Absorption Plus® High NRC Panels

Acoustic, Thermal and Fire Resistant Insulation System
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 decks applications where structural elements are exposed. Panels are easily installed over precast and poured concrete, steel deck, drywall and other substrates using common tools and attachments.

Advantages
- Sound Absorption - Excellent acoustic performance
- Thermal Effectiveness - Stable R Value, 4.1 per inch
- Fire Resistance - Tested 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 quickly and easily
- 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

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 matte facing under a quality controlled laminating process that is under accredited laboratory follow-up services.

Baseboard: Semi-rigid stone wool insulation
Maximum Service Temperature (per ASTM C612): 1200°F
Fire Performance:
ASTM E119, Behavior of Materials at 70°F (1382°F) Non-Combustible
CANI 514, Test for Non-Combustibility Non-Combustible
ASTM E 84 (UL 723) Surface Burning Characteristics:
Flame spread 0, Smoke Development 0
CANULC S102 Surface Burning Characteristics:
Flame spread 0, Smoke Development 0
Thermal Resistance: ASTM C518 (C117)
R-value (in): @ 7/8" - 4.1 R-Value

Moisture Resistance: ASTM C 1104, Moisture Sorption: 0.05%
Pong Resistance: ASTM C1388, Passed
Sound Absorption: per ASTM C423,
Coefficient at Frequencies
Thickness 125 Hz 250 Hz 500 Hz 1000 Hz 2000 Hz 4000 Hz NRC
2" 0.90 0.68 1.06 1.14 1.13 1.04 1.10 1.00
3" 0.62 1.01 1.20 1.10 1.08 1.10 1.10 1.10
4" 1.07 1.01 1.07 1.10 1.10 1.06 1.06 1.05

Black Mat Facing Material:
Primary Composition: Bonded fiberglass/polyester
Maximum continuous use temperature: 400°F
Halogen free flame retardant
EPA registered biocide
Mold Exempt: 20 PSI

Disclaimers and Limitations of Warranties. The purchaser/user is advised to consult with the appropriate professional to establish the feasibility, suitability and acceptability of the products. The manufacturer makes no claim or representation regarding the use or compatibility of the products. Furthermore, the manufacturer makes no warranty, expressed or implied, and disclaims all warranties including warranties of merchantability and fitness for a particular purpose.

Ask about other colors, order samples and receive pricing.
Typical Applications

- Multiplex Theaters
- Restaurants
- Nightclubs
- Performance Centers
- Sports Centers
- Office Space
- Recording Studios
- TV & Radio Studios
- Manufacturing Environments
Absorption Plus High NRC

**Provides:**
- Superior **Acoustics** for interior applications.
- Black matte finish does not reflect light
- Can enhance **Thermal insulation** for energy savings.
- **Fire resistant** panels can enhance assembly fire performance

An alternative to grid & tile systems
High NRC Panel

**Insulation board** (Stone Wool)
- Excellent sound absorption and damping
- Stable, long term R Value
- Dimensionally stable
- Resists temperatures up to 2150°F
- Non combustible
- Repels, does not absorb water or hold moisture
- Fungi resistant
- Made of natural & recycled material

**Finish Facing Mat**
- Durable, black matte facing won’t reflect light
- EPA registered biocide
A down side of open ceiling spaces, left untreated they are typically highly reverberant, noisy spaces. This creates an uncomfortable environment for patrons and employees which can impact business.

- The elevated noise levels can also impact adjacent space.

- The core insulation used in Absorption Plus High NRC has a unique non-directional fiber structure which is more dense than traditional insulations. This effectively reduces airflow and essentially sound transmission.

- Absorption Plus High NRC panels are effective sound absorption and sound damping.
Documented Acoustic Performance

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

*Outstanding Acoustics, Thermal Insulation and Fire Resistance Yields Unmatched Performance!*
### SUMMARY OF TEST RESULTS

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For INTERTEK B&C:

- **COMPLETED BY:** Daniel J. Poet
- **TITLE:** Technician II – Acoustical Testing
- **SIGNATURE:**
- **DATE:** 10/03/18

- **REVIEWED BY:** Kurt A. Golden
- **TITLE:** Project Lead – Acoustical Testing
- **SIGNATURE:**
- **DATE:** 10/03/18

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Need more sound absorption or a higher R Value? Also available in 4” thick!
IBC 2012

720.3 Exposed installation. Insulating materials, where exposed as installed in buildings of any type of construction, shall have a flame spread index of not more than 25 and a smoke-developed index of not more than 450.

(CODE = Required)
Stone Wool’s Documented Performance

Temperature Development in a Standard Fire (ASTM E119)

- Polyurethane foam burns
- Polystyrene foam melts
- Fiberglass melts
- Stone Wool melts
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!
Many fabricators are unable to pass a composite “as built” **CODE required** Class A rating. The “as built” material must be qualified by fire exposure testing (per ASTM E-84).

Reporting “component” material fire performance VS the as supplied product does not reflect actual in service fire performance.

Finished products are made up of a base insulation, various facing materials and a bonding adhesive. Combined these materials present a more significant challenge to meeting the required Class A, Flame Spread and Smoke Development ratings VS individual component materials.

To prevent project interruptions and potential liability specifiers and users should confirm the product has been evaluated to applicable standards by an accredited laboratory to demonstrate CODE compliance.
Product Labeling

- Independent accredited Laboratory fire test confirmed CODE compliance.
- IBC CODE requires Class A rating for exposed thermal and acoustic insulation.
- Absorption Plus High NRC achieved Class A fire exposure performance Per ASTM E84.

Sample Label
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.
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

- 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
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
Installation Using Insulfast T-3 (Use black IFS fasteners for steel deck)

Insulfast - YouTube Video
https://youtu.be/RSyQUYRn-QE

Gun & Fastener Detail - YouTube Video
https://youtu.be/YWHFtVpj1xA
Absorption Plus High NRC, Fastener Appearance

Typical Fasteners

Black Lock Washer

IFS Anchor (for steel deck)
Butted Panel Appearance

No seam tape used
Typical Installation for Substrate Mounted Fasteners
(See complete installation guidelines on the website)

Minimum 5 fasteners per board

- Before starting installation, ensure substrate is clear of any contaminants.

- Measure spacing to mark correct fastener locations according to the prescribed pattern (typ. 3” in from each corner and panel center)

- Install mechanical fasteners to substrate using preferred attachment method according to fastener manufacturer’s recommendations.

- Install the Absorption Plus High NRC panels onto mechanical fasteners. Confirm adjacent panels are aligned with each other.

- Avoid pillowing of facer material around fasteners. The insulation should not be over-compressed when installing insulation fasteners or lock washers.

- Secure the washer on the exposed end of the mechanical fastener.

- Nip off fastener end to prevent injury and provide a clean, finished appearance.

Panels cut easily with a serrated knife.
Learn more at spi-co.com

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.

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® Desk and Cloud Panel Datasheet
- Absorption Plus® Baffle Panel Datasheet
- Absorption Plus® High Impact Tack Panel Datasheet
- Absorption Plus® Tack Panel Datasheet
- Absorption Plus® "imagina" Acoustical Panel Datasheet
- Absorption Plus® High NRC Panels
- Absorption Plus® Pyramidal and Barrel Diffusers
Questions

Call
(855) 519 - 4044

Or email
Fabteam@spi-co.com