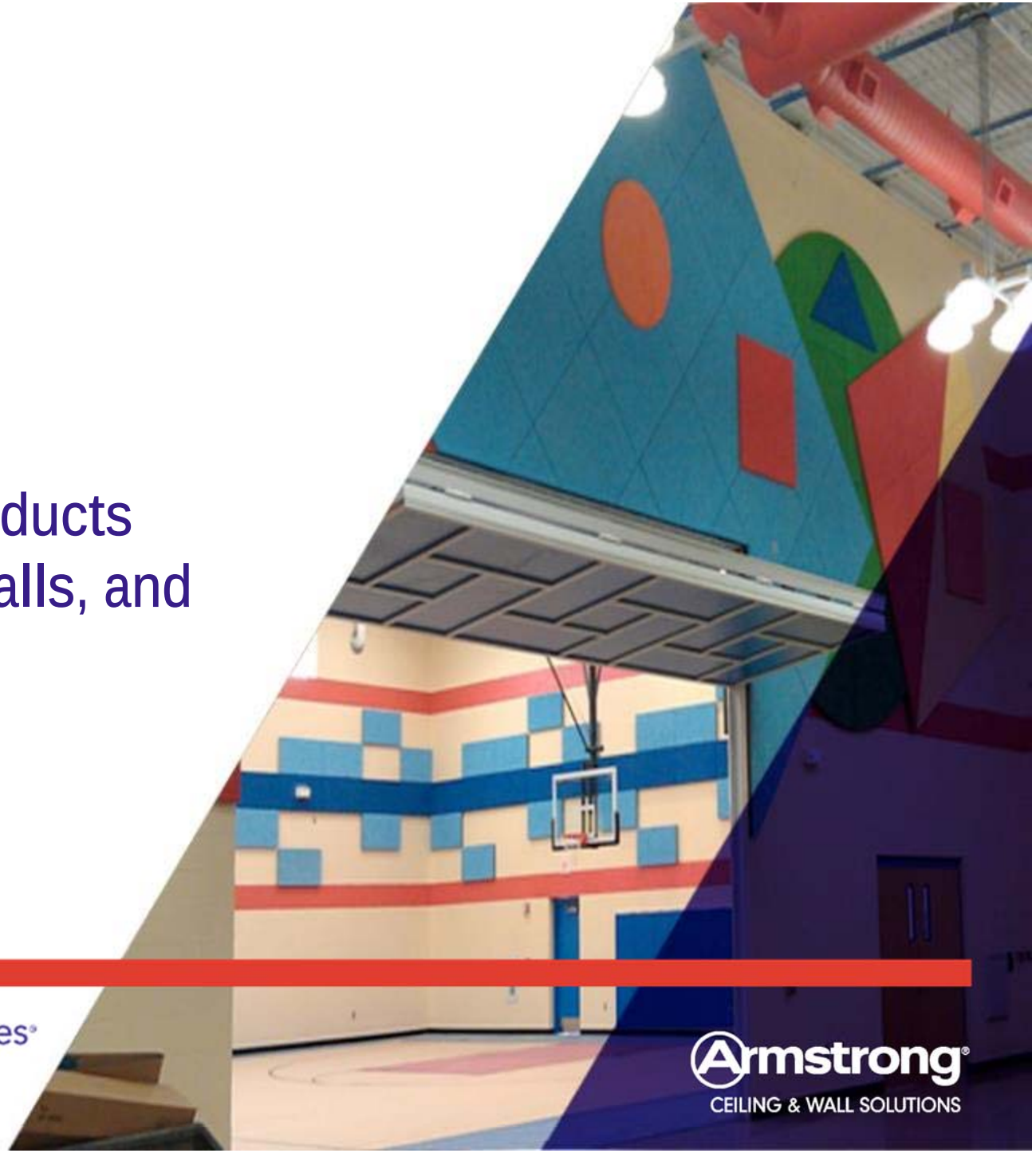
November 2017

Course Number:
AIA - ArmTEC098
IDCEC

Cementitious Wood Fiber Products For Ceilings, Walls, and Roof Decks



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Interior Design Continuing Education Council, Inc

IDCEC Approved Course

Learning Objectives

Structural Acoustical Products

- Structural Roof Decks
- Applications

Interior Acoustical Products

- Interior Wall and Ceiling
- Applications

What are Cementitious Wood Fiber Panels made from?

The primary ingredients are:

Wisconsin Aspen Trees
New Growth / Self Propagating

Salt Water -
Magnesium Oxide

Sand - Silicate

Limestone

LEED Contribution

Leadership in
Energy and
Environmental
Design

LEED V4 Contribution

EA Prerequisite 2: Minimum Energy Performance

EA Credit 1: Optimized Energy Performance

MR Credit 2: Construction Site Waste Management

MR Credit 4: Recycled Content

MR Credit 5: Regional Materials

MR Credit 6: Rapidly Renewable Resources

MR Credit 7: Certified Wood

EQ Prerequisite 3 (LEED for Schools): Minimum Acoustical Performance

For Complete LEED V4 Contributions - Click Here

LEED V4 Contribution

EQ Credit 3.1 and 3.2: Construction IAQ Plans

EQ Credit 4.1: Low-Emitting Materials, Adhesives and Sealants

EQ Credit 4.4: Low-Emitting Materials, Composite Wood & Agrifiber Products

EQ Credit 10 (LEED for Schools): Mold Prevention

EQ Credit 11 (LEED for Schools): Low-Impact Cleaning and Maintenance Equipment Policy

ID Credit 1: Innovation in Design

For Complete LEED V4 Contributions - Click Here

Structural, Acoustical Roof Deck Panels

Structural, Acoustical Roof Deck Panels

Tectim 1 Plank

Tectum E Plank

Tectum E-N Plank

Tectum III Plank

Tectum V Plank

Features and Benefits of Cementitious Wood Fiber Roof Deck

- Integrated Acoustics
- Durability – Can be field painted up to 6 times without impacting acoustic or fire performance of the panel
- Meets most Design Load Criteria
- Meets a wide range of Diaphragm Requirements
- Contributes to the LEED Certification Program
- Receives a wide variety exterior Roofing products
- Nailable Surface
- NRC's up to 0.80 – Eliminates the need for secondary acoustical treatments
- Attractive Finish
- Fast & Easy Installation

