Subject: R11/R13 Fiberglass Insulation and Environmental Health
Posted by Hodel on Fri, 05 Apr 2002 18:08:30 GMT
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Is anyone aware of any health problems by using fiberglass in the interior of enclosures. It seems as the woofer pushes air thru the port, it also will spew fiberglass particles into the room as well???

Subject: Re: R11/R13 Fiberglass Insulation and Environmental Health
Posted by replay on Fri, 05 Apr 2002 19:19:40 GMT
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absolutely, which is why i use asbestos for insulating. (ha!)

cheers,

george

Subject: Re: R11/R13 Fiberglass Insulation and Environmental Health
Posted by Adam on Sat, 06 Apr 2002 01:19:29 GMT
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Lol... Well among other things, you're at least talking fibreglass particals getting sucked into the motor, which could cause big problems.

If you do use fibreglass, try to get the oil covered stuff, it's like a weird greenish brown colour. I don't even know if they sell it anymore but I have found some in some old speakers and used to have some laying around the house. You won't have much of a problem with it.

Adam

Subject: Re: R11/R13 Fiberglass Insulation and Environmental Health
Posted by Maxjr on Wed, 10 Aug 2011 21:57:21 GMT
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I'd like to rise this from the grave instead of creating a new thread. Is there any substitute for the R11 or R13 insulation that does not use fiberglass? How about polyfill?

Subject: Re: R11/R13 Fiberglass Insulation and Environmental Health
Posted by Wayne Parham on Wed, 10 Aug 2011 23:34:19 GMT
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I prefer R13, real fiberglass. It seems to work best.

You know, the speaker doesn't really push this stuff out the port. When the speaker is first used, some of the loose fibers break off but after a very brief time, it settles down and doesn't give off practically anything. Just run the speaker for a few hours in an unused room for "break-in time" if you're worried about it. After that, the speaker won't produce any fibers for you to be concerned about.

There's a lot more stuff in the air - mold spores, pollen, dust, microbes, pet dander, radon, dead skin, particulates, gases, etc. A microscopic amount of glass fiber is pretty benign compared to all the other stuff in the air.

Subject: Re: R11/R13 Fiberglass Insulation and Environmental Health
Posted by Maxjr on Thu, 11 Aug 2011 01:57:55 GMT
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I guess I'm just scared of the fiberglass hairs flying out the ports, not being able to see them, and breathing them in.

If we use R13, is there a netting or spray that can be used on the fibers to keep them from separating and getting air born?

Subject: Re: R11/R13 Fiberglass Insulation and Environmental Health
Posted by Bill Epstein on Thu, 11 Aug 2011 12:24:36 GMT
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Is there "netting"? Sure

http://www.silkies.com/itemdy00.asp?T1=08&Cat=PLUSSIZE

The X-Tra Queen Size is for hip sizes, according to the sites size chart of up to 64"!!! Should handle netting for Voice Of The Theatres!

Subject: Re: R11/R13 Fiberglass Insulation and Environmental Health
Posted by Maxjr on Thu, 11 Aug 2011 18:46:01 GMT
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That is a great idea! It should be fine enough to do the job. Does anyone know if they will change how the 4pi sounds?

Subject: Re: R11/R13 Fiberglass Insulation and Environmental Health
Posted by Bill Epstein on Thu, 11 Aug 2011 19:13:38 GMT
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Maxjr wrote on Thu, 11 August 2011 14:46 That is a great idea! It should be fine enough to do the job. Does anyone know if they will change how the 4pi sounds?

Make the sound a little "fat"?

Give the music "weight"?

Subject: Re: R11/R13 Fiberglass Insulation and Environmental Health
Posted by Maxjr on Thu, 11 Aug 2011 21:42:38 GMT
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Bill Epstein wrote on Thu, 11 August 2011 14:13Maxjr wrote on Thu, 11 August 2011 14:46 That is a great idea! It should be fine enough to do the job. Does anyone know if they will change how the 4pi sounds?

Make the sound a little "fat"?

Give the music "weight"?

I'm fairly new to home audio. What exactly does this mean? Is it good?

Subject: Re: R11/R13 Fiberglass Insulation and Environmental Health
Posted by Wayne Parham on Fri, 12 Aug 2011 03:28:08 GMT
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Maxjr wrote on Thu, 11 August 2011 14:46 That is a great idea! It should be fine enough to do the job. Does anyone know if they will change how the 4pi sounds?
Bill Epstein wrote on Thu, 11 August 2011 14:13Make the sound a little "fat"?

Give the music "weight"?
Maxjr wrote on Thu, 11 August 2011 16:42I'm fairly new to home audio. What exactly does this mean? Is it good?
I think Bill was just having some fun, playing with audiophile words, making a double-meaning with them.
Audiophile wordsIn all seriousness, I think using a mesh over the port will have little or no effect at low volume levels but as volume is increased, it will tend to make the alignment shift nearer to a sealed cabinet.

Subject: Re: R11/R13 Fiberglass Insulation and Environmental Health
Posted by Bill Epstein on Fri, 12 Aug 2011 11:40:49 GMT
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Sealed? Did someone say sealed?

