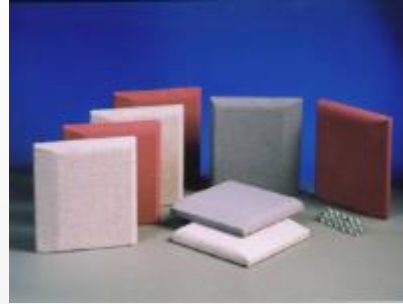


Absorption Plus[®] Acoustic Panel Applications

Wall, Deck, Cloud, Impact-Tack, *Imagine*, Baffle, Tack & Diffuser

Absorption Plus Panels (Full Coverage or Accents)

- Wall Panel
- Ceiling/Deck (Alt. to tile & grid)
- Clouds
- Baffles
- Impact Resistant / Tack Panel
- Tack Panel
- Custom Shapes
- Diffusers (Pyramidal & Barrel)
- "Imagine Panels"



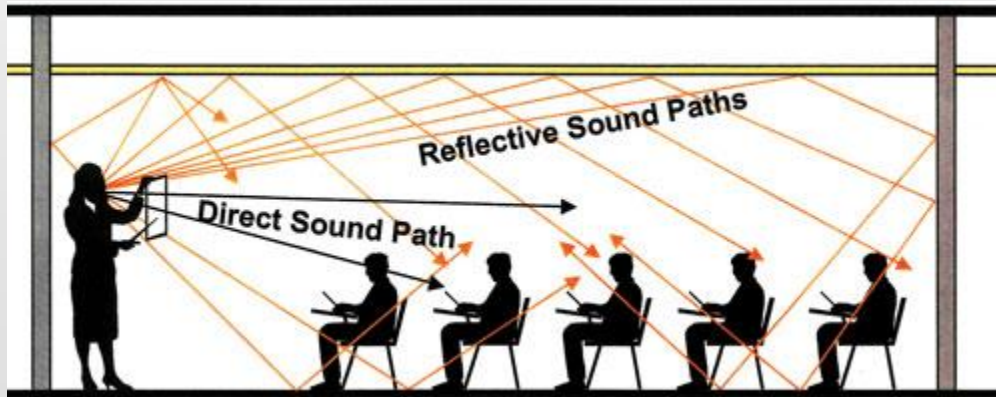
What Absorption Plus Panels Do

- Absorb sound, reduce space reverberation time
- Quiet treated and adjacent spaces
- Enhance speech privacy / confidentiality
- Improve concentration, learning and productivity

Note: Also enhances space thermal insulation in direct wall & ceiling applications

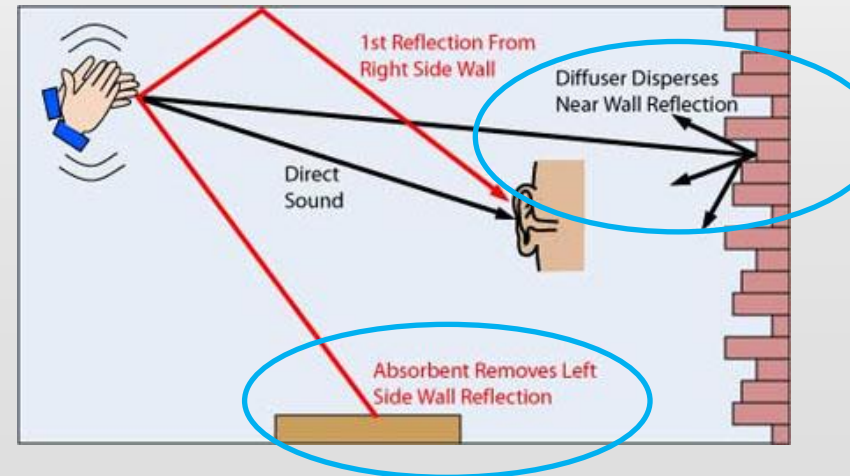
Untreated Space

Sound bounces off acoustically “hard” surfaces



Treated Space

Sound energy is absorbed and/or diffused



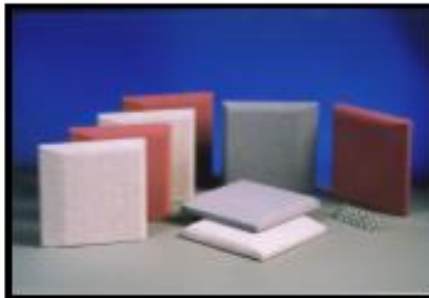
Concert halls use Absorbers and Diffusers to optimize the listening experience

Absorption Plus Panels



Absorption Plus[®] Acoustical Panels

Selected by Specifiers and Installers due to:



- Typical lead time of 3-4 weeks vs. industry standard 6-8 weeks
- Made to order panels, virtually eliminate field modifications, saving labor
- Composite Class A fire rating for most panel types, VS component ratings
- Excellent Sound Absorption NRC ratings
- Orders ship in wood crates reducing damage/freight claims and job delays
- “Imagine” Panels offers unlimited imaging capability for unique visual designs
- Wide range of fabrics, patterns and color options from industry leading manufacturers
- Competitive price

(It's not realwood! Imagine the possibilities with “Imagine” panels!)



Wall, Ceiling/Deck, Cloud, Impact, Baffle, Tack, Diffusers and “Imagine” Panels

Absorption Plus® Industry Standard Acoustical Panel

- Absorption Plus panels consist of a 6-7 PCF Fiberglass core
- Acoustically transparent fabrics from a wide range of manufacturers
- **Composite panel is Class A fire rated vs individual component ratings.**
- Resin hardened edges
- Edge details available include:
 - Square
 - Beveled / Chamfered
 - Mitered
 - Radius
- Panels are available in 5 different thicknesses up to 5' wide and 10 feet long
 - 1/2"
 - 3/4"
 - 1"
 - 1-1/2"
 - 2"



Fabric bonded with full face adhesive to eliminate fabric sags and maintain alignment



Typical Applications - Banquet Center (Wall & Ceiling Panels)

