

Absorption Plus[®] High NRC
Acoustic Panels

Superior Sound
Absorption and
Thermal Insulation

Absorption Plus High NRC

Absorption Plus High NRC (black mat faced mineral wool panels)
compliment Absorption Plus fabric wrapped acoustic panel applications



Absorption Plus High NRC

- Superior sound absorption performance
- Stable R Value for energy savings
- Up to 7.5" thick panels
- Composite panel Class A for CODE compliance
- Durable, black mat finish does not reflect light
- 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



SPI - Specialty Products & Insulation
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 E-mail: fabtextm@spi-co.com
 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.ft ² .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.

Absorption Plus High NRC Applications

- Restaurants
- Nightclubs
- Theaters
- Performance Centers
- Sports Centers
- Office Space
- TV & Radio Studios
- Recording Studios
- Manufacturing Environments



High NRC Panels

Insulation board (Stone Wool)

- Excellent sound absorption
- Stable, long term R Value
- Dimensionally stable
- Non-combustible
- Resists temperature up to 2150°F
- Repels, does not absorb water or hold moisture
- Fungi resistant
- Made of natural & recycled material

Finish Facing Mat

- Proprietary black mat facer does not reflect light
- Includes an EPA registered biocide



Acoustic Insulation Needed

- Untreated open exposed decks typically yield loud, reverberant spaces. This creates an uncomfortable environment for employees and patrons, negatively impacting operations and adjacent spaces



Restaurant Dinner Complaints

- Guests stay longer and enjoy the experience more when 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.

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.

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”

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ASTM E795, Common Acoustic Panel Mounting Methods

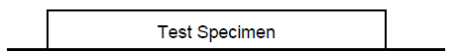
A Mount - Sample laid directly against the test surface with no airspace behind the panel. If the perimeter edges of the sample are exposed during the actual installation, they are not sealed during the test.

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

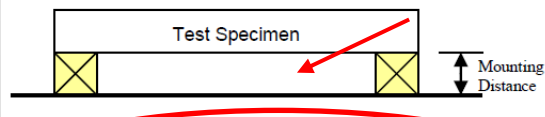
Common Mounting Methods

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.



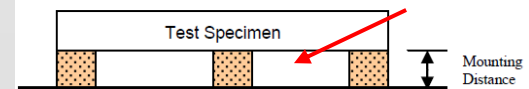
Reflects Mounting With:
Adhesive
Hook n Loop (aka Velcro)
Impaling Clip, Z Clip
and other direct mount methods

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

Documented Acoustic Performance

- **Absorption Plus High NRC** performance is documented by testing completed at an accredited laboratory to current ASTM Standards
- Testing was completed per ASTM C423 and ASTM E795, Type A mounting which reflects the most common application condition
- Panels demonstrated excellent sound absorption across the test full frequency spectrum VS other panels

***Outstanding Acoustics, Thermal Insulation and Fire Resistance
Yields Unmatched Performance!***





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- 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

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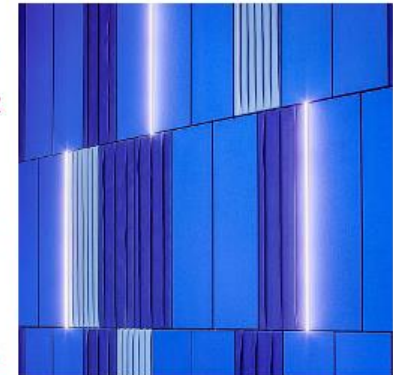
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■ Why Mfr. Acoustic Data can vary

Review & send presentation link to:

- Installers
- General Contractor
- Architect & Specifier
- Owner

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 as installed product performance
NOT pre assembly "component" performance***

CODE focus is on occupant Life Safety!



Historical Large Loss Fires From Flammable Interior Products

“Interior finishes have contributed to some of the deadliest assembly occupancy fires on record, and new building products continue to raise concerns among fire and life safety communities”.

