Subject: Vb vs Damping and Acoustic Absorption
Posted by dB on Wed, 12 Jul 2006 07:46:54 GMT
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Hi,(Wayne, maybe you had a similar situation before?)I am building this speaker for a 10" and the resonance curve (output) is good for a box with 60L-80L(2.1cf-2.8cf). Now, if I use a good acoustic absorbent about 20mm(3/4") I will lose about 17.5L(0.6cf). All computed (w/speakers, port and others protusions) I will end with a 35.7L(1.3cf) box what gives a really bad shaped curve. And it's about half the volume of the designed project and not only 10%. If I use an acoustic absorbent from the auto industry (like the one they use under a car) it's a film of about 1L of volume per speaker. Not the best Damping factor but the Total volume will be about the one that was designed for. What is the best compromise? (Also -- What about the 'expensive' line-X? ...anyone)RegardsCopopren (CA150-20mm) foam by Recticel: agregated polyurethane foam with an absorption grade of 12dB at 125 Hz, 20dB at 250 Hz, 32dB at 500 Hz, 37dB at 1000 Hz, 60dB at 2000 Hz.
Copopren

Subject: Re: Vb vs Damping and Acoustic Absorption
Posted by Wayne Parham on Wed, 12 Jul 2006 13:30:54 GMT
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One thing that may help you - Acoustic insulation displaces some interior volume, but it has the opposite effect. Adding acoustic insulation tunes the box as if it were larger. Some acoustic simulation programs model this effect, but to know how much adjustment is made is largely an empirical matter.