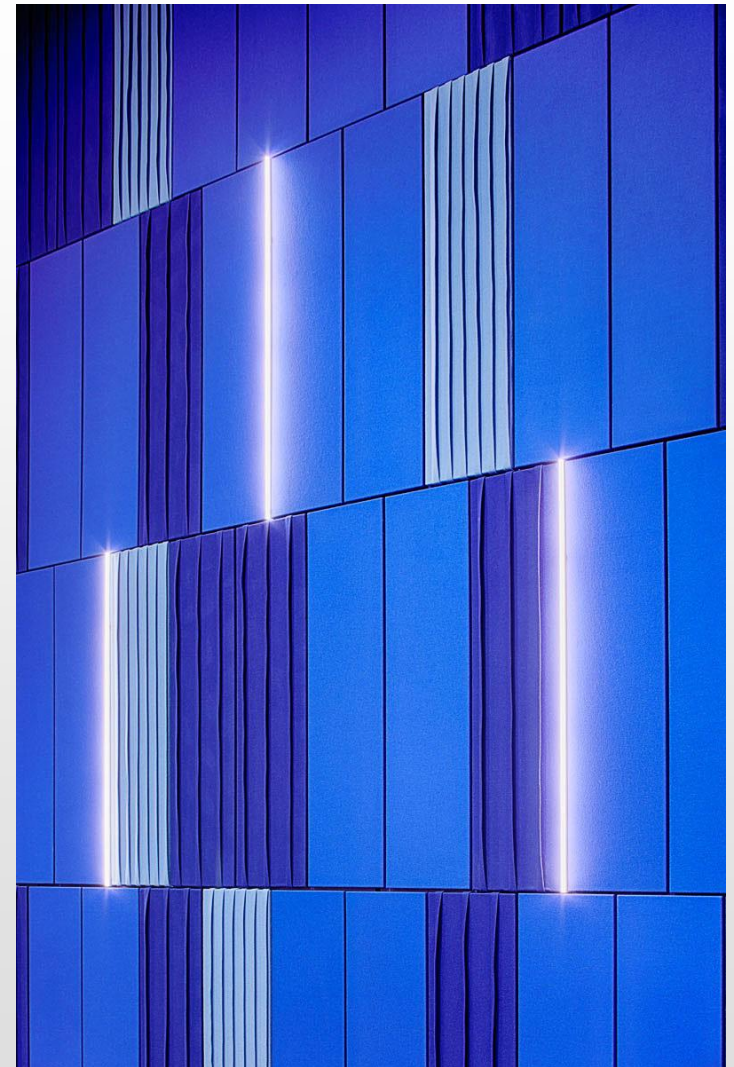


Sidewall and Backwall Panels



Absorption Plus Award Winning Project

Pleated fabric panels dispersed by linear light bars to create a unique visual



Typical Fabrics Used (acoustically transparent)

- Guilford of Maine FR701, True Textile and Burch provide industry standard 100% polyester acoustic fabric used on ~80% of projects
- Examples of Designer Fabrics Used Include:
 - Maharam
 - Knoll
 - Momentum
 - Designtex
 - Filzfelt
 - And Others

Note: Designer fabrics require the Architect and project name for quoting



Applicable ASTM Acoustic Test Standards

- Fabric wrapped acoustic panels must be tested to ASTM C423. “Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method”
- Panels must be mounted in the reverberation room test chamber per ASTM E795. “Standard Practices for Mounting Test Specimens During Sound Absorption Tests”

To ensure accuracy and repeatability of test results, testing must be performed by an accredited testing Laboratory



Absorption Plus® Standard Panel Acoustic Performance

Acoustical Data (ASTM C423-09a, <u>Type A Mounting per ASTM E 795-05</u>)									
Finish	Panel	Frequency (Hz)							
		125	250	500	1000	2000	4000	NRC	SAA
	Thickness								
* Fabric	1" (25 mm)	0.05	0.30	0.72	1.01	1.09	1.02	0.80	0.77
* Fabric	1 1/2" (38 mm)	0.14	0.52	1.04	1.14	1.06	1.02	0.95	0.95
* Fabric	2" (50 mm)	0.31	0.79	1.18	1.22	1.08	1.07	1.05	1.06
* Testing performed on panels finished with acoustically transparent fabric									

NRC = Avg. of 250, 500, 1000 and 2000 Hz. values rounded to nearest .05

A higher NRC value equals a better overall absorber without specific frequency considerations

NRC of 1.00 means 100% of sound waves that strike the product surface are absorbed

Type A - the most common project application method, no air gap behind panels
(produces conservative results vs tests with air gap behind panels)



Absorption Plus Composite Panel Acoustical Testing

ASTM C423, **Type A Mounting** (sample tight to floor)



IMPORTANT

Some manufacturers report NRC values generated with a $\frac{3}{4}$ " - 1" air gap with Type D or F Mounting
These mount types do not represent the most common application condition
They improve sound absorption and NRC as the air gap allows the panel backside to absorb sound

If the panel NRC was generated with an air gap and project panels are installed directly to walls or ceiling, panels will not perform as advertised

ASTM E795, Common Acoustic Panel Mounting Methods

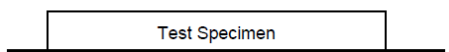
A Mount - Sample laid directly against the test surface with no airspace behind the panel. If the perimeter edges of the sample are exposed during the actual installation, they are not sealed during the test.

D Mount - Sample is mounted on wood furring strips spaced 300 mm (12") on center to create and air space between the back of the sample and the test surface. The perimeter edges of the sample must be sealed with a wood or metal frame.

F Mount – Sample laid against the test surface with mounting clips that would be used for the actual installation. The suffix of the mounting designation shall be the actual size of the spacers rounded to the nearest integral multiple of 5 mm for spacers 10 mm thick or greater and to the nearest integral multiple of 1 mm for those less than 10 mm. If the perimeter edges of the test specimen are not exposed in normal use, seal them with wood or metal frame

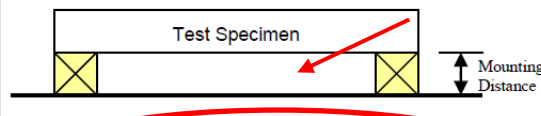
Mounting Methods

Type A – Specimen is placed directly on top of the floor. Intended for carpet, wall panels, or any product will be laid directly on floor or attached to a wall with adhesive or mechanical fasteners.



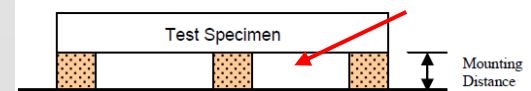
Reflects Mounting With:
Adhesive
Hook n Loop (aka Velcro)
Impaling Clip, Z Clip
and other direct mount methods

Type D – Specimen is separated from the floor with wood furring strips.



The typical size for furring strips is 20 by 40 mm (¾" by 1 ½"). This is a **D20** Mounting

Type F – Specimen is separated from floor with spacers. Intended to simulate normal use of a product containing spacers or spacing clips.



An **F-25** mount uses 1" spacer clips

The Mounting Method Can Significantly Impact Test Results

- ASTM E795 Mounting Types are intended to reflect actual project mounting conditions
- Test results are only relevant for panels installed with the same mounting method
- Some manufacturer testing references ASTM C423 test method but fail to report the specific Mounting Type used or gap size. Without this information users cannot assume reported performance will be achieved for the project
- A major manufacturer documented same panel NRC test results at 12.5% better with Type D20 (20 mm, ~3/4" air gap) vs Type A Mounting



Type A Mounting - Test specimen placed directly on chamber floor with exposed panel edges.

Reported test data that doesn't match project mounting conditions can yield disappointing results

Absorption Plus High Impact / Tackable Panel

- High Impact / Tack-able panels are comprised of 6-7 pcf fiberglass core laminated with a 1/8" high density molded fiberglass panel (provides a tack-able surface)
- **Composite panel is Class A fire rated**
- Panels available with optional resin hardened edges
- Edge details available with this panel include:
 - Square
 - Beveled / Mitered
 - Chamfered
 - Radius
- A wide range of fabric finishes are available.
- Panels are available in 4 different thicknesses up to 10 feet in length
 - 7/8"
 - 1-1/8"
 - 1-5/8"
 - 2-1/8"



Edge Details: Square, Round, Bevel and Chamfer

Absorption Plus High Impact / Tackable Panel Performance

Testing at an Accredited Lab is required for reliable results



Acoustical Data (ASTM C423-09a, Type A Mounting per ASTM E 795-05)

Finish	Panel Thickness	Frequency (Hz)						NRC	SAA
		125	250	500	1000	2000	4000		
* Fabric	1 1/8" (28 mm)	0.19	0.58	0.87	0.98	0.94	0.83	0.85	0.85
* Fabric	2 1/8" (53 mm)	0.53	0.88	1.04	0.98	0.86	0.82	0.95	0.93

* Testing performed on panels finished with acoustically transparent fabric.



