

Acoustiblok Sound isolation Material
Three Part Specification
Revised January 21 2008

Sections 09830, 09618

Part 1: General

1.1 Section Includes:

Acoustiblok sound isolation material, and installation accessories.

1.2 Related Sections

**** NOTE TO SPECIFIER: DELETE ALL ITEMS NOT APPLICABLE TO JOB ****

09110 Non-Load Bearing Wall Framing (resilient channel)

05400 Cold Formed Steel Framing (steel studs)

13080 Sound, Vibration And Seismic Control (PAC International RSIC clips)

09260 Gypsum Board Assemblies

07210 Building Insulation

1.3 References

ASTM E90-02 Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions

ASTM E413-87 Classification for Rating Sound Insulation

ASTM E989-89 Standard Classification for Determination of Impact Insulation Class (IIC)

ANSI/UL Std 263, Fire Tests of Building Construction and Materials

UL Fire Resistance Directory 2006 Vol 1, Walls and Partitions

UL Classification file R21490, Acoustiblok Inc. Acoustiblok sound isolation material

ASTM D3273 Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber

ASTM D3274 Standard Test Method for Evaluating Degree of Surface Disfigurement of Paint Films by Microbial (Fungal or Algal) Growth

1.4 Submittals

**** NOTE TO SPECIFIER: DELETE ALL ITEMS NOT APPLICABLE TO JOB ****

- A. Submit under provisions of Section 01300.
- B. Product Data: Manufacturer's complete and current product data for each product required, including complete installation requirements.
- C. Verification Samples: 8" x 10" sheet of Acoustiblok sound attenuation membrane, thickness as specified.

1.5 Quality Assurance

**** NOTE TO SPECIFIER: DELETE ALL ITEMS NOT APPLICABLE TO JOB ****

- A. Manufacturer Qualifications: The manufacturer shall be a firm with a minimum of five years of successful experience in manufacture of products with similar requirements.
- B. Installer Qualifications: The installer shall be a firm with a minimum of two years of successful experience in installation of products with similar requirements.
- C. Materials Qualification: Provide ASTM, ANSI, or UL Std test reports from independent laboratories with NVLAP or equivalent certification of standards compliance, documenting product performance specified for:
 - 1. Acoustical properties.
 - 2. Physical properties
 - 3. Fire-related properties.
- D. Receiving Inspection:
 - 1. Verify quantities received and condition of materials received.
 - 2. Verify the dimensions of Acoustiblok material are in compliance with materials specified.
 - 3. Verify dimensions and configuration of any mechanical parts or assemblies received, are in compliance with assemblies specified.
- E. Onsite Storage:
 - 1. Provide secure storage for all materials.

2. Exposure of Acoustiblok sound isolation material to sunlight is permissible. Acoustiblok material must be clean and dry for installation. Do not permit the material to be creased, cut, or punctured.

3. Acoustiblok material freezes at -40 ° F (-40 ° C). Do not unroll material at this temperature or below, as the material will crack. Freeze and thaw cycles do not affect the physical or acoustic properties of Acoustiblok.

F. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

Part 2: Products

2.1 Manufacturers

**** NOTE TO SPECIFIER: DELETE ALL ITEMS NOT APPLICABLE TO JOB ****

A. Provide Acoustiblok Inc. sound isolation membrane material.

1. Substitutions shall not be considered

B. Provide Acoustiblok Iron Grip Tape

1. Substitutions shall not be considered

C. Provide Acoustiblok Sound Sealant caulk

1. Substitutions shall not be considered

D. Provide Acoustiblok AcustiMat underlayment material (for enhanced isolation in floor/ceiling installations).

1. Substitutions shall not be considered

E. Provide fasteners per paragraph 2.2 Materials, subsection E, Fasteners.

1. Substitutions shall not be considered

F. Provide PAC International Inc. Resilient Sound Isolation Clips (for enhanced isolation wall and ceiling assemblies).

G. Provide PAC International Inc. RSIC-AMI Window Mullions (for enhanced isolation where exterior windows present a flanking sound path) .

