

**ACOUSTI-MAT®**  
*Superior Sound Control Systems*

**1. Product Name**

Acousti-Mat® Sound Control Systems

- Acousti-Mat® II
- Enkasonic®
- Acousti-Mat® 3
- Acousti-Mat® LP/LPR

**2. Manufacturer**

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**3. Product Description**

**BASIC USE**

Acousti-Mat® Sound Control Systems offer a cost-effective means to substantially reduce flooring impact noise, even with ceramic and wood floors. When installed, Acousti-Mat systems create a void area between the subfloor and the underlayment that helps reduce impact sound transmission over concrete by as much as 25 rating points and up to 17 rating points over wood frame construction.

Acousti-Mat is fast and easy to install, making it ideal for fast-track projects. After laying Acousti-Mat over the subfloor, Maxxon floor specialists pour a high-strength Maxxon underlayment on top, completing the system. For new construction or renovation, the Acousti-Mat System is available in 5 sound control levels.

**COMPOSITION & MATERIALS**

Acousti-Mat II, Acousti-Mat 3 and Enkasonic systems are composed of fused nylon filaments attached to a nonwoven fabric. Acousti-Mat II, Acousti-Mat 3, Acousti-Mat LPR and Enkasonic are made with 40% pre-consumer recycled content. Acousti-Mat LP/LPR consists of polymeric fibers bound with polymer adhesives. See Table 3 for a comparison of materials and physical properties of Acousti-Mat products.



Sound mat is loose laid over the entire concrete or wood subfloor.

**TYPES**

**ACOUSTI-MAT® II**

Acousti-Mat II has become an industry standard. It accepts a thin floating floor composite and is ideal for new and retrofit flooring applications where floor height is a concern. Acousti-Mat II increases IIC and STC levels up to 10 rating points over wood frame and IIC levels up to 20 rating points over concrete. Acousti-Mat II has 40% pre-consumer recycled content, is GREENGUARD Children and Schools Certified and may contribute points toward LEED® project certification.

**ENKASONIC®**

Enkasonic sound control mats create sound-rated floors with the high impact insulation class (IIC) and sound transmission class (STC) levels required by the International Conference of Building Officials (ICBO), International Building Code (IBC) and the U.S. Department of Housing and Urban Development (HUD) for luxury developments. Test results indicate that after 10 years of use, Enkasonic retains 97% of its original thickness, is as pliable as a new roll, and performs equally to a newly manufactured roll. Enkasonic increases IIC and STC levels up to 12 rating points over wood frame and IIC levels up to 20 rating points over concrete. Enkasonic has 40% pre-consumer recycled content, is GREENGUARD Children and Schools Certified and may contribute points toward LEED® project certification.

**ACOUSTI-MAT® 3**

Acousti-Mat® 3 provides 3 times more air-space than Acousti-Mat II and delivers an additional 7 - 10 sound control rating points. For open beam, concrete slab and conventional wood frame construction, Acousti-Mat 3 increases IIC and STC levels up to 17 rating points over wood frame and IIC levels up to 25 rating points or more over concrete. Acousti-Mat 3 has 40% pre-consumer recycled content, is GREENGUARD Children and Schools Certified and may contribute points toward LEED® project certification.

**ACOUSTI-MAT® LP/LPR**

Acousti-Mat® LP (Low Profile) and LPR (Low Profile with Reinforcement) are sound control mats used over concrete slabs and topped with a Maxxon underlayment or Level-Right® WearTop® to improve IIC ratings. Acousti-Mat LPR can also be used in wood frame construction for a low profile sound control solution, and is made with 40% pre-consumer recycled content. Acousti-Mat LP and LPR provide a tough, durable mat with water repellent features and excellent reductions in sound transmission and sound reflection, achieving a Delta IIC rating of 19 - a reduction in impact noise of approximately 75%. Tile may be thin-set directly to Acousti-Mat LP or LPR.