Structural, Acoustical Roof Deck

Applications

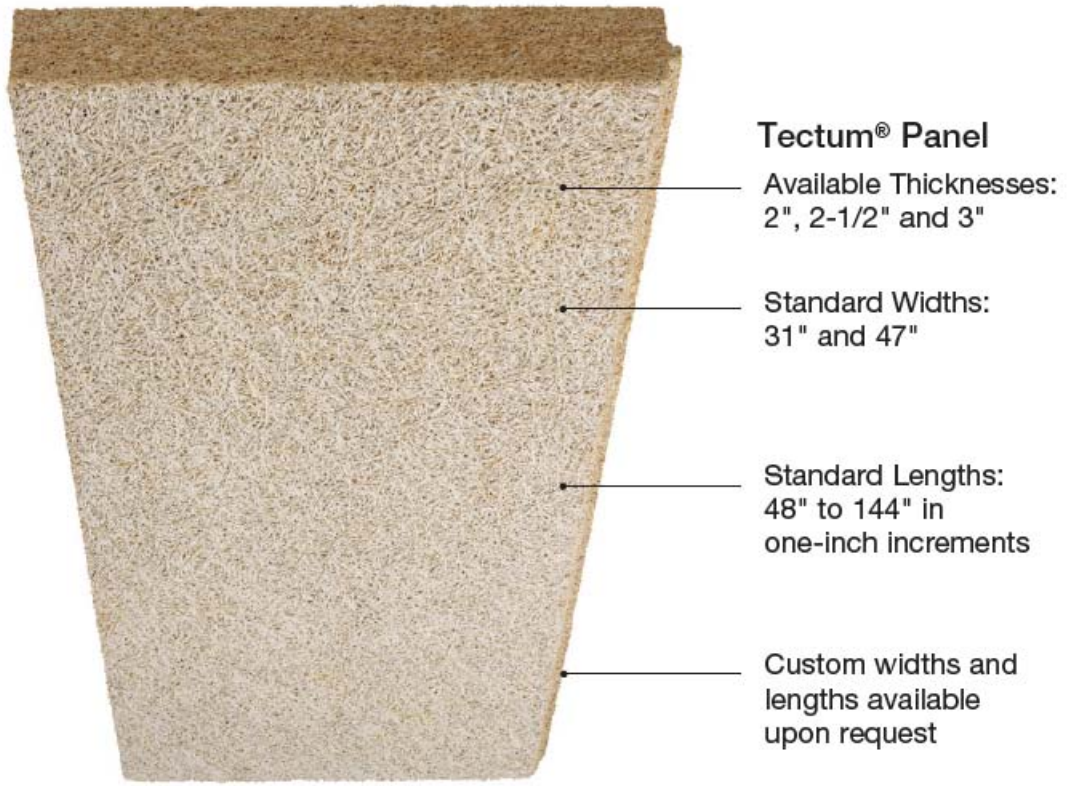
- Public and Private Schools, Dormitories
- Gymnasiums, Auditoriums, Band Rooms
- Pools
- Cafeterias, Multi-Use Rooms
- Arenas, Convention Centers, Libraries
- Prisons, Dayrooms
- Restaurants, Churches
- Open Shelters

Code Listings

- International Code Council Evaluation Service
  - ICC-ES Evaluation Report (ERS-1112)
- New York City Board of Standards & Appeals
  - Calendar No. L391-52-SM
- FM Approved CLASS I Roof Deck (Tectum I)
- Underwriters' Laboratories - Canada

Tectum I - Low Slope Applications

- Sound absorption – NRC up to 0.80
- R-value up to 6
- Spans up to 6 feet
- 50-pound design load
- Diaphragm shear up to 542
- Nailable surface
- Low slope applications



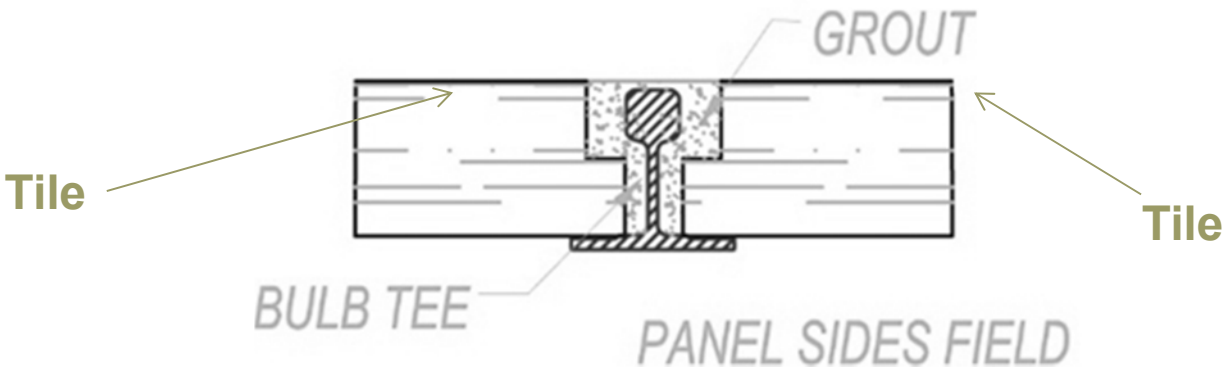
Panel size determined by joist spacing and span.