Absorption Plus Ceiling Baffle

- Baffles are available 2" thick and made from 6-7 pcf laminated fiberglass board.
- Composite panel is Class A fire rated
- Panels are suspended from mechanical hangers embedded in panels for strength.
- Baffles are available with optional resin hardened edges.
- Baffles are also available with optional edge details on three edges.



Absorption Plus Baffle Acoustic Performance “Type J” Mounting Required



8 - 2' x 4' baffle panels suspended from a metal frame above the chamber floor at specified distances.

Per ASTM E795 Baffles are tested to Type J Mount
Other mountings do not reflect baffle performance

Acoustical Data (ASTM C423-09a, Type J Mounting per ASTM E 795-05)

Finish	Panel Thickness	Frequency (Hz)						NRC	SAA
		125	250	500	1000	2000	4000		
* Fabric	2" (50 mm)	0.18	0.57	1.16	1.50	1.33	1.31	N/A	N/A

* Testing performed on panels finished with acoustically transparent fabric.

8 Baffle Units Tested, Frequency Absorption data in Square Meters per Unit



All Published Acoustic Data is Not the Same



To ensure the accuracy and repeatability of lab test results, product testing must be performed at an Accredited testing Laboratory.

- **The International Accreditation Service (IAS)** provides objective evidence that an organization operates at the highest level of ethical, legal and technical standards. IAS is a nonprofit, public-benefit corporation that has been providing accreditation services since 1975. It is **a subsidiary of the International Code Council (ICC)**, a professional membership association that develops the construction codes and standards used by most municipalities within the United States. IAS accreditation programs are based on recognized national and international standards that ensure domestic and/or global acceptance of its accreditations.
- **National Voluntary Laboratory Accreditation Program (NVLAP)** is a National Institute of Standards and Technology (NIST) program in the USA which provides an unbiased third-party test and evaluation program to accredit laboratories in their respective fields to the ISO 17025 standard. NVLAP is in compliance with ISO 17011.



Please Review Our Acoustic Educational Presentation

■ Why Manufacturer Acoustic Data Can Vary

The screenshot shows the SPI Specialty Products & Insulation website. The header includes the SPI logo, the company name, and navigation links for Locations, Contact Us, and a Search bar. A yellow navigation bar contains links for Home, About SPI, Products & Services, Credit & Tax, Sustainability, Careers, and MSDS. The main content area is titled 'Products & Services' and lists various categories: C & I Insulation, GSD, Fabricated, OEM, Marine, Fire Protection, Acoustical, Specialty, Manufacturing Partners, and Product Data Sheets. The 'Acoustical' category is expanded to show 'SPI Absorption Plus® Acoustical Panels'. This section features a list of reasons why customers select these panels, such as shorter lead times and custom sizes. Below this, there are two links to papers: 'Why Manufacturer Acoustic Data Can Vary' and 'Fire Risk and Code Compliance For Fabric Wrapped Acoustic Panels'. A 'Find us in MASTERSPEC' logo is also present. At the bottom, there is a 'Absorption Plus® Product Information' section with links to various brochures and datasheets, and an image of blue acoustic panels.

Products & Services

- [C & I Insulation](#)
- [GSD](#)
- [Fabricated](#)
- [OEM](#)
- [Marine](#)
- [Fire Protection](#)
- [Acoustical](#)
- [Specialty](#)
- [Manufacturing Partners](#)
- [Product Data Sheets](#)

SPI Absorption Plus® Acoustical Panels

Customers Select Absorption Plus® Panels Due to:

- Shorter lead times than other manufacturers.
- Panels are custom made to order not standard sizes that require field fabricating
- Ease of installation since panels require virtually no field cutting
- All orders are shipped in wood crates reducing damage and freight claims which may cause job delays
- Wide range of color and fabric options from multiple manufacturers
- Ability to get all Acoustical needs from one trusted source
- Competitively priced
- Sampling of product upon request

Read our paper about [Why Manufacturer Acoustic Data Can Vary](#).

Read our paper about [Fire Risk and Code Compliance For Fabric Wrapped Acoustic Panels](#).

Find us in **MASTERSPEC**

Absorption Plus® Product Information

- [Absorption Plus® Acoustical Panel Brochure](#)
- [Absorption Plus® Product Overview Presentation](#)
- [Absorption Plus® Panel Submittal Builder](#)
- [Absorption Plus® Panel Datasheet](#)
- [Absorption Plus® Deck and Cloud Panel Datasheet](#)
- [Absorption Plus® Baffle Panel Datasheet](#)
- [Absorption Plus® High Impact Tack Panel Datasheet](#)
- [Absorption Plus® Tack Panel Datasheet](#)

Tack Panels

- Tack Panels are made from high density mineral fiber board treated to resist warping
- Panels can be wrapped with a range of fabrics to match or compliment sound absorbing panels
- Limited sound absorption with optional perforated substrate
- Panels are available with three types of edge detail
 - Square
 - Radius
 - Beveled
- Resin hardening not available due to panel density
- Available in 2 different thicknesses in lengths up to 8' long
 - 1/2"
 - 3/4"



