
Subject: Internal Damping Material
Posted by [FredT](#) on Sun, 17 Apr 2005 14:18:56 GMT
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I was wondering if anyone has compared the materials that are commonly used for internal damping in diy enclosures? Specifically, has anyone done comparisons of eggcrate foam, R11 or R13 home insulation, and Armstrong #420 5/8" rigid fiberglass. My own superficial impression (without doing any valid measured comparisons) is that the eggcrate foam doesn't absorb very much sound, the home insulation seems to do a good job but is too thick for some applications, especially in small volume enclosures, and the 5/8" rigid fiberglass seems to be the most effective. I have used all three, but when I have completed an enclosure I'm not inclined to remove and reinstall damping material (especially the rigid Armstrong ceiling stuff) through the driver holes, so I haven't done any valid comparisons. Wayne, Bob, others, what do you think?

Subject: Re: Internal Damping Material
Posted by [Wayne Parham](#) on Sun, 17 Apr 2005 18:07:21 GMT
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I also think that position is important. If you take a 1" thick absorbent material and place it on the wall, it will act differently than if you place it a few inches out away from the wall. It will do a much better job of absorbing midrange when spaced further out. So the thicker insulation acts differently by virtue of its position by way of its thickness, and that may be as important or more so than its absorption coefficient.

Subject: Re: Internal Damping Material
Posted by [GarMan](#) on Mon, 18 Apr 2005 17:41:37 GMT
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I haven't had the exposure to different speakers like Wayne or Bob, but the of the four sets of cabinets I've built so far, I haven't had any problems with eggcrate not absorbing. Of course, my only method for testing is sticking my ears against the port to listen for any midrange. I've been lucky to date.gar.

Subject: Re: Internal Damping Material
Posted by [Bob Brines](#) on Tue, 19 Apr 2005 01:47:25 GMT
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I line all of my boxes with Armstrong #420. It is much easier to work with than batting or loose fill. I find that a single layer on the four walls eat anything above 500 Hz. It cuts with a knife, holds its shape and with a little 3M #77, it stays put. Of course, I work with pipes and BR's. Stuffing a sealed box is a whole 'nother thing. Bob

Subject: Re: Internal Damping Material
Posted by [GarMan](#) on Tue, 19 Apr 2005 12:24:55 GMT
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Bob, I'm not familiar with what Armstrong #420 is. Can you please elaborate or provide link for more detail. thanks, gar.

Subject: Re: Internal Damping Material
Posted by [FredT](#) on Tue, 19 Apr 2005 21:52:44 GMT
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It's compressed fiberglass ceiling tiles with a plastic surface used to make a suspended ceiling. Very good acoustic properties, and to use is inside a speaker enclosure you peel off the flexible plastic surface. But it's really nasty to work with.
Suspended Ceiling

Subject: Re: Internal Damping Material
Posted by [theNoid](#) on Thu, 21 Apr 2005 14:23:56 GMT
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I have been building speakers and subwoofers for many years. Combined total well over 100 enclosures easily. For sealed boxes I always use the standard "fluffed" polyfill from Wal-Mart or other craft stores. For ported boxes I have always used egg-crate foam or polyfill batting glued to the inside walls. As mentioned, of the many speakers I have built, I have never had a problem nor a complaint about either. Cheap, easy, and it works. Noidster