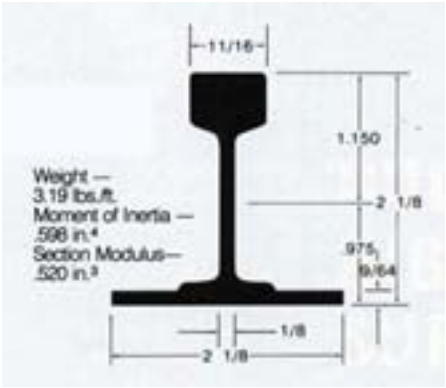
Tectum I – Project Photos

Tectum I Plank – Project Photos

Tectum I - Tile

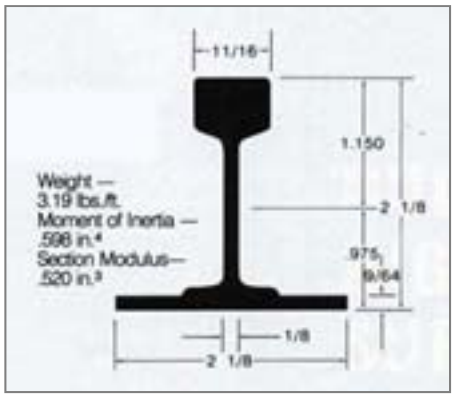
- Uses wood fiber roof deck panel to span between steel tees or concrete joists.



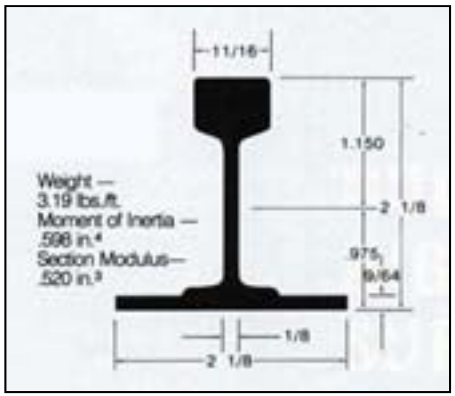


Tectum I Tile with LWIC – Project Photos

Tectum I Tile – Project Photos



Tectum I Tile – Project Photos



Composite Structural, Acoustical Roof Deck Panels

Three-in-One Composite Roof Deck Panels provide acoustics, insulation, and a nail-able surface that accepts a wide variety of roofing materials.

Tectum III & IIIP

- 1 ½” or thicker Tectum substrate
- Dow Styrofoam® brand XPS insulation
- 7/16” OSB (oriented strand board)

Tectum E

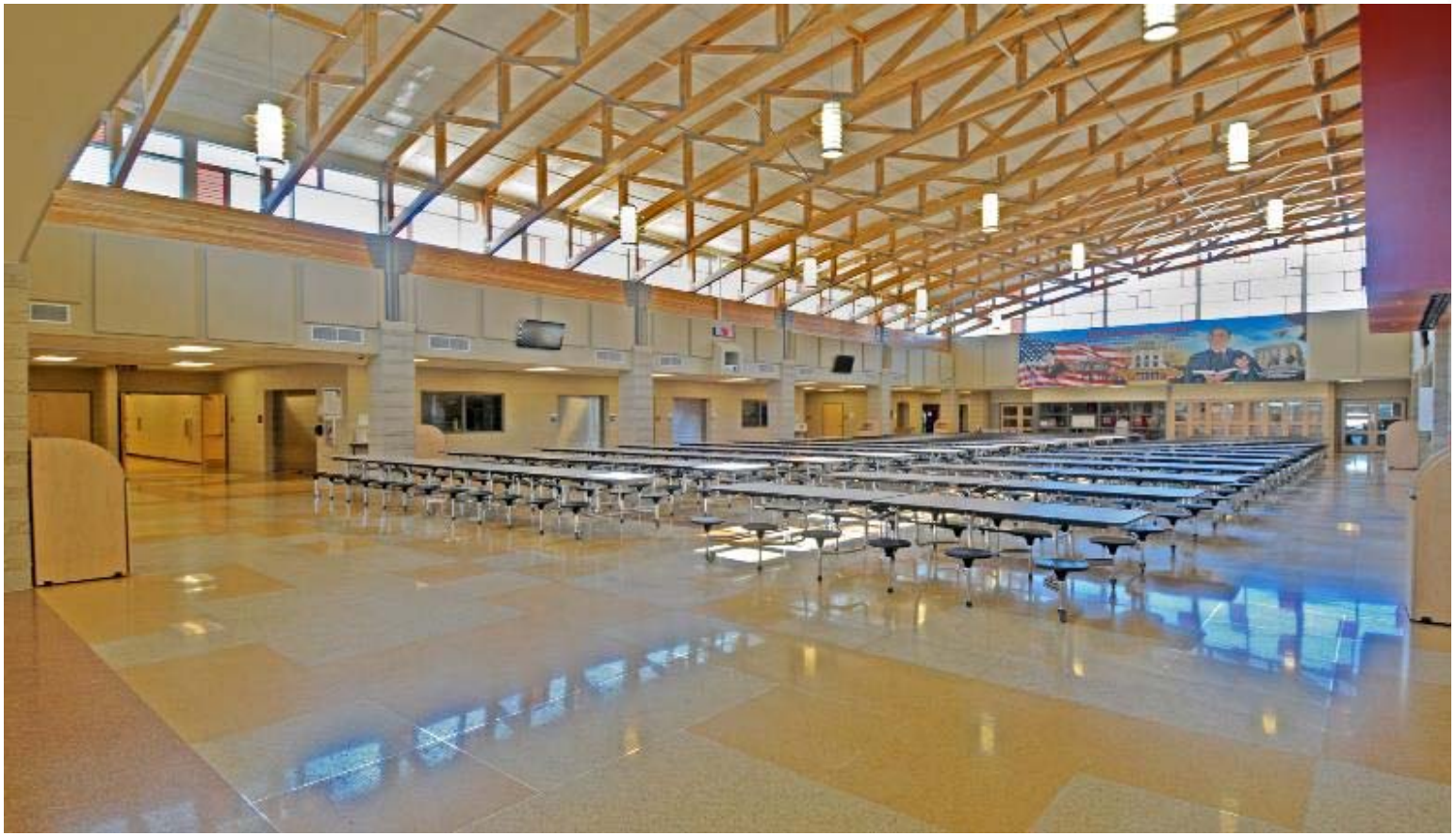
- 1 ½” or thicker Tectum substrate
- EPS (expanded polystyrene) insulation
- 7/16” OSB (oriented strand board)