Basic Tack Panels are typically installed in limited coverage areas

The Importance of Class A, Fire Rated Products

Nightclub used Non Class A acoustic material to control noise



Classic rock band starts the show



40 seconds in stage area on fire

Packed House at The Station Night Club, Rhode Island

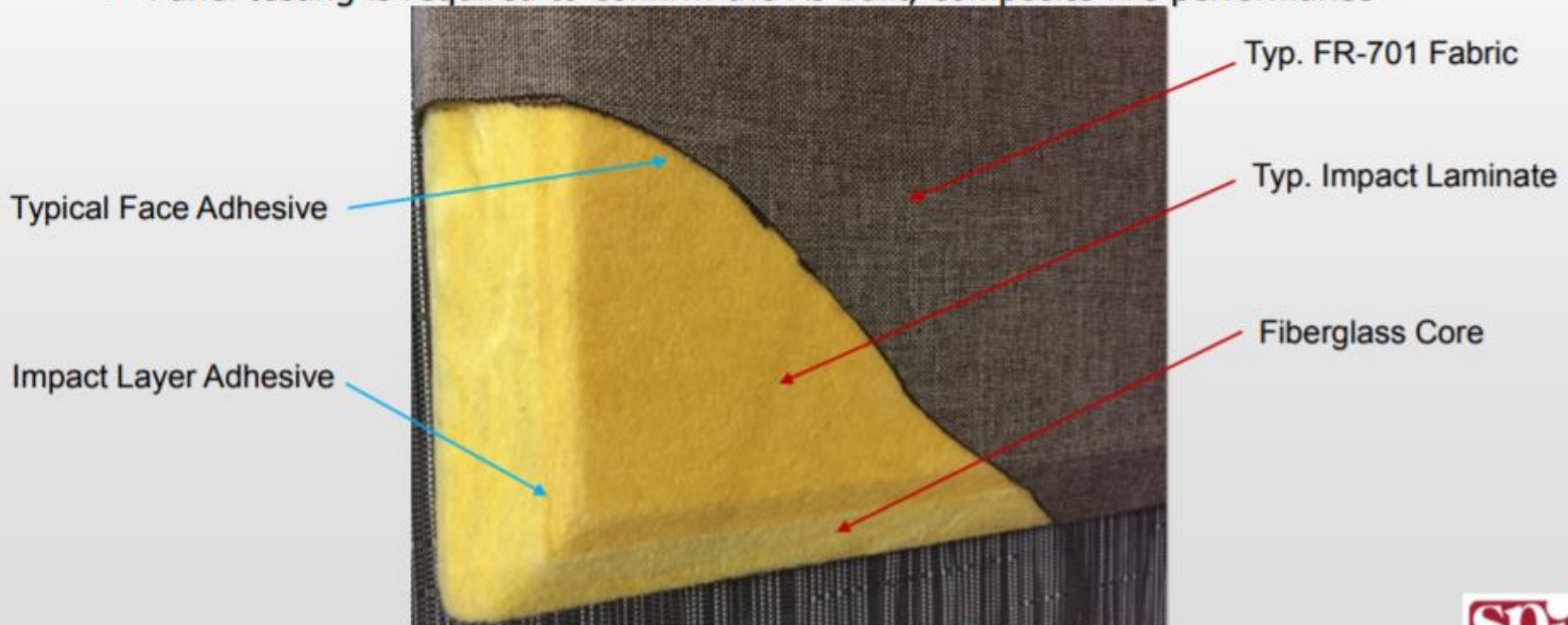
100 Died, 200+ injured

Feb 20, 2003

Typical Fabric Wrapped Acoustic Panels

(1 + 1 + 1 Doesn't = 1)

- Class A, fiberglass insulation core
- Class A fabric wraps the insulation core, typically adhesive bonded (per Specification)
- Option, high impact laminate (also adhesive bonded)
- The combined panel "components" do not necessarily meet a Class A rating
- Panel testing is required to confirm the As Built, composite fire performance



CODE States Minimum Requirements

REQUIRED



MUST HAVE

© Can Stock Photo

**NOT
OPTIONAL**

Related CODE Requirements (IBC 2012 & 2105)

- IBC 2012 – Chapter 7, Fire And Smoke Protection Features
 - Section 720 - **Thermal and Sound Insulating Materials**
 - Section 720.3, **Exposed Insulation** – Insulating materials, where exposed as installed in buildings of any type of construction, shall have a flame spread index on not more than 25 and a smoke development index of not more than 450 (Class A Rating)

*Note: CODE language describes material performance **NOT panel**
"component" performance*

CODE Focus is Life Safety!



2018 IBC Important CODE Update

720.1 General. **P**

Insulating materials shall comply with the requirements of this section. Where a flame spread index or a smoke-developed index is specified in this section, such index shall be determined in accordance with ASTM E84 or UL 723. Any material that is subject to an increase in flame spread index or smoke-developed index beyond the limits herein established through the effects of age, moisture or other atmospheric conditions shall not be permitted. Insulating materials, when tested in accordance with the requirements of this section, shall include facings, when used, such as vapor retarders, vapor permeable membranes and similar coverings, and all layers of single and multilayer reflective foil insulation and similar materials.

IMPORTANT: This change eliminates products with only component fire classifications

*Ignorance to CODE
does not excuse liability*



Absorption Plus Composite Panel Fire Test (For Code Compliance)

- ASTM E84 (Provides Flame Spread / Smoke Development Ratings)
- Absorption Plus Wall Panels achieved 15/40 vs Max allowable 25/450 for a composite Class A rating
- Absorption Plus Deck/Cloud, Baffle and High Impact/Tackable panels also meet CODE for Class A material
- Many panel providers only report material component ratings. This is not an accurate indicator of finished panel fire performance and does not comply with CODE