**BENEFITS**

Acousti-Mat Sound Control Systems offer a cost-effective means to meet performance



Sound mat is topped with approved Maxxon underlayment.

specifications in new construction and renovation projects. Acousti-Mat Sound Control Systems:

- Are fast and easy to install
- Reduce impact noise up to 75%
- Are suitable for new construction or renovation
- May contribute points toward LEED® project certification

**4. Technical Data**

**APPLICABLE STANDARDS**

ASTM International

- ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials
- ASTM E336 Standard Test Method for

Measurement of Airborne Sound Insulation in Buildings

- ASTM E413 Classification for Rating Sound Insulation
- ASTM E989 Standard Classification for Determination of Impact Insulation Class (IIC)
- ASTM E1007 Standard Test Method for Field Measurement of Tapping Machine Impact Sound Transmission Through Floor-Ceiling Assemblies and Associated Support Structures
- ASTM E2179 Standard Test Method for Laboratory Measurement of the Effectiveness of Floor Coverings in Reducing Impact Sound Transmission Through Concrete Floors

**APPROVALS**

- Enkasonic is recognized by the International Code Council Evaluation Service (ICC-ES) - ICC-ES Legacy Report ER-4778
- Maxxon Acousti-Mat II and Acousti-Mat 3 Sound Control Systems are recognized by ICC-ES Legacy Reports ER-3433 and ER-4950

See Table 1 for a list of approved UL and ULC design numbers for Acousti-Mat II, Acousti-Mat 3, Enkasonic and Acousti-Mat LPR.

**FIRE PERFORMANCE**

Acousti-Mat II, Enkasonic and Acousti-Mat 3 Sound Control Systems meet National Fire Protection Association (NFPA) Class A standards when tested in accordance with ASTM E84. Contact Maxxon Corporation for details and specific test results.

**ACOUSTICAL PERFORMANCE**

Maxxon Corporation has performed many sound tests on Maxxon Acousti-Mat Sound Control Systems. Each was performed by recognized testing agencies over a wide variety of floor/ceiling assemblies. All tests had sound ratings above the minimum values accepted by major housing codes. Visit [www.Acousti-mat.com/st](http://www.Acousti-mat.com/st) for Acousti-Mat product sound ratings.

**ENVIRONMENTAL CONSIDERATIONS**

See Table 4.

**5. Installation**

Acousti-Mat Sound Control Systems installation must be completed by a manufacturer-authorized applicator. General installation instructions are included below.

**PREPARATORY WORK**

Deliver products in manufacturer's original,

**TABLE 1 APPROVED DESIGN NUMBERS**

UL Design Numbers											
G524	G560	G561	G563	G566	G574	J917	J919	J920	J924	J927	J931
J957	J958	J966	J994	L004	L005	L006	L201	L202	L206	L208	L209
L210	L211	L212	L501	L502	L503	L504	L505	L506	L507	L508	L509
L510	L511	L512	L513	L514	L515	L516	L517	L518	L519	L520	L522
L523	L524	L525	L526	L527	L528	L529	L530	L533	L534	L535	L536
L537	L538	L539	L540	L541	L542	L543	L544	L545	L546	L547	L548
L549	L551	L552	L555	L556	L557	L558	L559	L560	L562	L563	L564
L569	L573	L574	L579	L581	L583	L585	L588	L589	L592	L593	L594
L599	M500										
ULC Design Numbers											
L003	L201	L511	L512	M500	M501	M503	M513	M514	M517		





Acousti-Mat® LP attached to concrete subfloor



Maxxon Underlayment poured over Acousti-Mat® LP

unopened, undamaged containers with identification labels intact. Store materials protected from exposure to harmful environmental conditions and at temperature and humidity conditions recommended by the manufacturer. Remove any damaged or deteriorated material from the job site.

Schedule the sound control system as late as possible in the construction cycle. Do not begin the underlayment and sound control system installation until the building is enclosed, including roof, windows, doors and other fenestration.

Install the underlayment and sound control system after drywall installation unless tenant finish requirements identify partitioning after the pour. If the sound control system will be installed before the drywall, loose lay 3.4 lb square yards of galvanized metal lath over the entire sound control surface.

The subfloor must be clean and structurally sound. Fill cracks and voids with a quick setting patching or caulking material.

**METHODS**

**ACOUSTI-MAT II, ACOUSTI-MAT 3 AND ENKASONIC**

Loose lay the sound control mat over the entire concrete or wood subfloor. Install and tape isolation strips around the room's perimeter to eliminate flanking paths. Also install and tape isolation strips around any vertical penetration through the floor. Tape the seams between sound mat sections or use zip-strips. Prime the sound mat to bond the underlayment to the mat. Top the sound mat with approved Maxxon Underlayment at a depth specific to the mat chosen for the application (see Table 2). Screed to a smooth surface. If installing only in hard surface areas, pour the

underlayment directly over the subfloor in areas to be covered by carpet and pad.

