

SōN™ ACOUSTICS PANEL SPECIFICATIONS

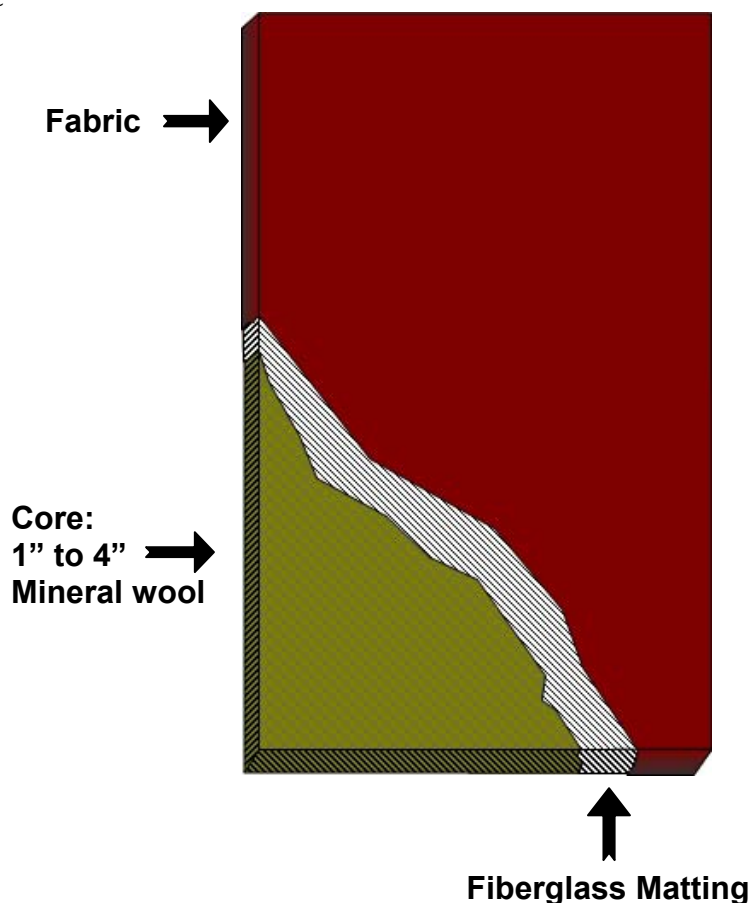
SōN Acoustics panels are high-performance sound absorption panels with a variety of applications such as:

- Quieting a restaurant
- Reducing echoes in a gym
- Improving spoken word clarity in a house of worship

SōN panels are made of a patented composite for enhanced performance and wider frequency absorption. The special composite is also more flame-proof and environmentally friendly than ordinary core materials.

This specification document outlines the composition, technical specifications, fire ratings, and installation information of SōN panels.

For more information and pricing, please contact MSR, Inc.



SōN panels control the noise in a restaurant



August 24, 2006

SECTION 09840
SōN PANELS
1" REGULAR EDGE SPECIFICATIONS

PART I. GENERAL

- 1.1 Acoustical sound treatment shall be of type and size herein described.
- 1.2 Manufacturer shall have a minimum of 3 years experience in the production of acoustical products.
- 1.3 Submittals: Submit 12" x 12" samples for each type of sound panel or baffle required, including backing, core, facing material and anchoring devices.

PART II. PRODUCTS

- 2.1 All panels shall consist of 1-inch thick mineral wool core with fiberglass mat front and back, fabric-wrapped and having square edges.
- 2.2 All product cores shall have a melting point of 1850° F (ASTM E-136); a flame spread of 0 and smoke developed rating 0, a tensile strength minimum of 2631 lbs/ft² breaking load, and a compressive resistance of 480 lbs/ft² at 10% compression, and a horizontal sag of not more than 1/2" in 4 ft.
- 2.3 Since these special patented cores have a flame spread of 0 and a smoke developed rating of 0, the rating of the cloth used would be the rating of the panel as a unit.
- 2.4 All NRC numbers must be in accordance with ASTM C423 for Type A mounting and certifiable acoustical data as obtained by an NVLAP-approved, independent testing laboratory shall be submitted to verify if the sound absorption at specified frequencies is satisfactory for this project.

Minimum NRC for 1-inch panels shall be as follows:

Frequency	125	250	500	1000	2000	NRC
Coefficient	0.28	0.67	1.11	1.05	0.98	0.95

1" Regular Edge - Spec Page 2

- 2.5 Fabric shall be selected from manufacturer's standard fabrics. Fabrics shall be bonded to the face and edges, and returned at edges a minimum of 2" on the back of the panels.