“The regulation of rapid progression fire on interior finish materials is as relevant today as it was 70 years ago”



- Coconut Grove, Boston, 1942 - 492 fatalities
- Winecoff Hotel, Atlanta GA, 1946 - 119 fatalities
- Beverly Hills Supper Club, Southgate KY, 1977 - 165 fatalities
- **The Station Night Club, West Warwick, RI, 2003 - 100 fatalities**
- Kiss Night Club, Santa Maria, Brazil, 2016 - 240 fatalities



Sources:

Inside Threat, Published July 1, 2014, NFPA (The National Fire Protection Association)
Case Histories: Fires Influencing the Life Safety Code, 2009 Life Safety Code Handbook
Underwriters Laboratory, UL's Iconic Steiner Tunnel Withstands The Test Of Time

The Importance of Class A, Fire Rated Products

Nightclub installed 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

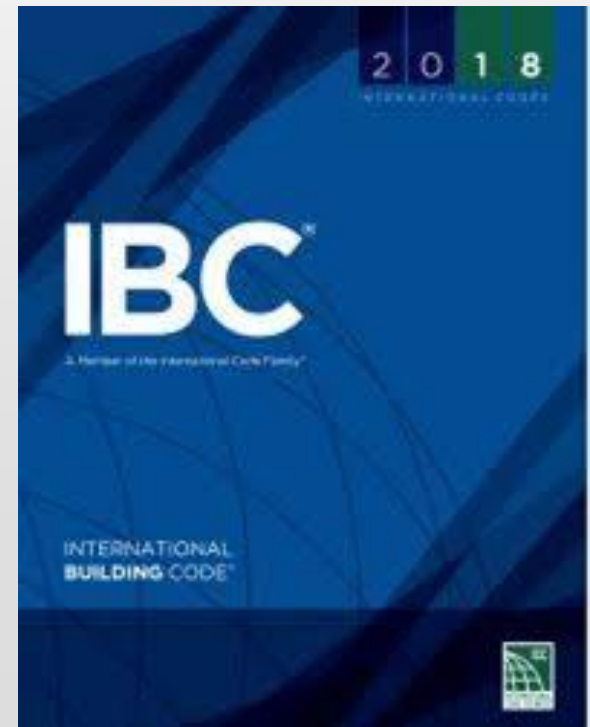
Feb 20, 2003

2018 IBC CODE Update

720.1 General. **P**

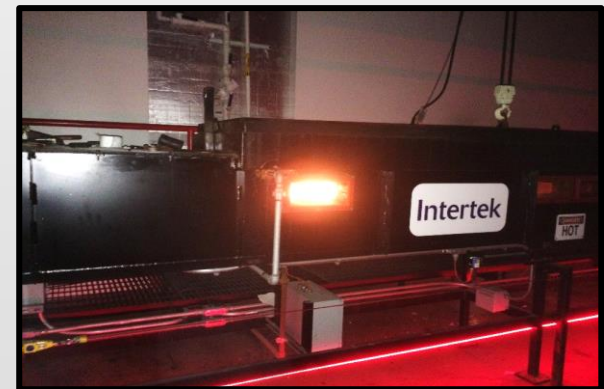
Insulating materials shall comply with the requirements of this section. Where a flame spread index or a smoke-developed index is specified in this section, such index shall be determined in accordance with ASTM E84 or UL 723. Any material that is subject to an increase in flame spread index or smoke-developed 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.

*Ignorance to CODE
does not excuse liability*



Fire Tested, Proven Performance

- Absorption Plus High NRC Panel high temperature fire resistance combined with exceptional Flame Spread and Smoke Development ratings satisfy CODE requirements for exposed insulation with a Class A fire exposure rating per ASTM E84.
- These properties can assist patrons, facility personnel and emergency responders with evacuations and help minimize the spread of fire, toxic smoke and superheated gases.
- Also, due to stone wools exceptional fire resistance it can enhance structure protection.