Provide continuous ventilation and adequate heat to remove moisture from the area until the underlayment is dry. Provide mechanical ventilation as necessary to enhance the drying process.

**ACOUSTI-MAT® LP/LPR**

Roll out Acousti-Mat LP Adhesive over clean and contaminant-free concrete. Over rough concrete surfaces, use a slurry of Maxxon Underlayment. Place Acousti-Mat LP or LPR into wet adhesive or slurry. Butt joint or overlap seams, depending upon the topping application. Back roll Acousti-Mat LP or LPR to ensure that 100% surface contact is achieved with adhesive or slurry application.

Install Isolation Strips around all walls, columns and floor penetrations to eliminate flanking paths. Use Acousti-Mat LP Isolation Strips to cover any exposed concrete between seams in the Acousti-Mat LP or LPR.

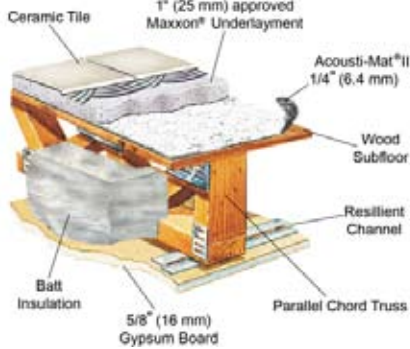
- Option 1 - Tile may be thin-set direct to Acousti-Mat LP or LPR
- Option 2 - Acousti-Mat LPR can be used in wood frame construction with a 3/4" underlayment topping for a low profile sound control solution

Top Acousti-Mat LP or LPR with an approved Maxxon Underlayment. For uniform depth and a smooth surface, use a screed to finish the underlayment surface.

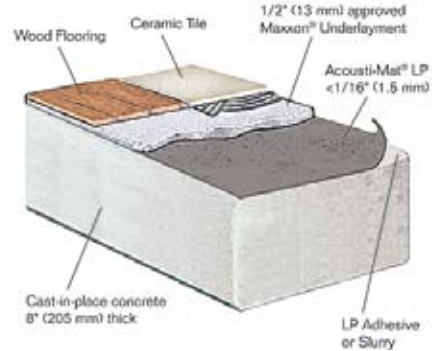
TABLE 2 MAXXON UNDERLAYMENT TOPPING DEPTHS		
Sound Mat	Underlayment Depth	Underlayment Depth with Maxxon CSM
Acousti-Mat II	1" (25 mm)	3/4" (19 mm)
Enkasonic	1 1/2" (38 mm)	1 1/4" (31 mm)
Acousti-Mat 3	1 1/2" (38 mm) plus wire mesh	1 1/2" (38 mm)
Acousti-Mat LP or LPR (over concrete)	1/2" (12.7 mm)	N/A
Acousti-Mat LPR (over woodframe)	3/4" (19 mm)	N/A