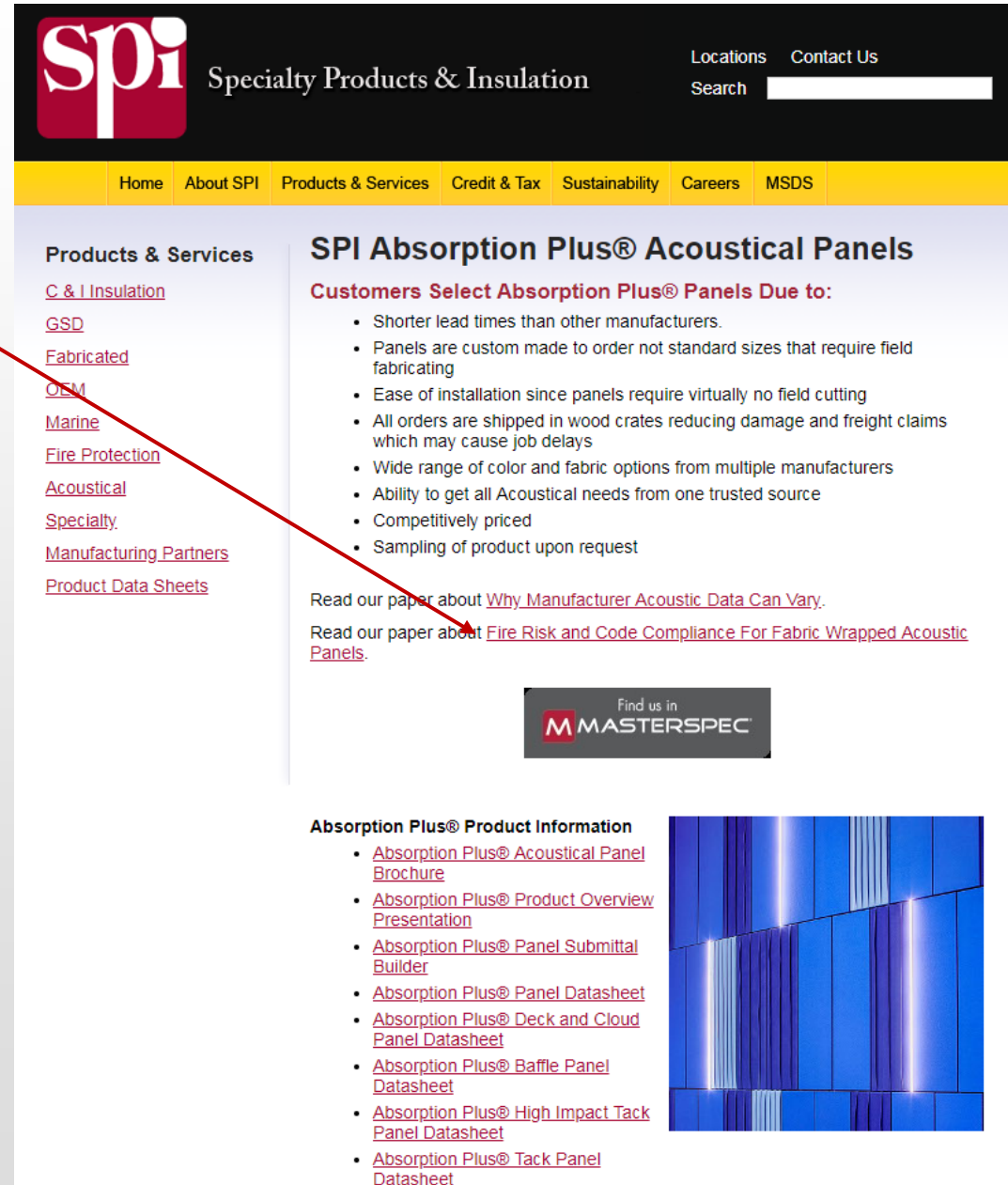


Flame Spread Monitored Via Viewing Ports
Smoke Development Established From
Tunnel Exhaust Gases



Please Review Our Educational Fire Risk Presentation

■ Fire Risk and Code Compliance For Fabric Wrapped Acoustic Panels



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- [Specialty](#)
- [Manufacturing Partners](#)
- [Product Data Sheets](#)

SPI Absorption Plus® Acoustical Panels

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- Wide range of color and fabric options from multiple manufacturers
- Ability to get all Acoustical needs from one trusted source
- Competitively priced
- Sampling of product upon request

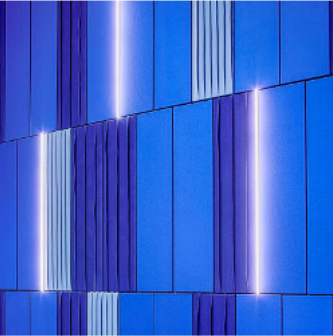
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- [Absorption Plus® Tack Panel Datasheet](#)



Imagine Digital Imaged Acoustic Panels (Newsprint poster on left, **Imagine** digital imaged panel on right)



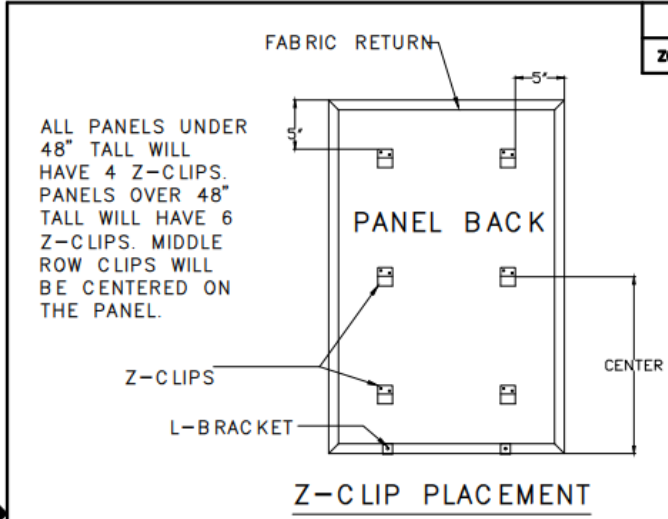
Imagine Panel was tinted to look like aged newsprint

We provide **Imagine** acoustic panels with high resolution digital images selected by you



Detailed Installation Drawings

(Standard Z Clip layout, see web files for additional dwg. details)



ALL PANELS UNDER 48" TALL WILL HAVE 4 Z-CLIPS. PANELS OVER 48" TALL WILL HAVE 6 Z-CLIPS. MIDDLE ROW CLIPS WILL BE CENTERED ON THE PANEL.

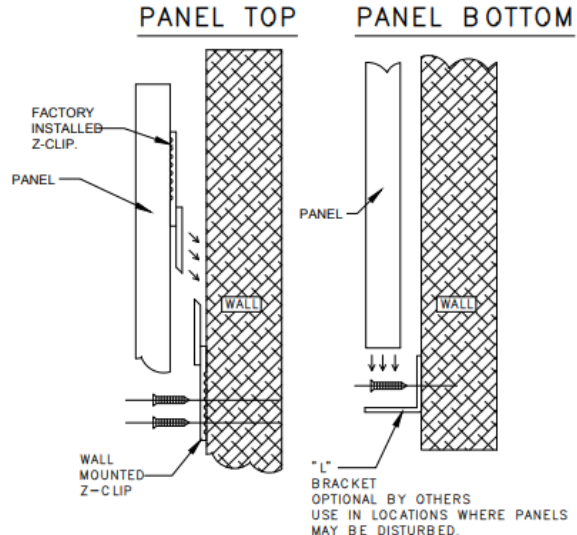
Z-CLIP PLACEMENT

PLACE AND SECURE L-BRACKETS TO SUPPORT PANEL WHEN RESTING ON Z-CLIPS.

SLIDE PANEL DOWN ONTO CLIPS UNTIL FIRMLY SEATED. ONCE PANEL IS LOCATED PROPERLY, LOCK PANEL IN PLACE BY PUTTING A SCREW UP THROUGH EACH "L" BRACKET INTO THE HARDENED BOTTOM EDGE OF THE PANEL.

DO NOT OVERTIGHTEN SCREWS TO PREVENT STRIPPING.

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED



LOCATE Z-CLIPS ON WALL PER Z-CLIP POSITION ON PANEL BACK. SECURE Z-CLIPS TO WALL WITH (2) SCREWS (BY OTHERS)

	ABSORPTION PLUS PANEL IMPACT AND TACK PANEL			
	INSTALLATION INSTRUCTIONS WITH Z-CLIP AND OPTIONAL L-BRACKET			
	SIZE A	FSCM NO.	DWG NO. 20000358	REV 5
NOV. 08, 2013	SCALE N/A	DRWN ZCH	SHEET 1 OF 1	



Project Examples, Cloud Panels with Mitered Edges



Performance Space, Cloud Application with Axiom Edge Trim



Performance Space Coffer Application



Mechanical and Manufacturing Space Applications

Cloud Panels In Mechanical Room

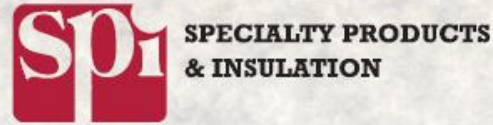


Baffles in Manufacturing Space



Sound Diffusers

- Pyramidal & Barrel Panels
 - Diffuse sound to create a better listening experience
 - Wall and Ceiling Applications



Absorption Plus[®] Pyramidal and Barrel Diffusers

Description

Absorption Plus diffusers are typically used in performance areas, auditoriums and other space to enhance acoustic performance. Diffuser panels scatter and blend sound across a broad frequency spectrum for an improved listening experience. Pyramidal and barrel diffusers are available in a variety of sizes to suit virtually any wall or ceiling application requirement. The durable panels are supplied complete with hardware appropriate for wall or ceiling application. Diffusers are composed of 1/8" thermoformed fire resistant plastic, molded to a special offset pyramidal or one piece barrel shape. The white lightly textured surface provides a pleasing finished appearance. Diffusers are also available fabric wrapped to suit virtually any project requirement. Diffusers can also be supplied with a 1 1/2" fiberglass batt insert to enhance sound absorption.

