Subject: R13??
Posted by Mark Andrews on Sun, 11 Mar 2007 18:34:23 GMT
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Guys can someone tell me what R13 is?I can get:1) Poly fill2) Fibre Glass3) Compressed fibre glass (high density almost like sheets)TaMark

Subject: Sound absorbtion
Posted by Wayne Parham on Sun, 11 Mar 2007 19:36:26 GMT
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R13 is simply fiberglass insulation that's 3.5" thick, uncompressed. It's used to absorb unwanted midrange frequencies inside the cabinet. Bass passes right through it because it isn't thick enough to absorb bass energy, and that's exactly what we want. We want the bass to react with the Helmholtz resonator formed by the bass-reflex cabinet. But midrange and higher frequencies would develop stading waves inside the cabinet, and we don't want that reflected back to the cone. So by using fiberous material inside, we absorb midrange and reduce standing waves.Insulation InfoThe same thing happens in rooms, but it happens at lower frequencies because of the size of the room. Standing waves setup inside rooms and cause peaks and dips at bass frequencies. So the best rooms are those that provide some damping. In North America, many homes are made using a framed drywall construction. This uses drywall panels mounted on studs with insulation in between. The panels flex fairly easily, and this allows some damping which actually does a lot towards reducing the strength of room modes.The Sound Absorption Properties of Walls

Subject: Re: R13??
Posted by dB on Mon, 12 Mar 2007 00:32:56 GMT
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I would not use fiber glass (sorry Wayne) because it does not last. And is not healthy.I would look under the names of "SoundProofing and Acoustic Materials" and other industrial type materials for construction, etc. with the same properties (is only my opinion). I like to open a speaker after 20 years and find the material intact, not like dust in the bottom. A good material similar in texture to figer glass is the white snow that goes in the upholstery of sofas (and pillows - home use) and you can find it in any supermaket or similar department store.

Subject: Re: R13??

Posted by Wayne Parham on Mon, 12 Mar 2007 01:33:07 GMT
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I would agree that fiberglass in the lung is not a good thing, but I don't think good quality R13 used in loudspeakers disintegrates to become airborne in enough quantity to hurt anyone. I have confidence in the ability of R13 to absorb sound and in its durability. I've never run into trouble with it disintegrating, even in adverse conditions like humid and dirty environments. Other products are fine too, so it's not a problem to substitute it with another similar fiberous material. But I think R13 works good, and I don't find it troublesome with respect to disintegration.

Subject: Re: R13??
Posted by Mark Andrews on Mon, 12 Mar 2007 05:02:31 GMT
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Thanks Wayne - but what is R13?TaMark

Subject: Re: Sound absorbtion
Posted by Mark Andrews on Mon, 12 Mar 2007 05:03:55 GMT
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Thanks WayneI missed this bit dohTaMark

Subject: Re: R13??
Posted by dB on Mon, 12 Mar 2007 11:17:09 GMT
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Is insulation fiber glass.

Subject: Re: Sound absorbtion
Posted by dB on Mon, 12 Mar 2007 11:45:37 GMT
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Very nice info Wayne. 5 Stars.(Wayne, for the first time I'm going to use a 3/4" Layer of Polyurethene Foam available from Spain i.e. COPOPREN by Recticel) There are a lot of technologicaly developed new materials (sound absorbing) available." A promising sort of material would be one that absorbed sound (rather than re-directing the air flow as leather does). Traditional sound absorbers are fabrics, such as batting, or knotted carpets. More recently, a number of high-tech sound absorbing fabrics have been devised which may work somewhat better, and are quite a lot thinner--very important in the restricted space of a concertina end. Sound-absorbing acoustic fabric produces a different sound quality The material I tried is a rough ribbed polyester fabric made by JM Lynne Co. and sold on the net by Netwell Noise Control under the name "silence wallcovering" for application to the walls of rooms; it is said to be "designed for light sound absorption where the human voice and other mid range sound sources are a culprit". It is thin: 0.175" (about 4.4mm). The mill width is 54 inches, so a single linear yard at that width will cut out into a dozen or more pairs of baffles, even large ones; it is light in weight, with a linear yard (54" wide x 36") weighing 24 ounces. The fabric is available in 24 colors (I have used black and ivory.) A yard costs USD 22.50 (GBP 15.85, EUR 25.60). See below under Suppliers.This particular acoustical fabric is not at all air-tight--if you hold it to your lips you can blow through it just about as easily as through a single layer of ordinary t-shirt fabric. "in www.concertina.com(http://www.concertina.com/gaskins/baffles/)
Acoustical Fabric

Subject: Re: Sound absorbtion
Posted by Wayne Parham on Thu, 15 Mar 2007 14:30:27 GMT
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Here's a thread about R13 alternatives:Damping stuff
