illbruck acoustic

willtec®

Product Information

- Open-cell, fiber-free melamine foam
- Excellent acoustic insulation
- Class 1 fire-rated ASTM E84
- Core material used in SONEX® and other illbruck products

Lightweight, flexible willtec foam excels at heat and sound insulation

illbruck's willtec foam meets many stringent requirements for fire resistance, heat shielding, sound control and cushioning without compromising important characteristics such as weight, flexibility, easy installation or reasonable cost.

Withstands extreme temperatures

willtec foam is made from lightweight porous melamine. It meets all ASTM E84 requirements for flame spread and smoke density, and it passes the aggressive new UL 1715 room fire exposure test. This versatile foam can even be exposed to constant temperatures up to 300°F, and short-term temperatures up to 482°F. It will char, but not ignite, at temperatures up to 1120°F.

Unique construction meets a range of requirements

The open-celled, fiber-free structure of willtec foam gives it an extremely low density, making it lightweight and flexible. The open-cells also enhance the materials' ability to dampen sound over a wide range of frequencies (see absorption coefficients and NRC on other side). willtec foam is easy to cut, mold, trim and laminate. illbruck uses willtec as the core material in all of its acoustical product lines, from wall SONEX Panels and Baffles to CONTOUR® Ceiling Tiles to multi-layer composites to HVAC duct liners.

In addition, illbruck has developed acouSTIC™, a specially formulated adhesive to be used with wall panels for quick and easy installation.

Handles tough environmental conditions

willtec foam comes standard in natural white and light grey colors. It can also be painted in a variety of colors. Many other surface finishes, including Hypalon® coating, are also available to resist wear from dirt, water, solvents and other environmental irritants.

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SONEXclassic™/ SONEXjunior™ Panels

willtec meets ASTM E-84 Class 1 fire rating

SONEXone Baffle

SONEXone™ Panel

SONEXvalueline™ Panels

willtec® foam features

- Class 1 fire-rated
- Meets ASTM E84 and UL 1715 requirements
- Does not ignite at temperatures below 1120°F
- Excellent heat insulation properties; no flaming drip
- Very low-density, lightweight and highly flexible
- Excellent sound control characteristics in a wide range of frequencies
- Economical, easy to install and maintain

Flammability

willtec meets the following regulations for flame spread, smoke density, and fuel contribution:

- ASTM E84, Steiner Tunnel Test
  - – Natural: Class 1 fire-rated
    Flame spread: 5
    Smoke Density: 50
  - – Painted: Class 1 fire-rated
    Flame spread: 10
    Smoke density: 10
  - – Hypalon®-coated: Class 1 fire-rated
    Flame spread: 25
    Smoke density: 65
  - – colortec™ foam: Class 1 fire-rated
    Flame spread: 5
    Smoke density: 90
- UL 1715, Corner Burn Test
  Natural: Passes
  colortec: Passes
- UL code 94, electronics
  HBF: Passes
  HF1: Passes
  VO: Passes

Additional tests:

willtec meets a variety of other tests to show that it is suitable for a wide variety of installations.

- Smoke Toxicity, New York City willtec: DOS# 0-500-970317-4001
- Boeing DSS 9739, toxic gas generation willtec: Passes
- UL181, microbial growth willtec: Passes
- ASTM G21, fungus resistance willtec: Passes

illbruck products made with willtec foam:

- SONEX® Panels, Baffles & Wedges
- FABRITEC™ Wall Panels
- CONTOUR® Ceiling Tiles
- HARMONI™ Ceiling Tiles
- WHITELINE® Ceiling Tiles
- willtec Flat Panels
- willtec Custom Solutions
- willduct® Acoustical Duct Liner
- PROSPEC® Foams and Composites

(please see individual product sheets for more information)

Physical Data — willtec® foam

Tensile Strength	8 PSI (ASTM D3574-77)
Density	0.7 lbs./cubic ft.
Elongation	8% (ASTM D3574-77)
Heat Conductivity	K factor = 0.24 at 50 degrees F, R value = 4.2
Temperature Stability	0 to 302 degrees F
Finish	Natural (white and light grey), Painted, Hypalon®-coated, colortec™ (charcoal), Mylar®, Tyvec® and others.

Sound Absorption

Finish	Thickness	Coefficients per ASTM C423-90a							
		125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	NRC	Mounting Type
Natural (white and light grey)	1 ½"	0.08	0.29	0.73	0.94	0.97	0.89	0.75	B
	2"	0.05	0.31	0.81	1.01	0.99	0.95	0.80	A
Painted (charcoal, beige, brown or blue)	3"	0.15	0.72	1.21	1.20	1.15	1.13	1.05	A
Hypalon-coated (black, grey, white or almond)	2"	0.13	0.41	1.02	1.18	1.18	1.13	0.95	B
colortec™	2"	0.07	0.26	0.77	1.01	0.99	1.00	0.75	B

Examples of acoustic data of various SONEX Panels made from willtec. These are not all the products available. This is just a sampling. All data is derived from ASTM C423-90a with Type A or B mounting. Contact us for acoustical data of other products.

For color charts and samples, contact illbruck acoustic, inc.

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