Features / Benefits

- Diffusers reflect, blend and scatter sound providing an improved listening environment.
- Optional fabric wrapped panels with full finished edges and tailored corners provide enhanced visual impact.
- Standard diffusers are in stock for quick shipment to meet compressed construction schedules.

Availability

Pyramidal Diffuser Sizes:

2' x 2' and 2' x 4' x 8" height and 4' x 4' x 12.5" height

Barrel Diffuser Sizes: (standard height 7")

2' x 2' and 2' x 4'

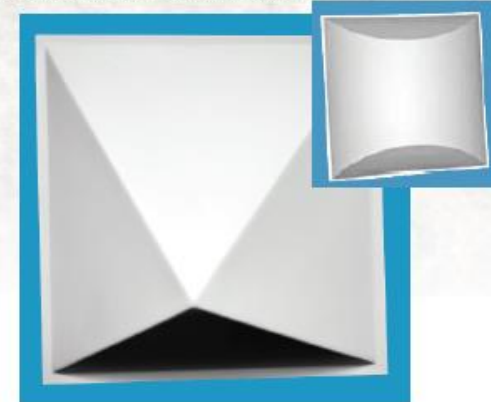
3' x 3'

4' x 2', 4' x 3' and 4' x 4'

Call for special shapes and sizes.

Absorption Plus acoustical panels are available through a network of SPI locations across North America.

Additional product information at www.fbm-spi.com



Pyramidal and Barrel diffuser with mounting flange to fit standard ceiling grid applications. Both wall and ceiling (non-grid application) diffusers have a straight mounting edge for quick and easy installation with supplied hardware.

Performance Data

Standard Diffuser - 1/8" thick thermoformed fire resistant plastic, molded to a special offset pyramidal and one piece barrel shape.

Components tested per ASTM E84 - Class 1/A rating

Sound Absorption Coefficients, per ASTM C423, Type D5 mounting (5mm airspace)

4' x 4' Pyramidal diffuser (standard texture finish), NRC = .10

4' x 4' Barrel diffuser (standard texture finish, NRC = .10
(Additional data available for fabric wrapped and insulation lined diffusers)

Optional Facings: include 100 % polyester fabric such as Guilford of Maine FR701, and other leading manufacturers.



SPI Specialty Products & Insulation

c/o Dune Point Capital
411 Theodore Fremd Ave.
Rye, NY 10580
Phone: (855) 519-4044

Web: www.spi-co.com
E-mail: fabteam@spi-co.com

January 2019 - Absorption Plus Diffuser

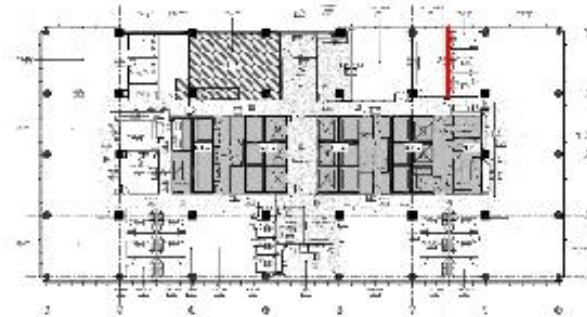


Disclaimer and Limitation of Warranty: The purchaser/user is advised to consult with the appropriate professionals and to read the manufacturer's product information to determine the adequacy or appropriateness of the product for the use intended. SPI makes no claim or representation regarding the use or applicability of the products. Further, SPI makes no warranty, expressed or implied, and disclaims all warranties including warranties of merchantability and fitness for a particular purpose.

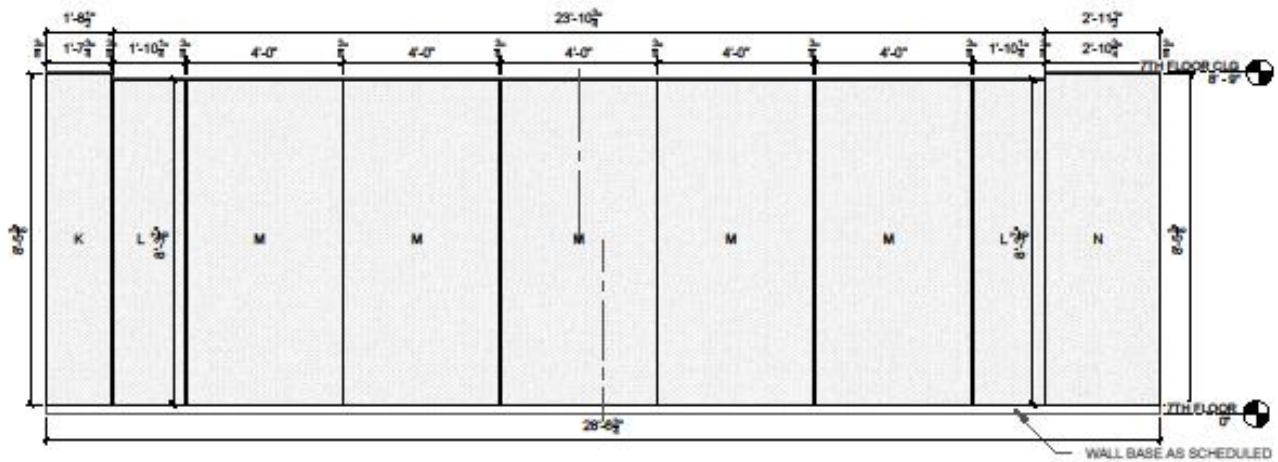
For additional information visit
<http://www.spi-co.com>

Please ask your SPI Sales Representative about
other fabrication products and services.

Project Shop Drawings



FLOOR PLAN
SCALE: 1/8" = 1'-0"



VzW CONFERENCE ROOM ELEVATION
SCALE: 1/4" = 1'-0"

I.D.	QTY.	THK.	WIDTH	HEIGHT	FINISH	FINISH	EDGE	FABRIC	COLOR	MOUNTING
K	1	1-1/2"	1'-7-3/4"	8'-0-0"	-	-	HARDENED SQUARE	XOREL STRE	814	Z-CLIPS
L	2	1-1/2"	1'-10-1/4"	8'-0-0"	-	-	HARDENED SQUARE	XOREL STRE	814	Z-CLIPS
M	5	1-1/2"	4'-0"	8'-0-0"	-	-	HARDENED SQUARE	XOREL STRE	814	Z-CLIPS
N	1	1-1/2"	2'-10-3/4"	8'-0-0"	-	-	HARDENED SQUARE	XOREL STRE	814	Z-CLIPS