Manufacturer shall ensure flat, wrinkle-free surface and tailored corners. When comparing fire protection, durability and NRC rating there is no equal to these specifications. Contact MSR, Inc. Fairfax CA , 1-415-454-2087.

- 2.6 All panels shall be pre-sized from exact field dimensions and altered in field as required for proper on-location fit.
- 2.7 Manufacturer shall provide "Concealed Multiple-Perforation Fastening Devices" (EZ-Clips) as follows: 4 per 4'x4', 6 per 4'x6', 8 per 4'x8', or equal.

PART III EXECUTION

3.1 Installation

Panels: Each "Concealed Multiple-Perforation Fastening Device" (Impale-Clip) shall be placed on the wall with appropriate attachment screws so that it will impale the acoustical absorber approximately 6" in from each corner and approximately 6" in from each side on longer panels. Paneling adhesive is to be applied in a 3/8" bead 1-1/2" in from the edge before impaling panel on the clips. All necessary field alterations are to be done according to manufacturer's own specific instruction and information directives.

SECTION 09840
SÖN PANELS
2" REGULAR EDGE SPECIFICATIONS

PART I. GENERAL

- 1.1 Acoustical sound treatment shall be of type and size herein described.
- 1.2 Manufacturer shall have a minimum of 3 years experience in the production of acoustical products.
- 1.3 Submittals: Submit 12" x 12" samples for each type of sound panel or baffle required, including backing, core, facing material and anchoring devices.

PART II. PRODUCTS

- 2.1 All panels shall consist of 2-inch thick mineral wool core with fiberglass mat front and back, fabric-wrapped and having square edges.
- 2.2 All product cores shall have a melting point of 1850° F (ASTM E-136); a flame spread of 0 and smoke developed rating 0, a tensile strength minimum of 2631 lbs/ft² breaking load, and a compressive resistance of 480 lbs/ft² at 10% compression, and a horizontal sag of not more than 1/2" in 4 ft.
- 2.3 Since these special patented cores have a flame spread of 0 and a smoke developed rating of 0, the rating of the cloth used would be the rating of the panel as a unit.
- 2.4 All NRC numbers must be in accordance with ASTM C423 for Type A mounting and certifiable acoustical data as obtained by an NVLAP-approved, independent testing laboratory shall be submitted to verify if the sound absorption at specified frequencies is satisfactory for this project.

Minimum NRC for 2-inch panels shall be as follows:

Frequency	125	250	500	1000	2000	NRC
Coefficient	0.51	1.01	1.24	1.25	1.16	1.15

2" Regular Edge - Spec Page 2

- 2.5 Fabric shall be selected from manufacturer's standard fabrics. Fabrics shall be bonded to the face and edges, and returned at edges a minimum of 2" on the back of the panels.

Manufacturer shall ensure flat, wrinkle-free surface and tailored corners. When comparing fire protection, durability and NRC rating there is no equal to these specifications. Contact MSR, Inc. Fairfax CA , 1-415-454-2087.

- 2.6 All panels shall be pre-sized from exact field dimensions and altered in field as required for proper on-location fit.
- 2.7 Manufacturer shall provide "Concealed Multiple-Perforation Fastening Devices" (EZ-Clips) as follows: 4 per 4'x4', 6 per 4'x6', 8 per 4'x8', or equal.

PART III EXECUTION

3.1 Installation

Panels: Each "Concealed Multiple-Perforation Fastening Device" (Impale-Clip) shall be placed on the wall with appropriate attachment screws so that it will impale the acoustical absorber approximately 6" in from each corner and approximately 6" in from each side on longer panels. Paneling adhesive is to be applied in a 3/8" bead 1-1/2" in from the edge before impaling panel on the clips. All necessary field alterations are to be done according to manufacturer's own specific instruction and information directives.

Notes on Fire Ratings

Class A or Class A as a Unit

Fire Protection is always a concern in interior products, and there are various rating methods. In the standard tunnel test, two things are measured. 'Flame spread' and 'Smoke developed' numbers are then given to the product according to these standard-testing procedures. For flame spread, Class A requires 25 or less, while the smoke developed rating is 150 or less for some and 450 for others.

The fact is that fiberglass board (used by other manufacturers) is barely rated Class A in most tests at flame spread 25. Every manufacturer appears to use a Class A cloth to cover their products and claims a Class A product when the fact is the cloth, fiberglass board, and glue that holds it all together will burn as a unit.