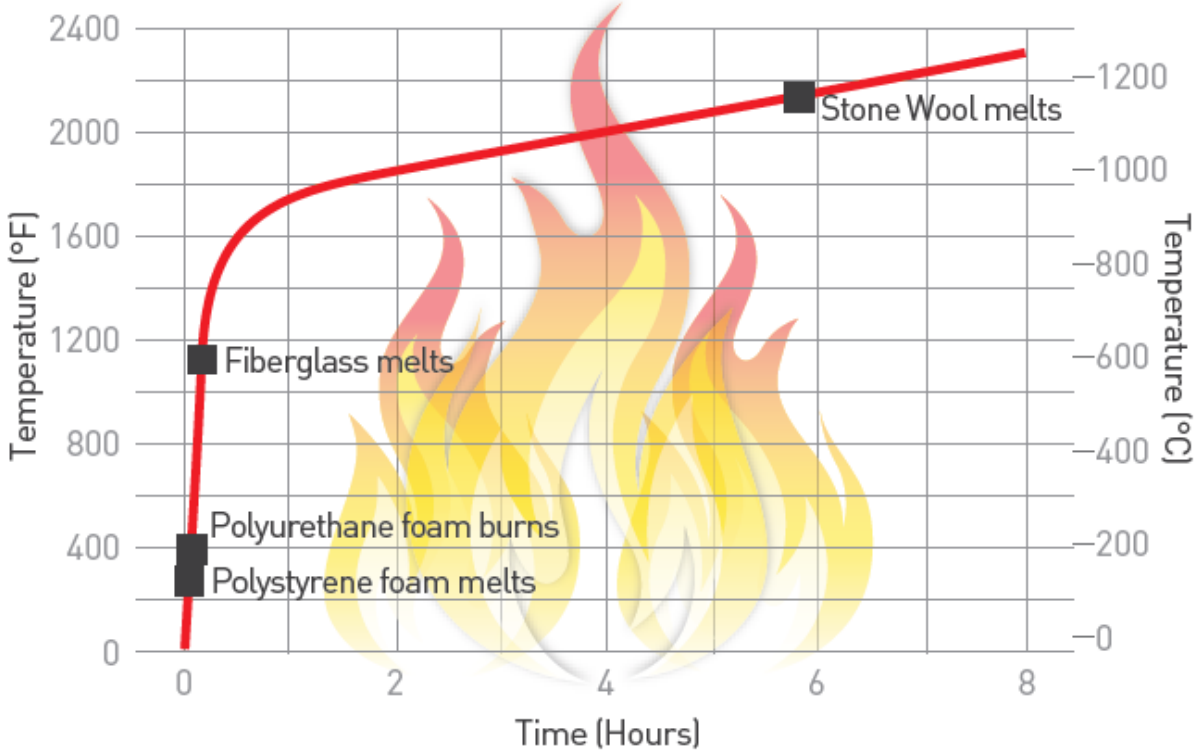
Outstanding Acoustics, Thermal Insulation and Fire Resistance

Unmatched performance!



Stone Wool's Documented Performance

Temperature Development in a Standard Fire (ASTM E119)





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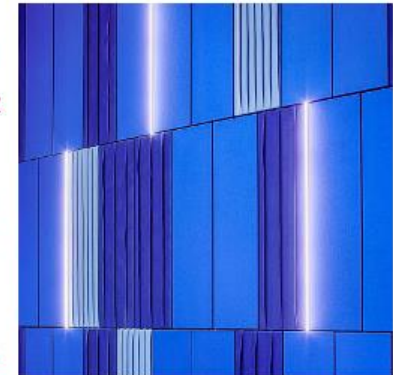
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■ Fire Risk & Code Compliance

Review and Forward link to:

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- Owners

Absorption Plus High NRC

- Panels up to 7.5" thick provide **superior acoustics**
- Black mat finish does not reflect light
- Enhances **thermal insulation** for energy savings
- **Fire resistant, Non combustible** insulation can enhance assembly fire performance



Alternative to grid & tile systems



Summary Absorption Plus HIGH NRC Advantages

- Per CODE composite panels meet Class A rating per ASTM E84 vs “component” ratings
- Typical lead time 3-4 weeks vs 6-8 weeks or longer
- Available in skid or truckload quantities VS only full truckload quantities
- Acoustic data generated by an “Accredited Acoustic Lab” to current ASTM standards yields reliable project results
- Acoustic data was generated using Type A mounting, the most common application method




Energy Savings Impact for Owners and Tenants

- In addition to great acoustics, **Absorption Plus High NRC** provides **outstanding insulation** that can provide a solid **payback** for owners by **reducing heating and cooling costs**.



Environmentally Sustainability / LEED

- Made from environmentally sustainable mineral wool insulation produced from basalt rock & slag.
- **CFC and HCFC free**
- Can earn LEED points across four key categories of sustainable development.
- Easy to use project LEED document generator.



Date: 2018/08/23
Att: Dave Latanision - FBM-SPI
RE: ROCKWOOL Inc.™ Product Qualifications for LEED® Project

PROJECT & LOCATION: Sample LEED Project - 17801

We have received your request for information regarding ROCKWOOL® products as they relate to LEED® credits for recycled content, manufacturing location and distance from the manufacturer and raw material suppliers to the project site. Please find the following information you requested.

Credit MRc4 – Recycled Content
Your FABROCK™ LT will contain 40% pre-consumer and 0% post-consumer recycled material.

Credit MRc5 – Regional Content
Distance from Manufacturing Location to Project Site
The distance from the Milton, ON manufacturing location of your FABROCK™ LT to your project site is approximately 302.22 miles / 486.38 km.

