

Enkasonic[®] Floor Underlayment

SECTION 09618

SOUND CONTROL MATTING

Part I General

1.1 Summary

- A. Section includes a sound control material for achieving an STC and IIC rating in excess of 50 to meet building code requirements in commercial and multi-family residential applications.
- B. This work shall consist of furnishing and installation of sound control system, including matting, isolation barrier, Sound Sealant acoustical caulk and related work in accordance with these standard specifications and at locations identified on drawings or designated by architect or acoustical consultant. This work shall include all necessary materials, labor, supervision and equipment for installation of a complete sound control system for flooring.
- C. Related Sections:
 - 1. Cast in place concrete: Refer to Division 3
 - 2. Insulation: Refer to Division 7
 - 3. Joint treatments Refer to Division 7
 - 4. Gypsum wall board Refer to Division 13
 - 5. Flooring Refer to Division 9
 - 6. Mechanical/electrical Refer to Division 15/16
 - 7. Other appropriate project-specific specifications sections

1.2 References

- A. General: Refer to Division 1 References Section

1.3 System Description

- A. Performance Requirements: Provide sound control flooring system, which has been manufactured and installed to achieve STC, and IIC performance levels that exceed code requirements of not less than 50 for both ratings.

1.4 Submittals

- A. General: Prepare, review, approve and submit specified submittals in accordance with "Conditions of the Contract" and Division 1 Submittals Sections. Product data, shop drawings, samples and similar submittals are defined in "Conditions of the Contract."



- B. Product Data: Submit manufacturer's product data with independent testing of actual floor assembly and laboratory results of sound control system. Provide report of tested STC level and IIC level.
- C. Shop Drawings: Submit shop drawings showing layout, profiles and product components, including accessories for sound control system and termination of system.
- D. Samples: Submit verification samples for sound control matting and isolation material.
- E. Quality Assurance/Control Submittals:
 - 1. Test Reports Certification: Submit certified test reports from an acceptable independent testing laboratory indicating compliance with applicable results of performance characteristics and physical properties.
 - 2. Certificates (Qualification Data): Submit product certificates signed by manufacturer certifying materials comply with specified performance characteristics and physical requirements, showing full time quality control. Single-source manufacturer supplies sound Control system.
- F. Close out Submittals:
 - 1. Warranty: Submit warranty documents specified herein.
 - 2. Project Record Documents: Submit project record documents for installed materials in accordance with Division 1 Project Close Out (Project Record Documents) Section.

1.5 Quality Assurance

- A. Qualifications:
 - 1. Installer Qualifications: Installer experienced (as determined by contractor) to perform work of this section, who has specialized in the installation of work similar to that required for this project, who can comply with manufacturer's warranty requirements, and who is an approved applicator as determined by sound control system manufacturer.
 - 2. Manufacturers Qualifications: Manufacturer capable of providing job service during construction, approving an acceptable installer, recommending appropriate application methods and conducting a final inspection of the sound control system.

1.6 Delivery, Storage, and Handling

- A. Ordering: Comply with manufacturer's ordering instructions and lead-time requirements to avoid construction delays.
- B. Packing, Shipping, Handling and Unloading: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.

C. Storage and Protection: Store materials protected from exposure to harmful weather conditions and at temperature conditions recommended by manufacturer.

1.7 Project Conditions/ Site Conditions

A. Project Conditions: Refer to “Conditions of the Contract” for control and responsibility of project site including means, methods and techniques of construction by the contractor.

Part II Products

2.0 Manufacturers

- A. Acceptable Distributor: Acoustical Solutions, Inc.
2420 Grenoble Road, Richmond, VA 23228
Phone: 800-782-5742 Fax: 804-346-8808
Email: info@acousticalsolutions.com
- B. Warranted Sound Control System: Enkasonic™ 9110 and Enkasonic™ Perimeter Isolation material. Provide system components from a single source supplier in accordance with manufacturer’s warranty requirements.
- C. Standard Product Data

Properties for Enkasonic™ Sound Control Matting

Durability:	After 10 years – Enkasonic™ retains 97% of original thickness	
	After 10 years - as pliable as a new roll	
	After 10 years - performance is equal to newly manufactured rolls	
Thickness:	0.4” (10mm)	
Weight:	22.9 oz./yd ² (776 g/m ²)	58.0 lbs./roll (26.3 kg/roll)
	Can be handled by one installer.	

TECHNICAL DATA		
Physical Properties	USA (Metric)	Enkasonic 9110
Core Material		Nylon 6
Thickness	inches (mm)	0.4 (10.2)
Total weight	oz/vd ² (g/m ²)	22.4 (759.4)
Core weight	oz/vd ² (g/m ²)	18.9 (640.7)
Fabric weight	oz/vd ² (g/m ²)	3.5 (118.7)
Performance Characteristics		
Fire Rating		NFPA Class A*
Smoke Density		15
Flame Spread		25
Fuel Contribution		0

* Will not promote flame spread.