- INSTALLATION NOTES:
1. MAINTAIN 1/8" GAP VERTICALLY AND HORIZONTALLY BETWEEN PANELS AND WALLS.
 2. MAINTAIN 1/8" GAP BETWEEN TOP PANELS AND CEILING.
 3. COORDINATE ALL WALL DEVICE PENETRATIONS WITH PANEL FABRICATION.
- AWP-1 (ABSORPTION PLUS @ ACOUSTICAL WALL PANELS)
- 1-1/2" SEM-RIGID FIBERGLASS
 - EDGE: SQUARE
 - ACOUSTICAL FABRIC STYLE: XOREL STRE
 - COLOR: VARIES
 - MOUNTING: Z-CLIPS

"VERIFY ALL DIMENSIONS IN THE FIELD"

PROJECT TITLE
Verizon
205 NORTH MICHIGAN AVENUE
7th FLR., CHICAGO, IL 60601
ARCHITECT PROJECT# 13.00024.00

ACUSTICAL WALL PANEL SHOP DRAWINGS

DATE: 07/15/14	BY: J.S.	CHECKED: 07/15/14	BY: D.L.
PROJECT # 13.00024.00		SHEET NO. 4 OF 8	

Typical Projects For Absorption Plus

- Performance Spaces: Auditoriums, Theaters, etc.
- Lecture Halls: Universities, Churches, Classrooms
- Cafeterias, Restaurants and Nightclubs
- Gymnasiums
- Music Rooms
- Office Space, Conference Rooms
- Shopping Malls
- Manufacturing Plants, Mechanical Rooms
- Home Theaters

Imagine Logo Panels



Shipping Damage: Cardboard VS Absorption Plus Wood Crates



The cost of damaged panels

- Wait weeks for replacements
- Can delay other trades
- May require re-scaffolding areas
- Typically a higher cost to complete
- Project opening can be delayed
- Fabric dye lots may not match





- Composite panels comply with CODE required Class A rating vs other supplier “component” ratings
- Typical lead time 3-4 weeks vs industry standard 6-12
- Acoustic data generated by an “Accredited Acoustic Lab” to current ASTM standards to provide reliable project results
- Acoustic data generated with Type A mounting. This represents the most common application condition and provides conservative acoustic test data for more reliable project results
- Baffle acoustic data was generated using the correct Type J mounting per ASTM C795
- Wood crates (vs competitor cardboard packaging) eliminates shipping or site damage, associated project delays and claims

Other Acoustic Needs

Exposed deck construction is very popular however it typically yields loud, reverberant spaces. This creates an uncomfortable environment for employees and patrons that will negatively impact business



Restaurant Dinner Complaints

- Guests stay longer and enjoy the dining experience more when table conversation is easy to understand

Typically cited issues:

- Loud or distracting diners at other tables
- Diners nearby talking on cell phones

Per Consumer Reports Survey



Noise

was the top complaint among 24% of American diners surveyed by Zagat in 2018.

Absorption Plus "High NRC"

- Mineral wool core with a durable, black mat finish that doesn't reflect light
- Superior sound absorption
- Composite Class A rating per CODE
- Quick and easy to install



Specialty Products & Insulation

Absorption Plus® High NRC Panels

Description

Absorption Plus High NRC Panels are made of environmentally sustainable mineral wool insulation produced from basalt rock and slag. The resulting non-combustible insulation provides exceptional acoustic and thermal insulation properties. The lightweight insulation board is water repellent yet vapor permeable. Also with a melt point of approximately 2150°F, panels offer enhanced fire resistance.

The durable black mat facing provides an interior finish product that is suitable for wall and ceiling and exposed deck applications where structural elements are exposed.

Panel are easily installed over precast and poured concrete, steel deck, drywall and other substrates using common tools and attachments.

Uses

Absorption Plus High NRC Panels are installed to absorb and dampen sound transfer to adjacent space. The stable R Value can also save energy and improve occupant comfort. Typical applications include: restaurants, nightclubs, theaters, sound studios, performance space, retail and manufacturing environments. High NRC Panels can also be used in conjunction with other Absorption Plus acoustic products to further enhance space acoustics.

Advantages

- Sound Absorption - Excellent acoustic performance
- Thermal Effectiveness - Stable R Value, +1 per inch
- Fire Resistance - Faced panels achieved a Class A fire exposure rating
- LEED® - Can earn LEED points across four key categories toward sustainable development.
- Finished Appearance - Attractive, smooth appearance
- Ease of Application - Prefinished panels install quick and easy.
- Availability - Typically 2-4 weeks ARO

Standard Panel Dimensions

2, 2.5, 3, 3.5, 4, 5, 6, 7 and 8" thick, 24" x 48" panel standard

(Custom cut to size panels available)

Learn more at www.spi-co.com



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November 2018 - Foam Absorption Plus High NRC Panels



Absorption Plus High NRC Panels provide superior sound absorption, thermal insulation and fire resistance.

Performance Compliance Data

Absorption Plus High NRC Panels are produced with Rockwool® stone wool insulation and a high quality black mat facer under a quality controlled lamination process that is under accredited laboratory follow-up service.

Base Board: Semi-rigid stone wool insulation

Maximum Service Temperature (per ASTM C612) 1200°F

Fire Performance:

ASTM E 136, Behavior of Materials at 750°C (1382°F) Non-Combustible

CAN4 S114, Test for Non-Combustibility Non-Combustible

ASTM E 84 (UL723) Surface Burning Characteristics:

Flame spread 0, Smoke Development 0

CAN/ULC S102 Surface Burning Characteristics:

Flame Spread 0, Smoke Development 0

Thermal Resistance: ASTM C-618 (C177)

R-value/inch @ 75°F, 4.1 hr.ft².F/Btu

Moisture Resistance: ASTM C 1104, Moisture Sorption, 0.03%

Fungi Resistance: ASTM C1338, Passed

Sound Absorption: per ASTM C423, **Coefficients at Frequencies**

Thickness: 125 Hz 250 Hz 500 Hz 1000 Hz 2000 Hz 4000 Hz NRC

2" + 0.26 0.76 1.15 1.21 1.13 1.09 1.05

4" 1.07 1.01 1.07 1.06 1.07 1.06 1.05

* As tested at an IAS accredited lab with black mat facing applied

Black Mat Facing Material:

Primary Composition: Bonded fiberglass/polyester

Maximum continuous use temperature 300° F

Halogen free flame retardant:

EPA registered biocide

Mullen Burst 29 PSI

Disclaimer and Limitation of Warranty. The purchaser/user is advised to consult with the appropriate professionals and to read the manufacturer's product information to determine the adequacy or appropriateness of the product for the use intended. SPI makes no claim or representation regarding the use or applicability of the products. Further, SPI makes no warranty, expressed or implied, and disclaims all warranties including warranties of merchantability and fitness for a particular purpose.

Ask about other
value add products and services.