Tectum E-N

- 1 ½” or thicker Tectum substrate
- NEOPOR® (expanded polystyrene) insulation
- 7/16” OSB (oriented strand board)

Tectum III – Project Photos

Tectum III – Project Photos

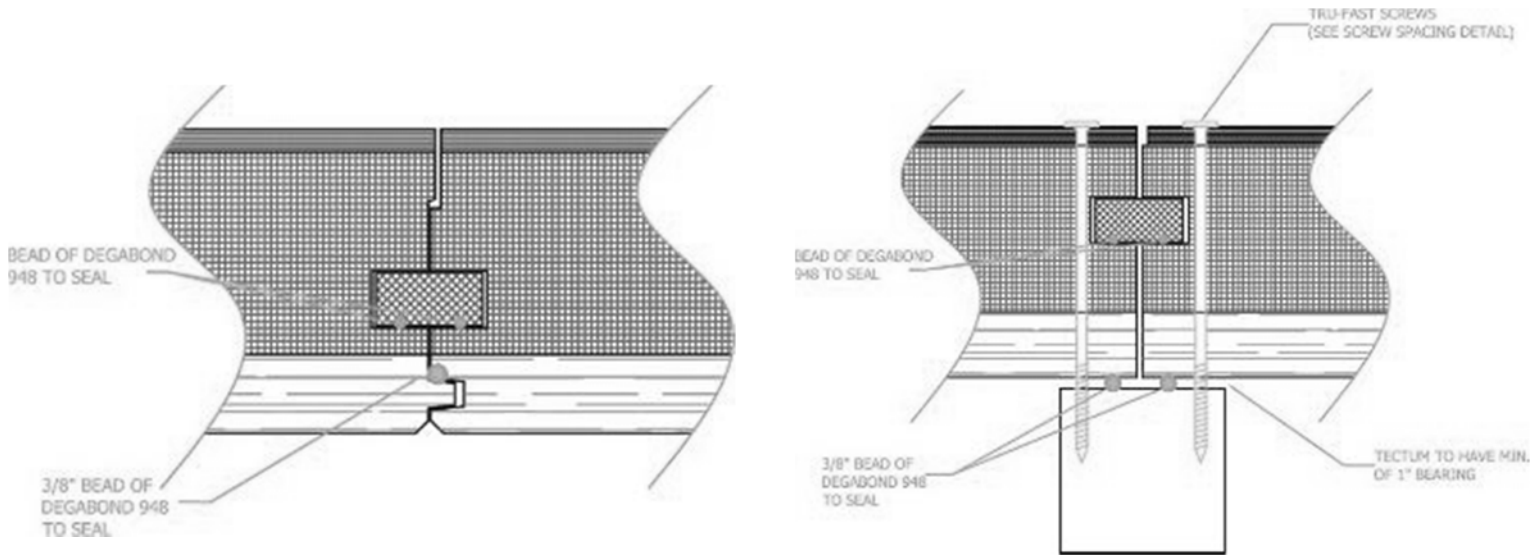


Tectum III – Project Photos

Tectum III – Project Photos

Tectum IIIP

- Edge detail specifically designed for use over high-humidity applications
  - Swimming Pools, Ice Arenas
- Provides a continuous vapor retarder from panel to panel in all directions



Tectum IIIP – Project Photos

Tectum IIIP – Project Photos

Tectum E – Project Photos

Tectum E – Project Photos

Tectum E – Project Photos

Structural, Acoustical Roof Deck

Tectum V – Long Spans up to 12 feet

- Excellent Noise Absorption — NRC up to 0.60
- R-Value up to 33
- Spans up to 12 feet
- 50 pound design load
- Diaphragm sheer up to 417 dsn/lf
- Nailable surface
- Low or high slope applications

Tectum V – Project Photos

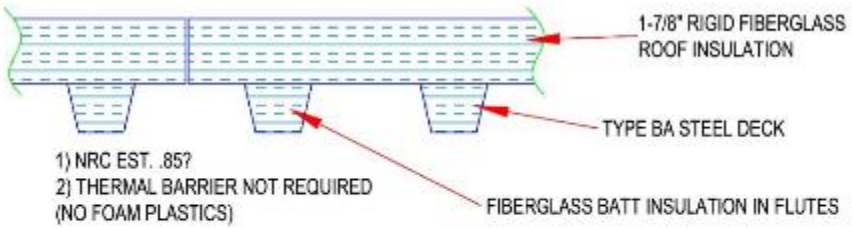
Type BA Acoustical Steel Deck

Concerns

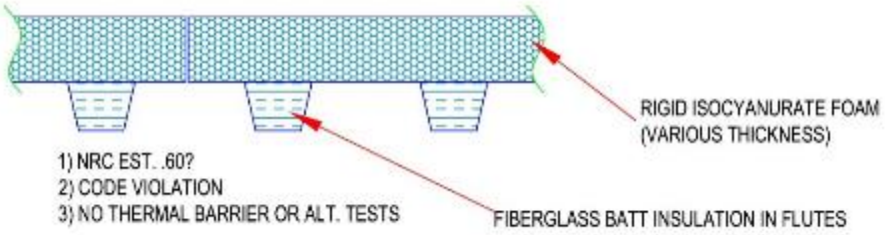
- Code Compliance
- Acoustical Performance
- Test vs. Actual Installations
- Directionality of Absorption

