

American Micro Industries, Inc.

PRODUCT DATA SHEET: QUIET BOARD™

DESCRIPTION:

QUIET BOARD™ is comprised of porous expanded polypropylene beads which are formed into a semi-rigid, water resistant panel. The cylinder shaped beads are nonporous, but the hollow cores and cracks between adjacent beads allow sound to travel into the panel where it is absorbed. QUIET BOARD™ is a washable, lightweight and impact resistant product with very good resistance to chemicals, bacteria and fungi.

APPLICATIONS:

QUIET BOARD™ can be installed as a wall panel, ceiling tile and hanging baffle. Due to its water resistant properties, this product may be used in marine applications. Practical applications include, but are not limited to; indoor swimming pools, locker rooms, auditoriums, gymnasiums, classrooms, arenas/stadiums, laboratories, computer rooms, clean rooms, food preparation areas, manufacturing facilities, machine shops, gun ranges and machine enclosures (i.e. compressors, pumps and air conditioner units).

PRODUCT AVAILABILITY:

- 1 x 24 x 48 inch white panels (Part #: QB124W)
- 2 x 24 x 48 inch white panels (Part #: QB224W)
- 1 x 24 x 48 inch charcoal panels (Part #: QB124C)
- 2 x 24 x 48 inch charcoal panels (Part #: QB224C)
- Custom sizes available

TECHNICAL DATA:

PROPERTIES

| Physical Property | Value | Test Standard |
|--|---|---------------|
| Color | White & Charcoal | n/a |
| Thickness | 1" & 2" | n/a |
| Density | 2.8 lbs/ft ³ | ASTM D-3575 |
| Porosity (Molded Compression Ratio @ 10%) | 30% | JPSI Internal |
| Elongation | 13% | ASTM D-3575 |
| Tensile Strength | 27 PSI | ASTM D-3575 |
| Tear Strength | 18.8 lbs/ 1" | ASTM D-3575 |
| Compression Set | 9% | ASTM D-3575 |
| Compression Strength @ 25% Strain @ 50% Strain @ 75% Strain | 23 PSI 35 PSI 79 PSI | ASTM D-3575 |
| Water Absorption | 0.0065 lbs/in ³ | ASTM C-272 |
| Water Vapor Permeability | 0.000066 lbs.ft ² /hrmmHg | ASTM E-96 |
| Thermal Conductivity @ 75°F | 0.26 (K) BTU-in/(ft ² -hr- °F) | ASTM C-177 |
| Thermal Stability Linear Dimensional Change 24 hrs. @ 225°F | 1.0% | ASTM D-3575 |
| Thermal Resistance | 3.8(R) | ASTM C-177 |

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QUIET BOARD™

PROPERTIES – cont.

| Physical Property | Value | Test Standard |
|--|---|---------------|
| Coefficient of Linear Thermal Expansion 70°F to -40°F 70°F to -180°F | 0.000064 in/in/°F 0.000108 in/in/°F | ASTM D-696 |
| Chemical Resistance (auto fuels, fluids, solvents) | Pass | Various |
| Flammability | Meets | MVSS 302 |
| | Flame Spread Index 3 (1" Thick) 5 (2" Thick) | ASTM E-84 |
| | Smoke Development Index 84 (1" Thick) 113(2" Thick) | ASTM E-84 |

SOUND TRANSMISSION LOSS

| Freq. Hz | 125 | 250 | 500 | 1000 | 2000 | 5000 | STC |
|--------------------------------|-----|-----|-----|------|------|------|-----|
| 1" (dB) | 6 | 5 | 7 | 8 | 10 | 15 | 9 |
| 2" (dB) | 9 | 8 | 10 | 10 | 17 | 22 | 13 |
| 1" between ¾ gypsum (dB) | 27 | 27 | 29 | 31 | 32 | 45 | 32 |

NORMAL SOUND ABSORPTION/NOISE REDUCTION

| Freq. Hz | 125 | 250 | 500 | 1000 | 2000 | 4000 | NRC |
|--------------------------------------|------|------|------|------|------|------|------|
| 1" Wall mount (%) | 0.05 | 0.06 | 0.21 | 0.80 | 0.65 | 0.75 | 0.45 |
| 1" Wall w/ ¾ Airspace (%) | 0.06 | 0.13 | 0.51 | 0.79 | 0.62 | 0.79 | 0.50 |
| 1" Wall w/1"BAP* (%) | 0.11 | 0.58 | 1.07 | 0.71 | 0.74 | 0.72 | 0.85 |
| 2" Wall Mount (%) | 0.07 | 0.21 | 0.81 | 0.85 | 0.93 | 0.88 | 0.70 |
| 2" Wall w/ ¾ Airspace (%) | 0.10 | 0.29 | 0.99 | 0.74 | 0.90 | 0.93 | 0.75 |
| 2" Wall w/1"BAP* (%) | 0.17 | 0.81 | 0.97 | 0.85 | 0.89 | 0.92 | 0.90 |
| 1" Ceiling E400 (%) | 0.46 | 0.59 | 0.42 | 0.49 | 0.76 | 0.86 | 0.55 |
| 2" Ceiling E400 (%) | 0.51 | 0.52 | 0.52 | 0.72 | 0.77 | 0.89 | 0.70 |
| 1" Wall C423 12"spacing (%) | 0.04 | 0.07 | 0.20 | 0.83 | 0.81 | 1.00 | 0.50 |
| 2" Wall C423 12"spacing (%) | 0.09 | 0.21 | 0.82 | .11 | 1.11 | 1.12 | 0.80 |

* BAP = Bonded Acoustical Pad

The information contained herein is typical and based upon the results of controlled laboratory tests. The information is accurate to the best of American Micro Industries, Inc.'s knowledge. Product performance may vary based on the particular application and installation techniques utilized.

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