We use basalt and binder in the manufacture of our product, but ROCKWOOL regards the location of extraction of its raw materials as proprietary company information, the disclosure of which could have a negative impact on its competitiveness.


Distance from Extraction Locations to Project Site
We can however, provide information regarding whether our raw materials suppliers are within a 500 miles / 800 km radius of your project site.


85% of the resources used to make FABROCK™ LT are within 500 miles / 800 km of your project site.

Distance from Extraction Locations to Manufacturing Location:
We can however, provide information regarding whether our raw materials suppliers are within a 500 miles / 800 km radius of our point of final manufacture.

85% of the resources used to make FABROCK™ LT are within 500 miles / 800 km of the Milton, ON manufacturing location.

We trust this meets your needs. If you have any further questions, please feel free to contact our Technical Product Specialists at 1-800-265-6878 or contactus@rockwool.com

Sincerely,
Bent Jorgensen
VP Operations 

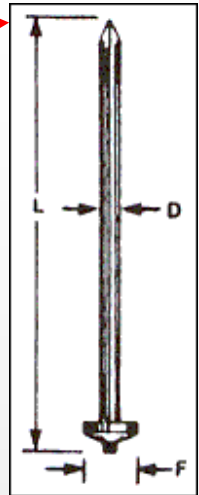
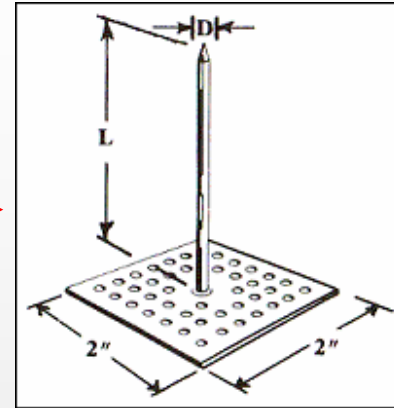
Mark Bromiley
VP Business Development 

8124 ESQUEMING LINE
MILTON, ON, L9T 6W3 1-800-265-6878 DR (9C9) 878-6474 WWW.ROCKWOOL.COM Part of the ROCKWOOL Group

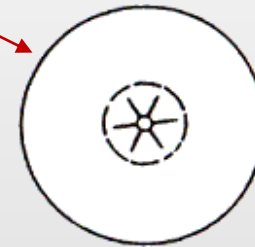


Mounting Methods (Architect / Engineer spec'd)

- Corrugated Steel Deck
 - CD insulation weld pin
- Concrete Deck (i.e. formed, precast, docks plank)
 - **Perf. base insulation pins**
- Black lock washers – 1.5" Round
- Drywall screws w/ 1.5" Rd washers



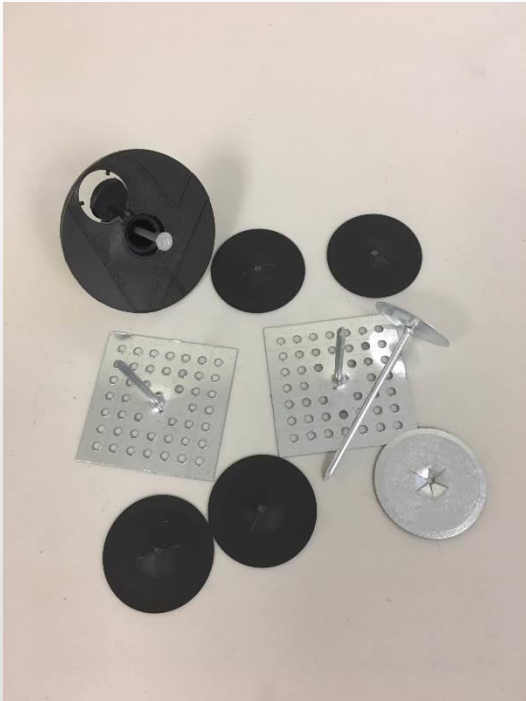
- **Perforated base pins** - Mechanical attachment or alternate, use Tuff-Bond adhesive to secure perf. base pins. (requires clean substrate and 24 – 48 hour cure).