Steel Deck Code Issues

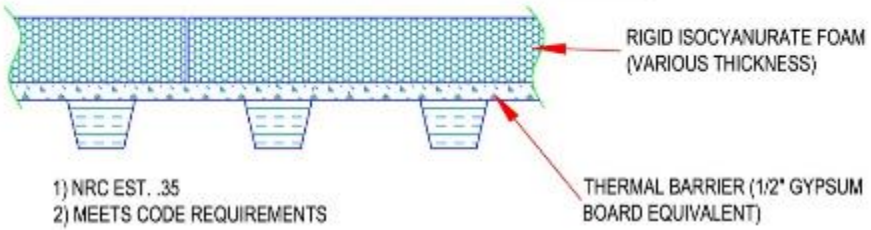
I. ACOUSTICAL STEEL DECK AS TESTED



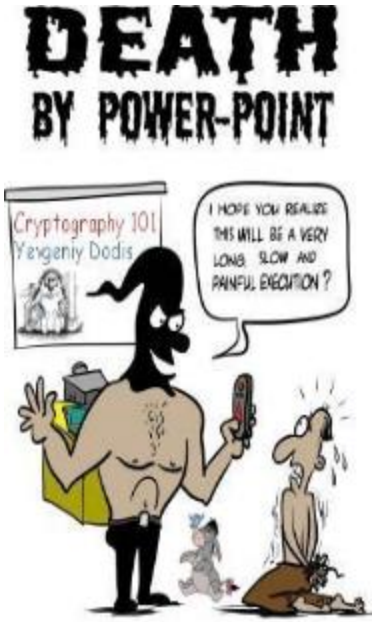
II. ACOUSTICAL STEEL DECK TYPICAL INSTALLATION



III. ACOUSTICAL STEEL DECK CODE COMPLIANT



Hang In There!