High NRC Panels

Insulation core

- Excellent sound absorption
- Stable, long term R Value
- Dimensional stability
- Non-combustible
- Fire resistant up to 2150°F
- Does not absorb water, repels moisture
- Insulation is fungi resistant
- Made of natural & recycled material

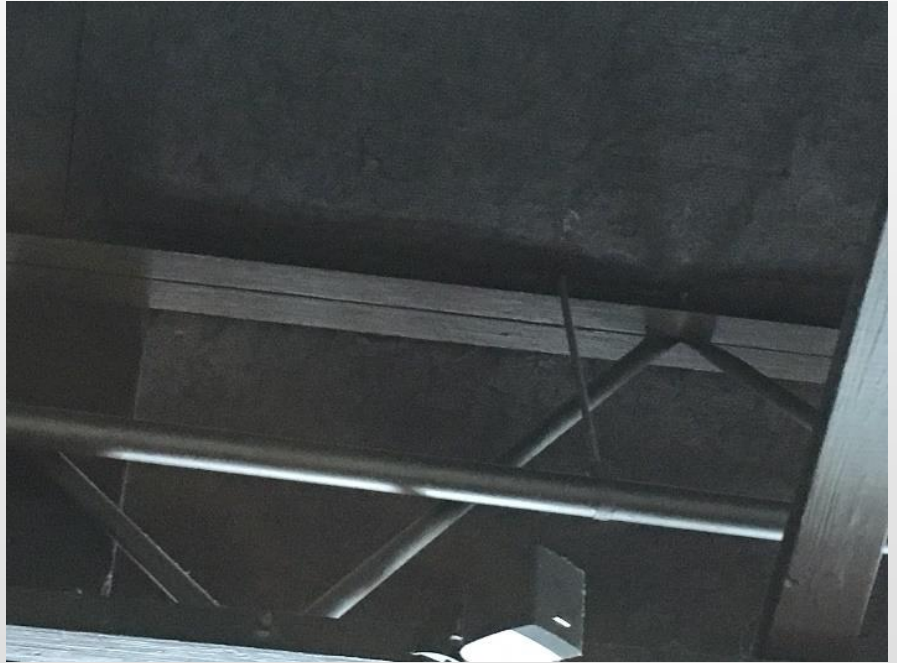
Proprietary Facing

- Does not reflect light
- Contains an EPA registered biocide



Absorption Plus High NRC Panels

- Available up to 7" thick to provide **superior acoustics** vs other black faced fiberglass panels
- The proprietary, black mat finish doesn't reflect light
- Enhances **thermal insulation** for energy savings
- **Non-combustible** insulation can enhance assembly fire performance

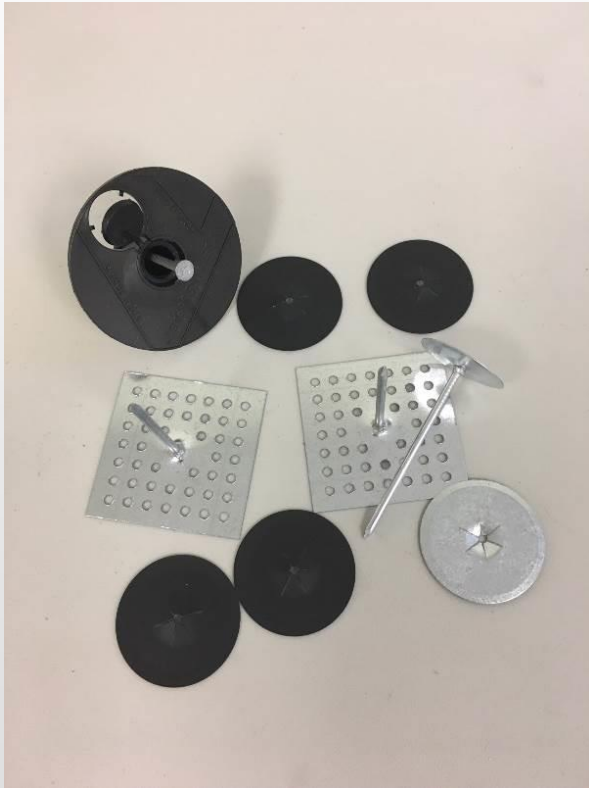


An alternative to grid & tile systems

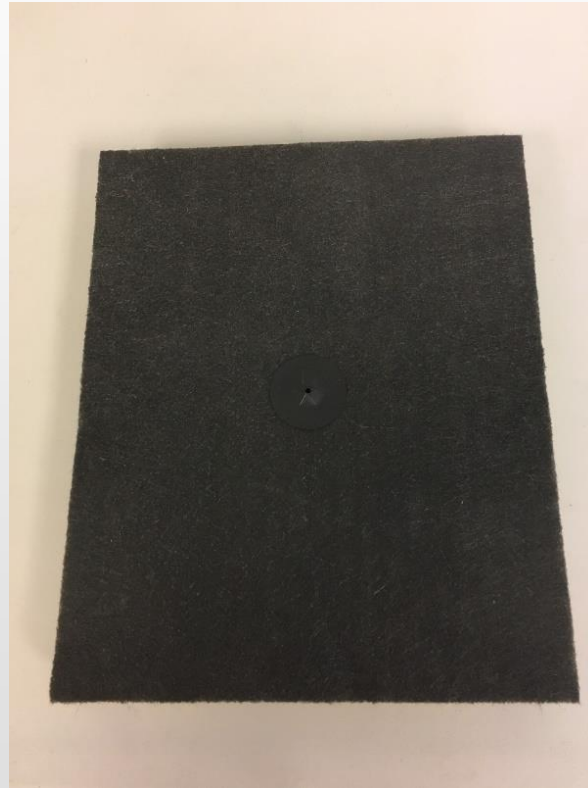


Absorption Plus High NRC, Fastener Appearance

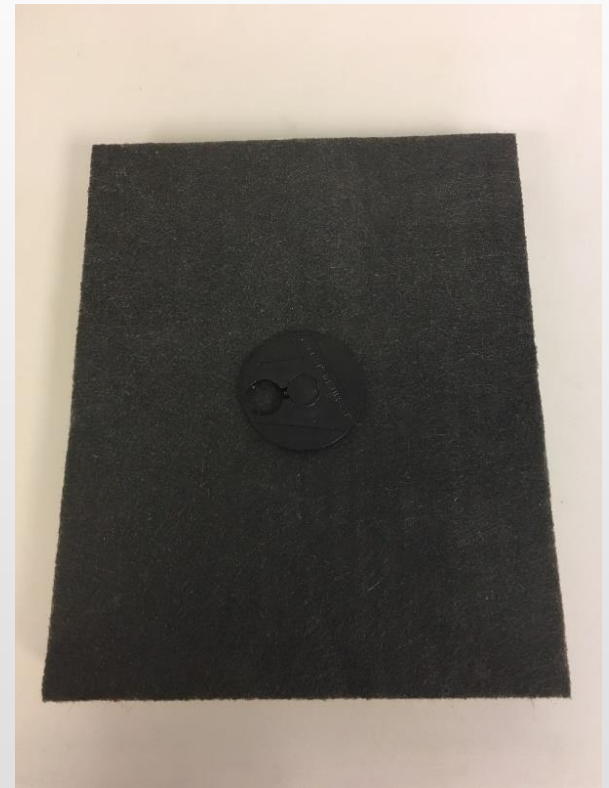
Typical Fasteners



Black Lock Washer



IFS Anchor (for steel deck)



4" Absorption Plus High NRC Quiets Noisy Restaurant, Sports Bar



Questions
Contact: Fabteam@spi-co.com
Or call (855) 519-4044