2.2 Materials

**** NOTE TO SPECIFIER: DELETE ALL ITEMS NOT APPLICABLE TO JOB ****

A. Acoustiblok sound isolation membrane, 16 oz

1. Dimensions:

Width 54" \pm 0.125" (1.372 meters \pm 3.175 mm)
Rolls 30', 60', 350' (9.14, 18.29, 106.68 meters)
Material thickness 0.11" \pm 0.03" (2.79 mm \pm 0.76 mm)

Weight, per roll:

30' (9.14 m)	= 150 lb. (68 kg)
60' (18.29 m)	= 300 lb. (136 kg)
350' (106.68 m)	= 1600 lb. (725.75 kg)

2. Physical Properties:

- a. Weight 1 lb. square foot (4.89 kg square meter)
- b. Tensile strength min. 510 PSI
- c. Color black (high UV resistance)
- d. Composition: Proprietary mass loaded vinyl based compound

3. Acoustical Properties:

- a. Minimum STC 26 per ASTM E90-02 and ASTM E413-87
Minimum sound attenuation 19 dBA @ 100 Hz.
- b. STC and/or IIC ratings of tested wall and floor/ceiling construction configurations, as provided by manufacturer's literature and verified by independent laboratory tests conducted in compliance with ASTM E90-02, ASTM E413-87, and/or ASTM E989-89

4. Environmental Performance:

- a. Heat tolerance: 200 degrees F (93 ° C) for 7 days, less than 1% shrink, no deformation
- b. Material freezes at -40 ° F (-40 ° C). Do not unroll, flex, or handle frozen material (other than as a roll), as it will crack and break.
- c. UV resistant, not affected by water, detergents

d. No fungal or algal growth and no visible disfigurement, per ASTM D3273 and ASTM D3274 (rating = 10).

5. Fire Related Properties:

a. UL Classified for use in fire rated wall and floor/ceiling designs of the U300, U400, V400, and L500 series, per UL Fire Resistance Directory 2006, vol 1.

B. Acoustiblok sound isolation membrane, 32 oz

1. Dimensions:

Width 54" \pm 0.125" (1.372 meters \pm 3.175 mm)
Rolls 100' (30.48 meters)
Material thickness 0.22" \pm 0.03" (5.58 mm \pm 0.76 mm)

Weight, per roll:

100' (30.48m) = 900 lb. (408.24 kg)

2. Physical Properties:

- a. Weight 2 lb. square foot (9.78 kg square meter)
- b. Tensile strength min. 510 PSI
- c. Color black (high UV resistance)
- d. Composition: Proprietary mass loaded vinyl based compound

3. Acoustical Properties:

- a. Minimum STC 32 per ASTM E90-02 and ASTM E413-87
- b. STC and/or IIC ratings of tested wall and floor/ceiling construction configurations, as provided by manufacturer's literature and verified by independent laboratory tests conducted in compliance with ASTM E90-02, ASTM E413-87, and/or ASTM E989-89

4. Environmental Performance:

- a. Heat tolerance: 200 degrees F (93 ° C) for 7 days, less than 1% shrink, no deformation

b. Material freezes at -40 ° F (-40 ° C). Do not unroll, flex, or handle frozen material (other than as a roll), as it will crack and break.

c. UV resistant, not affected by water, detergents

C. Acoustiblok Iron Grip Tape

1. Application: As a joint sealing tape

2. Dimensions and packaging: Tape is 2" (50.8 mm) wide, 2.0 mil (51 microns) thick, packaged 60 yards (54.86 meters) per roll. 24 rolls per case.

3. Quantity required: As specified to tape all joints in Acoustiblok material as installed.

4. Acoustical, Mechanical, and Fire Related properties

a. Acoustical properties n/a, air tight seal only

b. Mechanical properties: One sided tape, formulated to adhere to Acoustiblok sound isolation material. (Note: Common adhesive tapes release from Acoustiblok in 4 to 10 days.)

c. Fire related properties: U.L. recognized and CSA accepted.

5. Environmental performance:

<u>Chemical</u>	<u>Appearance</u>
Isopropyl Alcohol	No Change
Detergent	No Change
Engineer Oil at 250°F (121°)	No Change
Water for 48 hours	No Change

Temperature Resistance 300° (149°C) for 24 hours: Slight discoloration and shrinkage. -40°F (-40°C) for 10 days: No change noted Humidity Resistance: 24 Hours at 100°F(38°C) and 100% relative humidity: No change noted.

D. Acoustiblok Acoustical Sound Sealant Caulk

1. Application: As an acoustical caulk

2. Packaging: 10 Oz (0.296 liters) Tube, 1 lb. (0.454 kg) ea. 12 tubes per case.

3. Quantity required: Estimate requirement for caulking Acoustiblok joints and edges where required, and for caulking to seal penetrations (air holes) in partitions incorporating Acoustiblok. One tube provides approximately 25 feet (7.62 meters) of linear coverage (typical caulk bead).