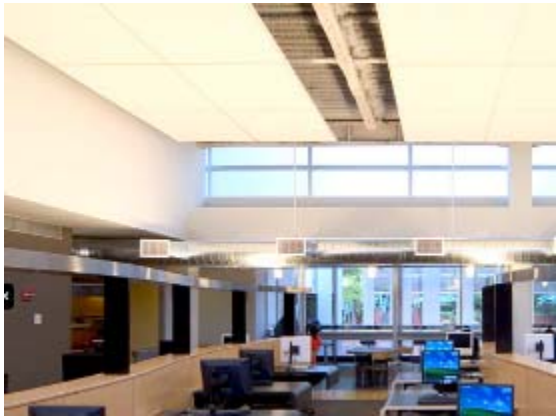


CONTINUING EDUCATION AIA

Standard & Custom Product Line Overview

Standard Product Lines

Direct Attach Wall & Ceiling Panels



Lay-In & Tegular Ceiling Panels

Custom Product Lines

Panel Art Wall & Ceiling Panels

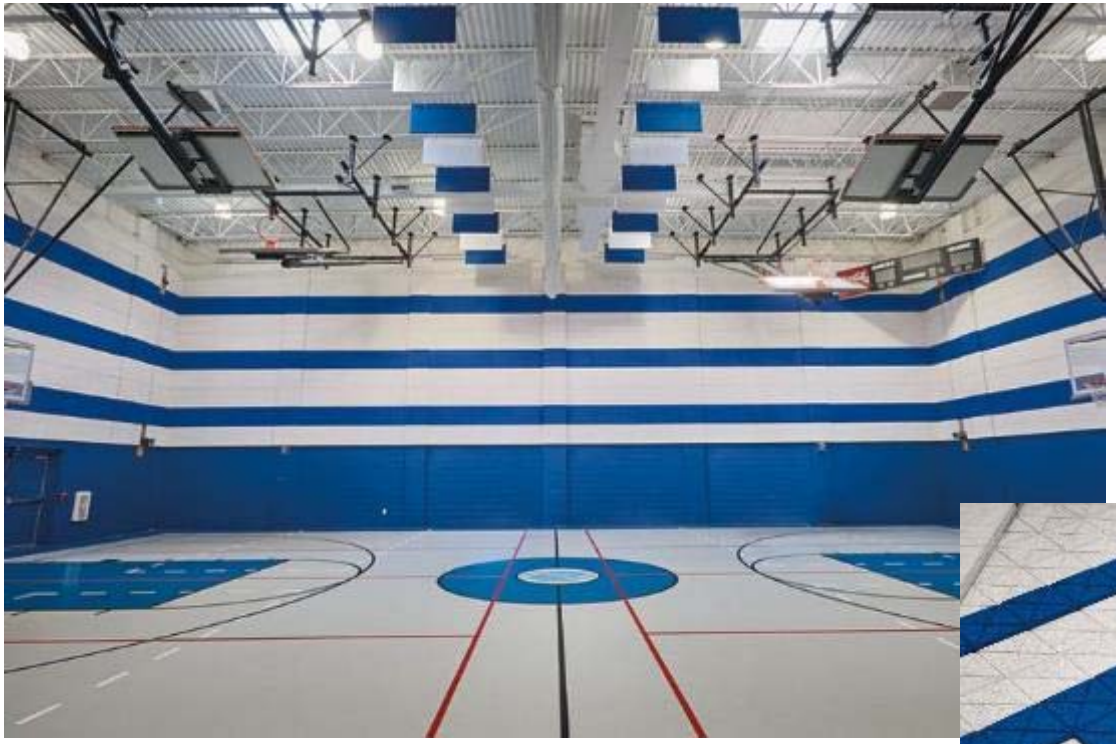
Finale Wall & Ceiling Panels

Baffles & Blades

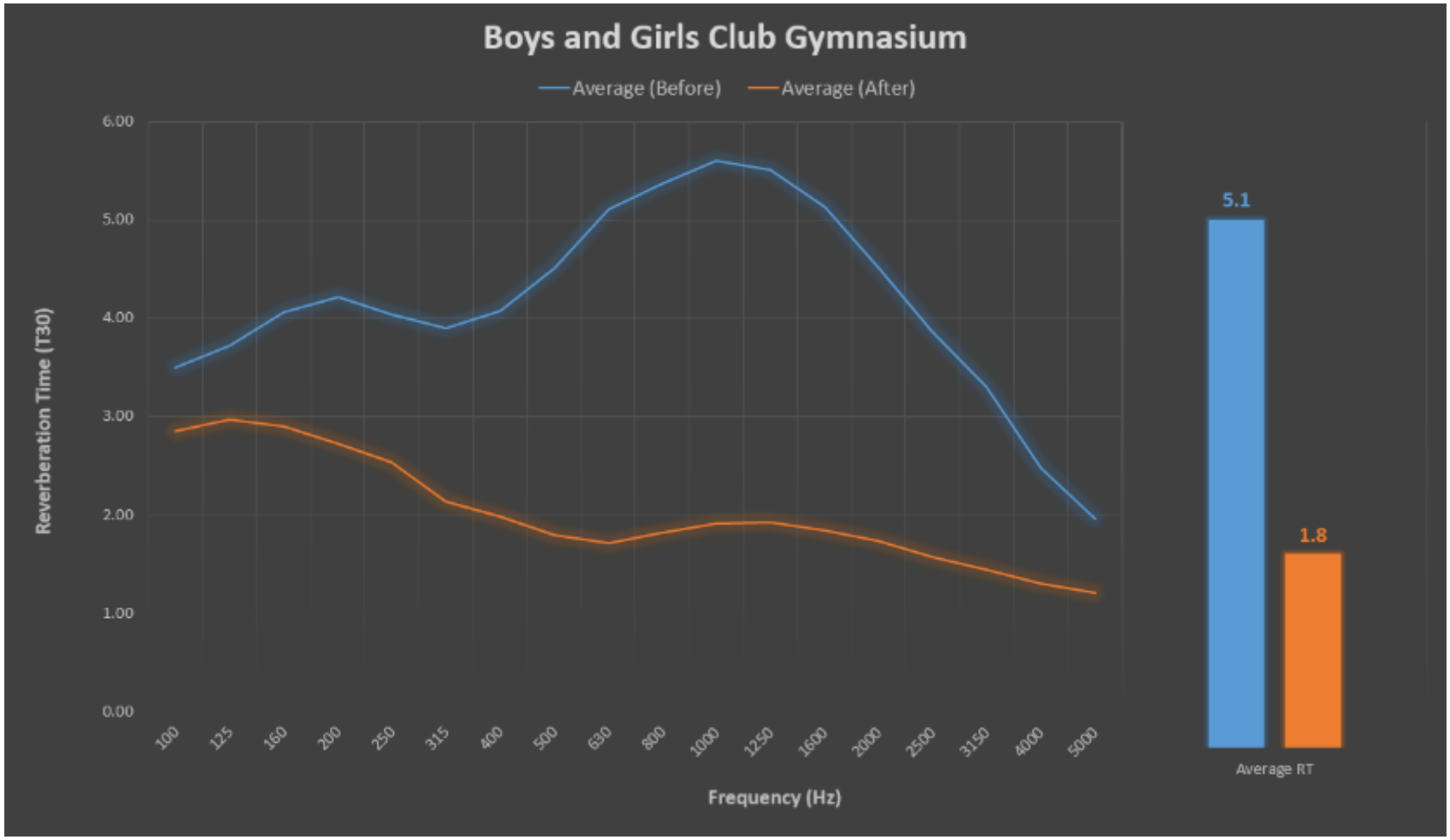
Clouds & Shapes

Fabric Walls

Sound Study – Boys & Girls Club – Lancaster, PA



Success Story: Boys and Girls Club of Lancaster



Here you can see the dramatic improvement made with by the installation of the wall panels

Cementitious Wood Fiber - Interior Panels

Interior Panel Features:

- Attractive Finish
- Flame Spread – 0
- Smoke Developed – 0
- NRC's up to 1.00
- Custom Paintable up to 6 times

Cementitious Wood Fiber - Interior Panels

Applicable Spaces:

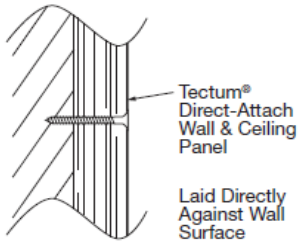
- Public and Private Schools, Dormitories
- Gymnasiums, Auditoriums, Band Rooms
- Pools, Cafeterias, Cafetoriums
- Multi-Use Rooms, Arenas, Convention Centers
- Libraries, Prisons, Dayrooms
- Restaurants, Churches
- Open Shelters
- Other spaces Where Acoustics are Required