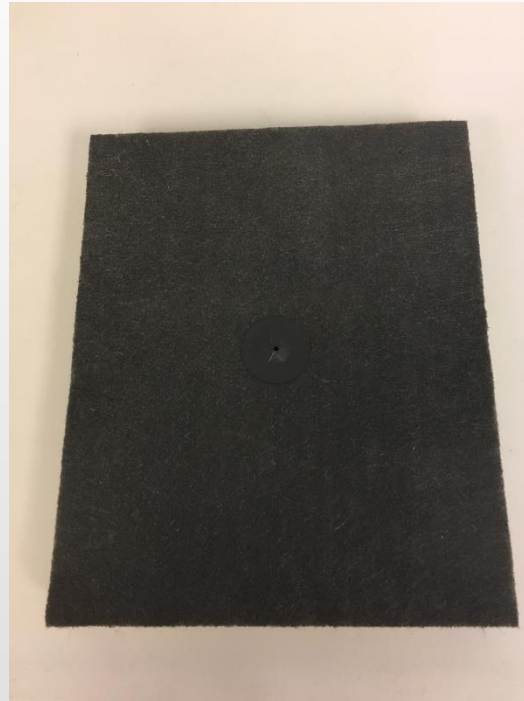
Minimum 5 fasteners per 2' x 4' board

Absorption Plus High NRC, Fastener Appearance

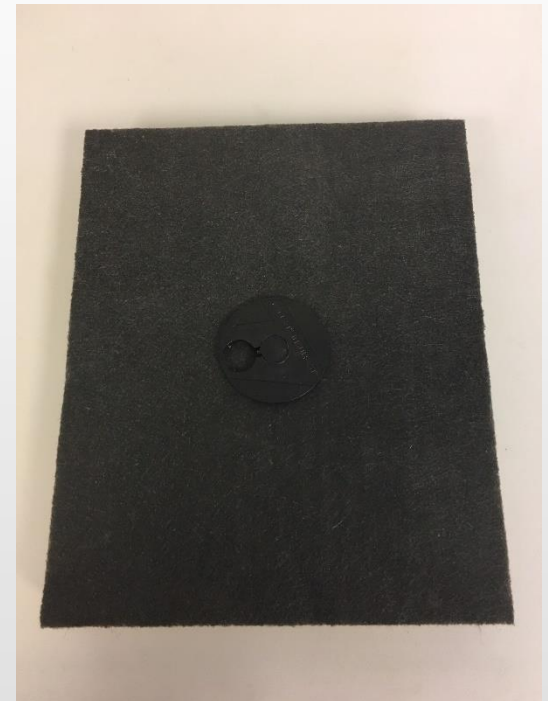
Typical Fasteners



Black Lock Washer



IFS Anchor (for steel deck)



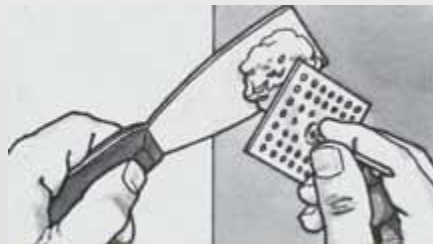
Tuff-Bond Anchor Adhesive

When using Perf. base pins for panel mounting with adhesive

■ **Follow adhesive manufacturer detailed installation instructions!**

▪ **Key steps**

- Clean substrate to remove dust, dirt, loose paint, oil or other contaminant that could prevent strong, long term bond.
- Apply correct amount of adhesive to perf. base
- Press and twist motion to attach
- Adhesive application temperature 45 – 90°F
- Adhesive must cure (24 - 48 Hrs.) before starting panel installation

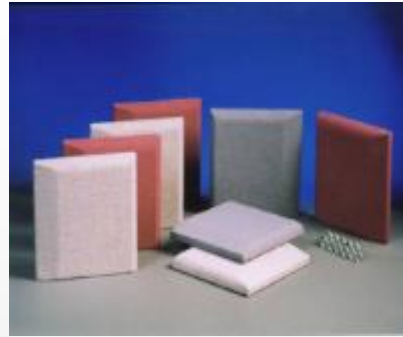


4" Thick Absorption Plus High NRC Quiets Noisy Sports Bar



Absorption Plus Fabric Wrapped Panels (Full Coverage or Accents)

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





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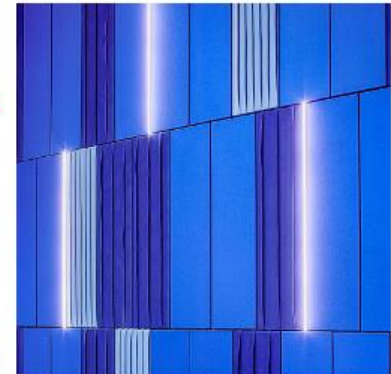


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Questions

email Fabteam @spi-co.com
or Call (855) 519 – 4044