Note - Floor coverings can also be glued directly to AcoustiMat LP or LPR





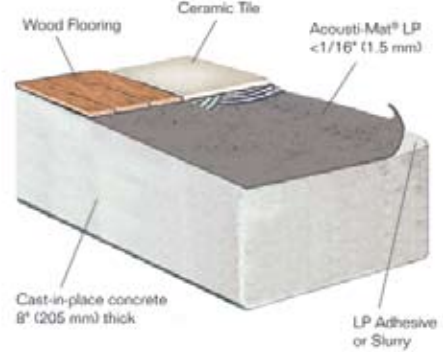
Acousti-Mat® II



Acousti-Mat® LP with Maxxon underlayment



Acousti-Mat® 3



Acousti-Mat® LP with floor goods direct

TABLE 3 COMPOSITION, PHYSICAL PROPERTIES AND PERFORMANCE

Model	Acousti-Mat II	Enkasonic	Acousti-Mat 3	Acousti-Mat LP	Acousti-Mat LPR
Material composition	Nylon filament (40% pre-consumer recycled content)	Nylon filament (40% pre-consumer recycled content)	Nylon filament (40% pre-consumer recycled content)	Polymeric fibers	Nylon reinforcement on blend of polymeric fibers (40% pre-consumer recycled content)
Thickness (ISO 534 - CLP only)	0.25" (6 mm)	0.4" (10 mm)	0.8" (20 mm)	< 0.06" (1.5 mm)	0.16" (4 mm)
Density	6.3 pcf (100.8 kg/m <sup>3</sup> )	4.65 pcf (74.4 kg/m <sup>3</sup> )	2.66 pcf (42.6 kg/m <sup>3</sup> )	-	-
Color	Black nylon, white fabric	Black nylon, white fabric	Black nylon, white fabric	Dark gray	Black nylon, dark gray
Environmental considerations	GREENGUARD Children and Schools Certified	GREENGUARD Children and Schools Certified	GREENGUARD Children and Schools Certified	-	-
Basis weight (ASTM D646)	-	-	-	175 g/m <sup>2</sup>	175 g/m <sup>2</sup>
Mullen burst (ASTM D774)	-	-	-	> 200 psi (1.4 MPa)	> 200 psi (1.4 MPa)
Air permeability	-	-	-	150 CFM (45.7 m <sup>3</sup> /min.)	150 CFM (45.7 m <sup>3</sup> /min.)
MD tensile (ASTM D828)	-	-	-	30 psi (0.21 MPa)	30 psi (0.21 MPa)
CD tensile (ASTM D828)	-	-	-	30 psi (0.21 MPa)	30 psi (0.21 MPa)
Pressure:					
50 psf (244 kg/m <sup>2</sup> )	-	-	0.05" (1.27 mm) deflection	-	-
100 psf (488 kg/m <sup>2</sup> )	-	-	0.08" (2.03 mm) deflection	-	-
200 psf (976 kg/m <sup>2</sup> )	-	-	0.15" (3.81 mm) deflection	-	-
300 psf (1464 kg/m <sup>2</sup> )	-	-	0.21" (5.33 mm) deflection	-	-
500 psf (2440 kg/m <sup>2</sup> )	0.06" (1.52 mm) deflection	0.09" (2.21 mm) deflection	-	-	-
1000 psf (4880 kg/m <sup>2</sup> )	0.08" (2.03 mm) deflection	0.13" (3.33 mm) deflection	-	-	-
2000 psf (9760 kg/m <sup>2</sup> )	0.15" (3.81 mm) deflection	0.19" (4.80 mm) deflection	-	-	-
4000 psf (19,520 kg/m <sup>2</sup> )	0.20" (5.08 mm) deflection	0.26" (6.50 mm) deflection	-	-	-

**TABLE 4 ENVIRONMENTAL CONSIDERATIONS**

USGBC LEED	Category	Credit	
Innovation & Design	Sound Control	ID 1.1	
Materials & Resources	Recycled Content	MR 4.1, MR 4.2	Pre-consumer: Recycled nylon, 40%
Materials & Resources	Regional Materials	MR 5.1, MR 5.2	Enka, NC 28728
Indoor Environmental Quality	Low Emitting Materials: Floor System	EQ 4.3	GREENGUARD Children and Schools Certified

The floor will be hard enough to accommodate foot traffic approximately 2 hours after the underlayment has been poured. By utilizing a Maxxon Underlayment over the Acousti-Mat LP or LPR, a smooth flat underlayment will be achieved that can meet the finished floor goods floor flatness criteria.

Note - Maxxon offers an installation brochure for flooring materials. Refer to these guidelines for more information. The procedures described here are to be used as guidelines only and do not constitute a warranty. Where floor goods manufacturers require special adhesive or installation systems, their requirements supersede these requirements.

**PRECAUTIONS**

During construction, place temporary wood planking over the underlayment or topping if it will be subject to heavy wheeled or concentrated loads. Protect installed products until the project is complete.

Rigid attachments through the sound mat reduce its performance. For this reason, once the mat has been loose laid, no further penetrations should be made.

**BUILDING CODES**

Installation must comply with the requirements of all applicable local, state and federal code jurisdictions.

**6. Availability & Cost**

**AVAILABILITY**

Maxxon Acousti-Mat Sound Control Systems are available from certified dealers and regional representatives throughout the U.S., Canada and worldwide. Contact Maxxon Corporation for availability information in specific localities.

**COST**

Cost information may be obtained from Maxxon dealers.

**7. Warranty**

Complete warranty terms and conditions are available from the manufacturer. For details, consult Maxxon Corporation.

**8. Maintenance**

None required.

**9. Technical Services**

Technical assistance, including more detailed information, product literature, test results, project lists, assistance in preparing project specifications and arrangements for application supervision, is available by contacting Maxxon Corporation.

**10. Filing Systems**

- SmartBuilding Index
- ARCAT®
- Sweet's Catalog Files
- GREENGUARD Environmental Institute
- Additional product information is available from the manufacturer upon request.