NRC Values/Acoustical Absorption

- Dependent on Thickness
- Dependent on Mounting

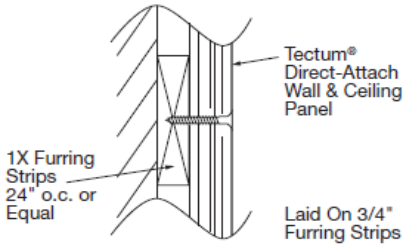
ACOUSTICAL MOUNTING METHODS

Mounting A



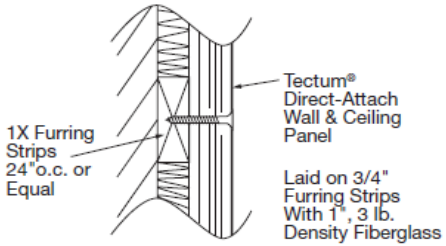
1” – 0.40 NRC
2” Up to 0.60 NRC

Mounting D-20



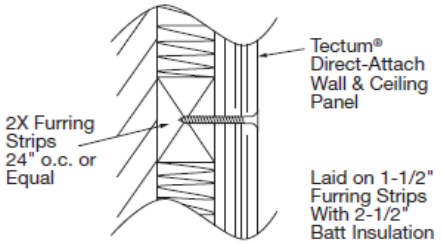
1” – 0.40 NRC
2” - Up to 0.70 NRC

Mounting C-20



1” – 0.80 NRC
2” Up to 0.95 NRC

Mounting C-40



1” – 0.85 NRC
2” Up to 1.0 NRC

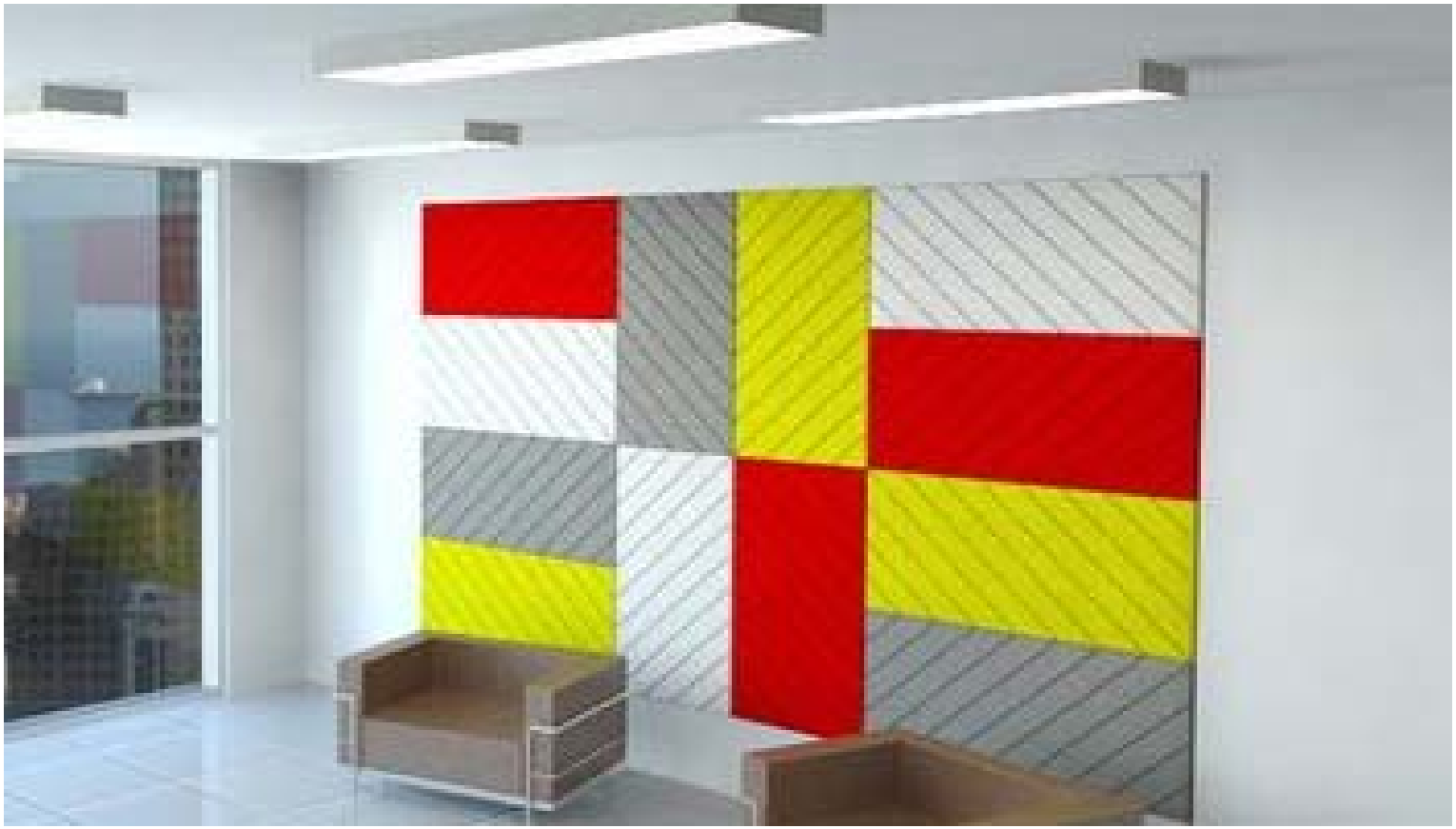
Direct-Attach Ceiling and Wall Panels

Features:

Direct Attach Panels

- Durable for heavy-use interiors
- Amazing design flexibility, can be field modified for any design
- Great retrofit solution for noise reduction
- Excellent noise absorption – NRC up to 1.0
- Meet the most stringent sustainability standards today
- Available in 1", 1.5", and 2" thickness to meet your project needs
- Can be field painted up to six times without impacting acoustic or fire performance

Direct Attach Panels – Project Photos



Direct Attach Panels – Project Photos

Direct Attach Panels – Project Photos

Cementitious Interior Panels – Integrated Acoustical Infill

Features:

- Composite panel design combines panel and acoustical absorptive material in one for maximum sound control and fast & efficient installation
- Excellent Noise Absorption NRC up to 1.0* for maximum sound absorption (1" panels)
- Panel sizes in 1", 1-1/2", and 2" thickness; widths: 23-3/4" to 47-3/4"; lengths: 48" to 144"
- Abuse resistant for active spaces
- Can be mechanically fastened to a wide variety of surfaces including masonry, drywall, wood, and more

MinWool Backed Panel – Project Photo

Cementitious Wood Fiber Interior Fabric-Wrapped Panels

Features:

- Abuse-resistant, fabric wrapped panels attach directly to walls
- Tackable panels can be used for bulletin/ display boards
- Mounting is quick and easy using internal spline system
- Wall Panel System
  - Spline Mounted
  - Field Machinable
  - Variety of Colors
- Décor Panels
  - Clip Mounted
  - Variety of Colors