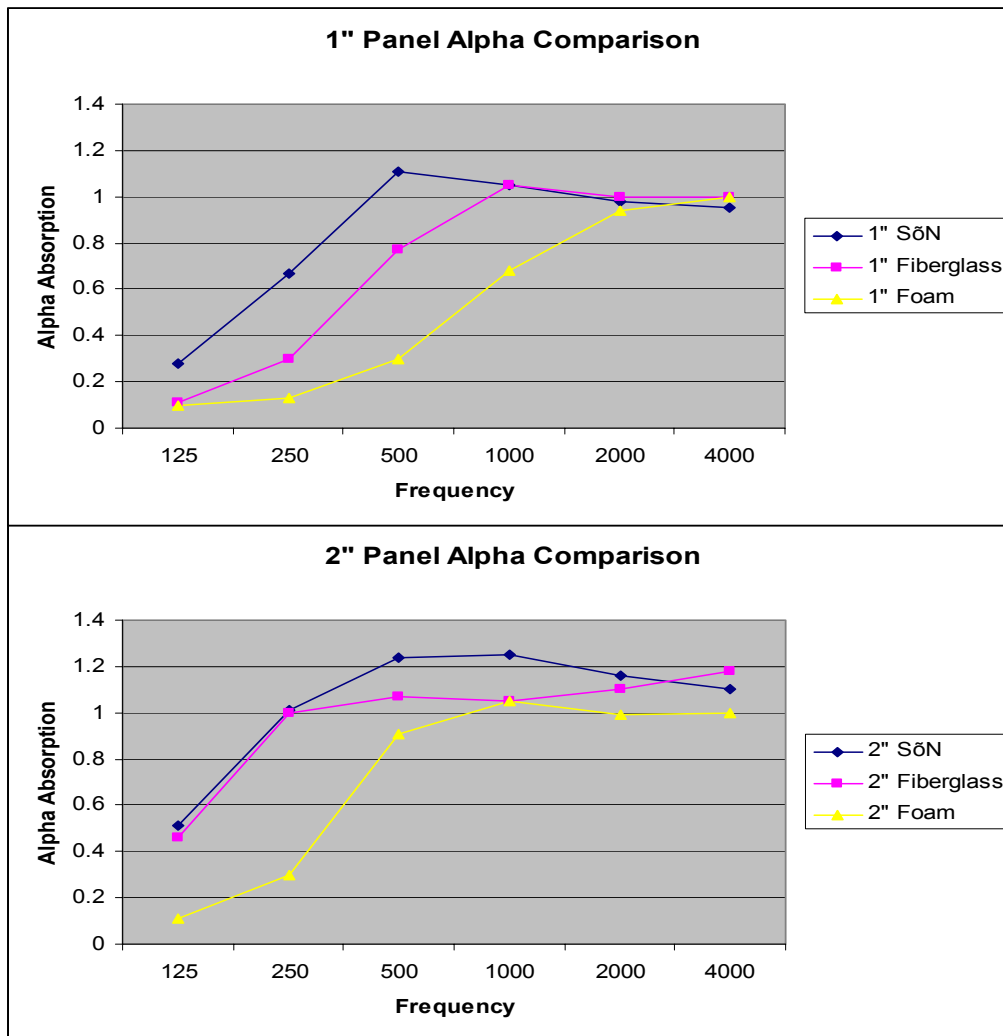
In the past, this type product was the only choice, but with a flame spread of 10 and smoke developed 95 as a unit, the use of such products could be deemed as negligent! We have developed better acoustical products that are patented, have the highest NRC's, best compressive and tensile strengths, best fire ratings and do not cost more than our fiberglass counterparts. There is a better choice: SōN™ Panels by MSR, Inc.

Notes on Absorption Coefficients

Alpha and NRC – What do they mean?

Absorption devices are defined by a coefficient called Alpha. The higher the Alpha coefficient, the better the absorption character of the panel. Alpha is specified in octave bands from 125Hz to 4kHz, and one would want as high a number as possible across all the bands of frequencies. An average number, across the four middle bands from 250Hz to 2kHz is known as the Noise Reduction Coefficient (NRC), and is useful for fast comparison between products.

However, do notice that many products have limited usefulness at low frequencies, and this may result in a boomy character to the sound of a treated room. Pay close attention to the bands below 500Hz when choosing your panels. The chart below shows a comparison of SōN panels against standard fiberglass and foam materials of equal thickness. Notice that SōN panels are often over 20% more effective than their fiberglass counterparts. Also notice that in some cases (500Hz), SōN panels are 3 times more effective than foam sheets!



Installation Recommendations

There are several installation options for SōN panels. It is recommended to place the panels on furring strips in order to provide an air gap behind them. This improves their low frequency performance and can in some cases improve esthetics. Mounting clips are provided with the panels and they should be used in conjunction with adhesives to secure the panels to the wall surface. Do NOT use these impale mounting clips on their own. Please follow one of the recommendations below, or contact MSR, Inc. for further advice.

