

American Micro Industries, Inc.

PRODUCT DATA SHEET: IN-THE-WALL BARRIER™

DESCRIPTION:

IN-THE-WALL BARRIER™ is a sound blocking, one pound mass loaded vinyl barrier sandwiched between two layers of sound absorbing acoustic foam that was specifically designed to fit between the studs with in the wall cavity. The sound blocking component of IN-THE-WALL BARRIER™ is suspended between foam and acts as a second wall that reflects noise back into the absorptive foam layers. The porous acoustic foam absorbs noise by filtering and dissipating the sound waves.

APPLICATIONS:

IN-THE-WALL BARRIER™ reduces the transmission of noise from one room to another. This product is friction fit between studs that are sixteen inch on center. When installing IN-THE-WALL BARRIER™ within an exterior wall, it is recommended that a vapor barrier material is also applied. Applications include, but are not limited to; common walls, walls between office spaces and manufacturing areas, multi media rooms, industrial facilities, and machine enclosures (i.e. compressors, pumps, air conditioning units, etc.).

PRODUCT AVAILABILITY:

- 3 1/8 x 14 1/2 x 48 inch (Part #: ITWC115X145X48)

TECHNICAL DATA:

SOUND TRANSMISSION LOSS (BARRIER)

| Freq. Hz | 125 | 250 | 500 | 1000 | 2000 | 4000 | STC |
|----------|-----|-----|-----|------|------|------|-----|
| (dB) | 14 | 14 | 23 | 29 | 34 | 37 | 27 |

PROPERTIES (BARRIER)

| Physical Property | Value | Test Standard |
|-------------------|-------------------------|---------------|
| Color | Black | n/a |
| Thickness | Approx. 0.125" (1/8) | n/a |
| Surface Mass | 1.0 lbs/ft ² | n/a |
| Density | 96 lbs/ft ³ | n/a |
| Elongation | 120% | ASTM D-412 |
| Tensile Strength | 407 PSI | ASTM D-412 |
| Tear Strength | 77 lbs/ 1" | ASTM D-624 |
| Temperature Range | -40°F to 255°F | n/a |
| Hardness | 90 Durometer, Shore A2 | ASTM D-2240 |
| Specific Gravity | 1.80 | ASTM D-798 |
| Stiffness | 19.60 mega pascal | ASTM 749 |
| Flammability | Meets | UL 94 HF-1 |
| | Meets | MVSS 302 |

SOUND ABSORPTION/NOISE REDUCTION (FOAM)

| Freq. Hz | 125 | 250 | 500 | 1000 | 2000 | 4000 | NRC |
|-------------|------|------|------|------|------|------|------|
| 1" Foam (%) | 0.07 | 0.12 | 0.28 | 0.60 | 0.93 | 0.83 | 0.85 |

American Micro Industries, Inc.

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<http://www.soundprooffoam.com>

PROPERTIES (FOAM)

| Physical Property | Value |
|---|---|
| Color | charcoal |
| Elongation | 150% to 250% |
| Tensile Strength | 14 to 20 psi |
| Tear Resistance | 1.5 to 3.0 ppi |
| Compression Set @ 50% deflection @ 90% deflection | Max. 10% Max. 20% |
| Resilience (Ball Rebound) | 45% to 60% |
| Load Bearing Range @25% Compression | 0.20 to 0.45 pal |
| Resistance to Air Flow (1/2 inch H2O Pressure Drop) | 2 to 5 cfm |
| Oxidation Resistance | Excellent |
| Hydrolysis Resistance (Activation Energy) | Excellent 32,00 cal./mole |
| Solvent Resistance | Moderate Swelling (recovers after drying) |
| Water Absorption | Hydrophobic |
| "K" Factor (1") | 0.25 to 0.30 |
| R-value @ 75° | 12* |

* This value was deduced by dividing the total thickness of the foam by the K-Factor (3 inches ÷ .25 = 12).

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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