Custom Fabrics – Project Photos

Custom Fabrics – Project Photos

Custom Fabrics – Project Photos

Lay-In & Tegular Ceiling Panels

- Durable lay-in & Tegular ceiling panels for heavy use interiors
- Can be installed with an infill panel for improved sound absorption and blocking
  - 1” – NRC 0f .40 (1.63 lbs./sf.) or .90NRC & 33CAC with mineral fiber infill
- Ceiling Grid
  - 15/16” Standard Intermediate Duty Grid
- Wide variety of color options available, including made-to-order COLORATIONS and Sherwin-Williams® colors
- Can be field painted up to six times without impacting acoustic or fire performance
- Short lead times

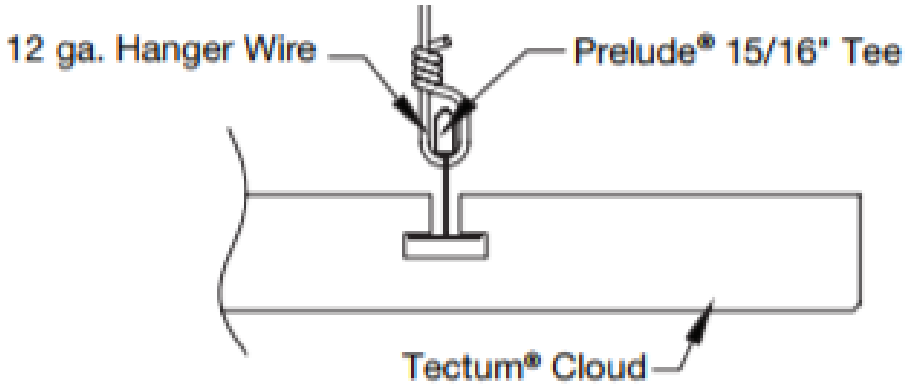
Lay-in – Project Photos

Tegular – Project Photos

Cementitious Wood Fiber Ceiling Panels – Clouds

Clouds

- Floating cloud system in multiple sizes and shapes; custom shapes available
- Noise Absorption up to 0.41 Sabins/SF
- Panel Sizes in 1-1/2"or 2" panel thickness; widths: 23-3/4" to 47-3/4"; lengths: up to 96"
- Available in White, Natural, and made-to-order COLORATIONS colors and Sherwin-Williams® colors
- Installs with 15/16" Suspension System
- Square or radius edges

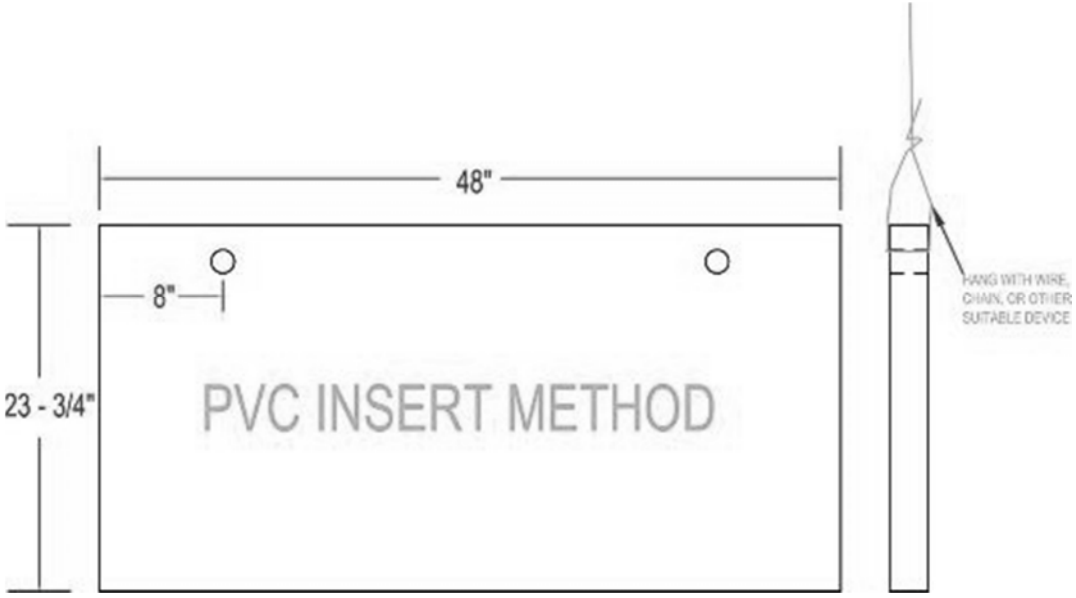


Clouds – Project Photo

Clouds – Project Photo

Baffles & Blades

- Upscale linear visual adds acoustics and aesthetics to any space
- Noise Absorption up to 0.41 Sabins/SF
- Panel sizes in 1", 1-1/2", and 2" thickness; widths: 23-3/4" to 47-3/4"; heights from 11-3/4" to 23-3/4"
- Square edges or radius corners; beveled bottom edges available
- Custom shapes available to meet your project needs
- 24" on center spacing



Baffles – Project Photo

Baffles – Project Photo

Panel Art

- Eight shapes and custom options available
- Choose from 1", 1.5", and 2" panel thickness: create your own custom shapes from panels up to 48" x 48"
- Available in White, Natural, and made-to-order COLORATIONS colors and Sherwin-Williams® colors
- Noise absorption – NRC 0.40 (1" panel)
- Abuse resistant for active spaces
- All panels have beveled edges
- Can be mechanically fastened to a wide variety of surfaces including masonry, drywall, wood, and more

Square
.631 lb/pc
Width: 8"
Length: 8"

Rectangle
1.4 lb/pc
Width: 8"
Length: 16"

Hexagon
.575 lb/pc
Width: 7.5"
Length: 8-11⁄16"

Circle
.475 lb/pc
8" Diameter

16" Triangle
1.425 lb/pc
Width: 16"
Length: 16"

8" Triangle
.375 lb/pc
Width: 8"
Length: 8"

Right Parallelogram
.700 lb/pc
Width: 8"
Length: 16"

Left Parallelogram
.700 lb/pc
Width: 8"
Length: 16"

Panel Art

Panel Art - Project Photo

Questions?