.04	GenieMat FF17	1 3/4" Stone Pavers + 2" Adjustable Deck Supports	6" Concrete Slab	51	68

TEST RESULTS

TEST RESULTS					
TEST REPORT	PRODUCT	FLOOR TOPPING	STRUCTURE	STC RATING (ASTM E90)	IIC RATING (ASTM E492)
g2953.02	GenieMat FF25	(2) 1/2" Cement Board	6" Concrete Slab	55	58
g2953.04	GenieMat FF25	(2) 3/4" AdvanTech® Wood Subfloor	6" Concrete Slab	56	56
5014139, 7014190	GenieMat FF06	3/4" Gypsum Concrete	2x10 Wood Joist + GenieClip RST + 1/2" GWB	59	52
5014142, 7014195	GenieMat FF06	Engineered Wood + 3/4" Gypsum Concrete + 3/4" Plywood	16" Open Web Truss + 1/2" Resilient Channel + 5/8" GWB	57	53
g1707.11	GenieMat FF06	Vinyl + (2) 1/4" Cement Board + 3/4" OSB	18" Open Web Truss + 1/2" Resilient Channel + 5/8" GWB	61	65
5014049, 7014060	None	None	Heavy Timber Floor	29	24
5014082, 7014109	None	4" Concrete Slab	Heavy Timber Floor	40	34
5014145, 7014200	GenieMat FF42	4" Concrete Slab	Heavy Timber Floor	54	51
7014194	GenieMat FF42	Vinyl + GenieMat RST05 + 2" Gypsum Concrete + 1/2" Cement Board	Heavy Timber Floor	53	52
F5500.08	GenieMat FF25	4" Concrete Slab	7" CLT	57	50
F6279.14	GenieMat FF25	Vinyl + GenieMat RST05 + 2" Gypsum Concrete	7" CLT	53	51
g1707.05	GenieMat FF23	4" Concrete Slab	7" CLT	56	52
F5500.10	GenieMat FF50	4" Concrete Slab	7" CLT	59	54

CONTACT US

For Your Project Specific Questions
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08/24
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