



SOUNDX™

Flexible Acoustic Barrier Sheet

PRODUCT DESCRIPTION

SoundX™ flexible sheets are used for sound abatement in a variety of applications. The high specific gravity of these mass-loaded sheets absorbs sound waves and prevents transmission of sound. SoundX materials are available as:

- SoundX EVA – a non-PVC solution primarily used in the Transportation market
- SoundX 100 – a non-barium and self-extinguishing PVC-based solution for Building & Construction or Industrial applications

VALUE SOLUTION

Effectively reduce noise while increasing production efficiency.

From walls to flooring, unwanted noise can negatively impact the end-user experience. SoundX flexible solutions diminish sound in end-use applications and can help grow the bottom line during production. Customized sheet sizes or rollstock lengths can reduce scrap and optimize shipping and handling. Products can be differentiated with custom colors and finishes.

Sound Abatement Properties

The Sound Transmission Class (STC) for both SoundX 100 and SoundX EVA @ 1 lb/sf = 26. In addition, SoundX 100 and SoundX EVA both met or exceeded the predicted sound reduction as calculated by the limp mass law:

$$dB = 20 * \log (f * m) - 33 \text{ (where } f = \text{ frequency in Hz and } m = \text{ mass in lb/SF)}$$

This should provide the sound engineer confidence that SoundX 100 and SoundX EVA will provide the anticipated component sound reduction.

KEY CHARACTERISTICS

- Mass-loaded flexible sheet provides effective sound abatement
- Available as PVC-based SoundX 100 or non-PVC SoundX EVA acoustical barrier sheets
- Easy to fabricate in a wide range of processes
- Easily cut on-site with standard tools and equipment
- Custom sheet and rollstock widths and lengths, gauges or basis weights (see chart for capabilities)
- Meets FMVSS 302, can also meet UL HB
- Reliable for RoHS-compliant solutions



TARGET MARKET AND APPLICATIONS

SoundX solutions are formulated for use in a range of applications, including:

Building & Construction

- Installed directly to studs and joists to reduce sound in home theaters, condos, and residential applications
- Soundproof rooms
- Wall constructions
- Lagging for pipe and duct work
- Outdoor noise barriers (highway, fencing, temporary sites)

Industrial

- Oil or natural gas transmission lines and platforms pipe wrap to provide sound abatement
- Industrial equipment
- SoundX is often laminated to foam, scrim, aluminum foil, etc. to provide optimum sound reduction
- Appliances – silencer for dishwashers, air compressors and industrial air conditioners

Transportation

- Automotive sub-flooring and interior cabin walls
- Heavy and medium truck driver and sleeper cabin sub-flooring
- Agricultural equipment roof pans and sub-flooring

Spartech provides two current product offerings for the Sound Abatement industry:

SoundX 100 – Highly mineral filled, flexible PVC sheet with a 1.95 g/cc density

- FR – capable of meeting UL94 HB
- Flexible to -4° F (wrap around a 1" mandrel), service temp -20° F to 150° F
- Die cut or shallow draw thermoformable (230° to 250° F starting temps)
- Easy to adhere with water based and hot melt adhesives

SoundX EVA – Highly mineral filled, flexible EVA sheet with a 1.95 g/cc density

- FR – capable of meeting FMVSS 302 (approx. burn rate of 50 mm/min)
- Flexible to -20F (wrap around a 1" mandrel), service temp -20° F to 150° F
- Die cut or shallow draw thermoformable (210° to 230° F starting temps)
- Easy to adhere with water based and hot melt adhesives

CAPABILITIES

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Gauge Capability	Gauge Minimum: 0.0400" (0.4 lb/SF)	Gauge Maximum: 0.200" (2 lb/SF)
Sheet Width Capability	Width Minimum: 24"	Width Maximum: 60" < 0.150" / 54" > 0.150"
Sheet Length Capability	Length Minimum: 36"	Length Maximum: 130"
Roll Width Capability	Width Minimum: 24"	Width Maximum: 60" < 0.150" / 54" > 0.150"
Roll Length Capability	Length Minimum: 25 LF	Length Maximum: 400 LF < 0.150" / 125" > 0.150"