STANDARDS	
Tile Council of America Inc.	RF900-89
New York City Dept. of Buildings	MEA 144-89-M
Ceramic Tile Institute	CTI-R-4-113-79
ICBO Report	4778

Deflection

Deflection characteristics of the most pliable of the CTI approved Enkasonic™ SR Floor Systems;

DEFLECTION*					
Pressure (psf)	Inches	(mm)	Pressure (psf)	Inches	(mm)
100	0.028	(0.711)	500	0.087	(2.210)
200	0.046	(1.168)	1000	0.131	(3.327)
300	0.061	(1.549)	2000	0.189	(4.801)
400	0.075	(1.905)	4000	0.256	(6.502)

* Deflection characteristics of the most pliable of the CTI approved Enkasonic SR Floor Systems:
Case #5 Enkasonic with WonderBoard®

Case #5-Enkasonic™ with Wonder-Board®.

STANDARD PACKAGING INFORMATION			
	USA	(Metric)	9110-101-0002
Core width	inches	(cm)	*39.0 (99.1)
Length	feet	(meters)	111.0 (33.8)
Area	yd ²	(m ²)	40.0 (33.5)
Roll diameter	inches	(cm)	27.0 (68.6)
Gross roll weight	lbs	(kg)	58.0 (26.3)

* Plus 3" overlap

Other Accessories

Sound Sealant Acoustical Caulk: A permanently resilient, non-shrinking latex-based sealant as distributed by Acoustical Solutions, Inc.

Adhesive: Franklin #711, Franklin #1011, or W. W. Henry #116 adhesive for bonding layers of plywood overlay together or equal.

Duct Tape or Cellophane Tape: 2" (5 cm) wide to bond the 39" (1 m) wide strips of Enkasonic together.

Welded, Galvanized Wire Mesh: 2"x2" x 16/16 gauge, 1/2" (13 mm) self-furred.

Enkasonic Perimeter Isolation Material: See data sheet.

Enkasonic 7918R Reinforcement Material: See data sheet.

2.1 Related Materials

- A. Concrete: Refer to Division 3
- B. Insulation: Refer to Division 7
- C. Sealant: Refer to Division 7
- D.

2.2 Source Quality Control

- A. Single Source Responsibility: Obtain all sound proofing materials from single source for required warranty.

Part III Execution

3.1 Surface Condition

- A. Sub floor shall be structurally sound. Deflection shall not exceed 1/360 of the span, including live and dead loads.

B. Sub floor shall be dry and free of debris.

3.2 Installation

A. Perimeter Isolation Strip:

1. Install Enkasonic Perimeter ISO at the perimeter of the entire sub floor (including door frames), and around any protrusions through the installation. This procedure isolates the Enkasonic floor system from the walls in order to create an acoustical break, which will minimize the transmission of sound laterally from the "floating floor" to the walls. Also, the perimeter isolation material provides space for possible expansion of the finished flooring.
2. Adhere the foam perimeter isolation strip to the wall with construction adhesive applied as close as possible to the top of the foam strip.

B. Enkasonic Sound Control Matting:

1. Lay the Enkasonic directly over the sub floor (or waterproofing membrane, if applicable) **with the black mesh down, white fabric side up**. Push the Enkasonic up tightly to the isolation barrier previously installed around the perimeter of the floor.
2. If hardwood flooring and plywood floating slab are to be used, place a layer of roofing felt on the sub floor prior to the Enkasonic.
3. If the waterproofing membrane is mopped-on, put a layer of roofing felt over the membrane before installation of the Enkasonic.
4. Butt adjoining edges of the black Enkasonic mesh together. Then tape [Duct Tape or 2" (5 cm) wide Cellophane Tape] the 3" (7.5 cm) wide longitudinal fabric overlap snug to the adjoining Enkasonic strip. The taping procedure seals the overlap seams and keeps any residual material from getting into the Enkasonic mesh. Tape seam at intersection of Perimeter Isolation and Enkasonic.
5. Enkasonic is free-floating. Do not attach it to the sub floor with nails, screws, staples, glue or any type of attachment.

Specifier Note: It is necessary to install an overlay over the Enkasonic to receive and support the finished flooring. The overlay varies with the type of finish flooring. The overlays are: 1 1/4" (3.2 cm) mortar bed, 7/16" (11 mm) WonderBoard®, 1/2" (4 cm) lightweight Concrete [1800 PSI (12.4 MPa)], 1 1/2" (4 cm) Gypsum [2000 PSI minimum (13.8 MPa)], or two layers of minimum 1/2" plywood. Specific installation details are described in our installation bulletins.

C. Finish Flooring:

1. **After** the finished flooring is installed, trim the perimeter isolation barrier to $\frac{1}{4}$ " (6.5 cm) below the finished flooring. Fill the groove with a bead of acoustical sound sealant caulk. Do not allow hard grout to come in contact with the wall. If the floor is carpet or vinyl, trim the perimeter isolation barrier flush with the surface **before** the finished flooring is installed. Shim the molding to $\frac{1}{16}$ " to $\frac{1}{32}$ " (1.6 to 0.8 mm) above the finished flooring preventing a transmission path for sound between the finished floor and wall.
2. If a flat base is adhered to the wall, space it $\frac{1}{8}$ " (3.2 mm) up from the tile surface, and run a bead of acoustical sealant into the void.
3. If a cove base is used, fill the joint between the last course of floor tile and the base with acoustical sealant.

END OF SECTION