4. Acoustical, Mechanical, and Fire Related properties

a. Acoustical properties: Provides air-tight seal and significant acoustical isolation. All acoustical test results for wall and floor/ceiling designs provided by Acoustiblok, employ Acoustiblok Acoustical Sound Sealant Caulk.

b. Mechanical properties: A high bonding resilient caulk which will reliably adhere to Acoustiblok sound isolation material and other construction components. Formulated for interior use only.

c. Fire related properties: Exceeds the specifications for ASTM E-136 and conforms to all National Building Codes, including BOCA, CABO, SBCCI, ICBO, NFPA and the 2003 International Building Codes. Pass ASTM E-814 (UL 1479)

E. Acoustiblok AcoustiPad underlayment material

1. Application: To enhance acoustical and mechanical isolation (STC, IIC) in floor/ceiling construction.

2. Dimensions and Packaging: Material is 0.25" (0.635 cm) thick. Packaged in rolls, 35 ft x 4 ft (9.75 meters x 1.22 meters).

3. Quantity required: Estimate requirement by calculating area of floor(s) where this material will be applied.

4. Acoustical, Mechanical, and Fire Related properties

a. Acoustical properties: Mechanical decoupler only

b. Mechanical properties: Resilient high density, high stability polymer foam, formulated to decouple audio frequency vibration between layered structures and materials. Typical application: Lay on top of decking to isolate an Acoustiblok layer from the decking, before flooring is installed.

c. Fire related properties: U.L. recognized and CSA accepted.

F. Fasteners

**** NOTE TO SPECIFIER: DELETE ALL ITEMS NOT APPLICABLE TO JOB ****

1. Staple Caps

- a. Mfg part number(s), dimensions and packaging shall be specified per manufacturer documentation. Consult Acoustiblok Inc. for recommendations.
- b. Quantity required shall be estimated based on design and site specific considerations.

2. Tin Caps

- a. Mfg part number(s), dimensions and packaging shall be specified per manufacturer documentation. Consult Acoustiblok Inc. for recommendations.
- b. Quantity required shall be estimated based on design and site specific considerations.

3. Wafer Headed Screws

- a. Mfg part number(s), dimensions and packaging shall be specified per manufacturer documentation. Consult Acoustiblok Inc. for recommendations.
- b. Quantity required shall be estimated based on design and site specific considerations.

**** NOTE TO SPECIFIER: FOR 2.2 F - 2.2 I, OBTAIN DATA AS REQUIRED FROM APPLICABLE MANUFACTURER ****

G. PAC International Inc. RSIC sound isolation clips

- 1. Application: Enhanced acoustical isolation of drywall and other materials in wall and ceiling assemblies from framing components.
- 2. Mfg part number(s), dimensions and packaging shall be specified per manufacturer documentation
- 3. Quantity required shall be estimated based on design and site specific considerations.

4. Acoustical, Mechanical, and Fire Related: Specifier shall review the acoustical, mechanical, and fire related properties in the manufacturer's documentation.

H. PAC International Inc. RSIC-AMI Window Mullion

1. Application: Enhanced acoustical isolation of architectural spaces with adjoining exterior windows (control flanking path transmission).

2. Mfg part number(s), dimensions and packaging shall be specified per manufacturer documentation

3. Quantity required shall be estimated based on design and site specific considerations.

4. Acoustical, Mechanical, and Fire Related: Specifier shall review the acoustical, mechanical, and fire related properties in the manufacturer's documentation.

I. Resilient Channel

1. Application: Enhanced acoustical isolation of drywall and other materials in wall and ceiling assemblies.

2. Mfg part number(s), dimensions and packaging shall be specified per manufacturer documentation

3. Quantity required shall be estimated based on design and site specific considerations.

4. Acoustical, Mechanical, and Fire Related: Specifier shall review the acoustical, mechanical, and fire related properties in the manufacturer's documentation.

Part 3: Execution

3.1 Examination

A. Do not begin installation until substrates have been properly prepared.

B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 Preparation

- A. Assure that the Acoustiblok sound isolation material is clean and dry.
- B. Follow manufacturer's guidelines for materials prep and handling.

3.3 Installation

- A. Install in accordance with manufacturer's suggestions.
- B. Apply fasteners per Acoustiblok installation guide and fastener manufacturer's guidelines.
- C. Installers shall apply Acousticalcaulk, tape, and scrap sound isolation material as necessary to preserve the isolation's acoustical integrity, where the isolation material is mechanically penetrated (electrical outlet and switch boxes, etc.).

3.4 Protection

- A. Protect installed products until completion of project.
- B. Correct any materials or mechanical damage or deficiencies before substantial completion.

END OF SECTION