JBL 2226H, 2.5 cu ft, sealed; F3=91.3 Hz, F6=83.5

That would be technically known as "Jack Sprat Bass"

File Attachments
1) 2226 closed.bmp, downloaded 4766 times
2) Cheeky_monkey.jpg, downloaded 4701 times

Subject: Re: R11/R13 Fiberglass Insulation and Environmental Health
Posted by Wayne Parham on Fri, 12 Aug 2011 14:58:40 GMT
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Subject: Re: R11/R13 Fiberglass Insulation and Environmental Health
Posted by Wayne-o on Sat, 13 Aug 2011 01:45:50 GMT
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On another note some people have bad reactions to fiberglass. There is a new white fiberglass that has long curly fibers and is better as far as breaking up. I have tested it but, can not say it will out perform the pink or yellow stuff.

Subject: Re: R11/R13 Fiberglass Insulation and Environmental Health
Posted by sippy on Tue, 06 Sep 2011 13:54:22 GMT
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Hi there,
This is a topic i was going to ask about.....
I work with composites, ie boat building, race car / motor bike body parts and surfboards using both glass and carbon in both open and chop veriety. We in the industry are about as anal as it gets regards handleing / working with these materials. One would think because the cloth is sized to help stability / the bonding process during lay-up would go some ways towards mitigating the issue of loose fibers - WRONG!

Now, obviously the quantity of loose fiber is slightly less in a loudspeaker than in say a 30ft hull, BUT insulation glass is a non sized random mass (for want of a better description) and is downright evil an i personaly wouldnt use it as a speaker stuff.
Obviously there are ways to get around this loose fiber problem:
1. Work outside when doing your stuffing

2. Wear a modicum of safty items - ie use disposable gloves and goggles, 'Ooooo, my eye itches' and you forget and rub it with fibered fingers.

3. IF you have to stuff in a closed space, wear a mask AND NOT ONE OF THOSE PAPER JOBBIES WITH A STRIP OF METAL THAT GOES OVER YOUR NOSE - they do a sum total of nothing regarding protection, get yourself a cheap cartridge filter mask - itll make diy'ing a whole lot more pleasent (buy one befor you make your cabinets out of MDF... considered to ba as evil as f/g)

4. If yo get in a mess (fore-arms are the usual suspect spot) dont wash yerself with warm or hot water as this will open your skins pores and alow fiber ingress, rinse without rubbing with plenty of COLD water, then use detergents.

I'd say if you think about the stuffing stage, you could remove the possibility of the cabinet breathing out loose fibers by sizeing the glass as its installed with realy well watered down pva glue sprayed on useing a plant spray, beforethe stuff goes in. These are dirt cheap - 99 pence in the uk - not a huge drop in the ocean compared to the cost of your spanking new speekers or health.
As for the center of cabinet drape stuffing, could it not be bagged with something like silk or very light nylon lineing material? I dont see any problems with this idea other than slightly more effort.....

Subject: Re: R11/R13 Fiberglass Insulation and Environmental Health
Posted by Wayne Parham on Tue, 06 Sep 2011 16:02:20 GMT
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I absolutely hate working with the stuff. I've spent enough hot summer Oklahoma evenings in an attic running cables to learn to absolutely loathe fiberglass insulation. Nothing worse than being in a hot, sweaty attic. Even just the few minutes putting the R13 in a loudspeaker in a nice cool air-conditioned room kinda sucks.

But I've tried other damping materials over the years and find most to be lacking, some really bad. What I often find in other padding materials is they are less effective at attenuating midrange. Sometimes not only that but they can also modify cavity resonance and detune the box. I'm not sure if the problems with other materials are that the fibers are too heavy and/or rigid to vibrate and absorb energy or if it's more of a bulk/mass thing where the sheets just acts like a solid block. Could be a little bit of both. But whatever the case, I find good old fiberglass insulation works best.

Fiberglass insulation may be a little irritating to your skin when you install it, but once it's there it doesn't enter the air. The sound of the loudspeaker may vibrate the fibers, but they don't break free. And glass is a quite benign, really. It does not cause cancer, and is probably one of the safest fiberous materials to use. It's not like asbestos, but probably gets associated with that in some people's minds because it looks similar. So I think it is probably the best, safest and most effective material to use for this purpose. I find no downside to using the stuff.

After the damping material is installed, once it is in the speaker and has settled down, I don't object to it at all. I don't find that it sheds enough particulate to matter. There's far too much other particulate in the air for me to get excited about the insulation inside a speaker. The insulation in a loudspeaker pretty much just sits there, even when the cabinet is vented. Subs rarely use insulation, so the kinds of cabinets that pump a lot of air don't have the stuff in them. Speakers used as mains don't have the same kind of displacement.

One look at the HVAC ducts in a home, the way they're "sealed" with duct tape, is enough for me to realize that's ten-thousand times more prone to pushing R13 into the air supply than a loudspeaker. So my thinking is if you're worried about fiberglass in the air, focus on that first. If you can get the environment so clean that the tiny particulate produced by a loudspeaker makes a difference, I think you would pretty much be living in a sterile Class 100 cleanroom.

Subject: Re: R11/R13 Fiberglass Insulation and Environmental Health
Posted by jtwrace on Mon, 06 May 2019 17:15:34 GMT
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Like you I hate working with fiberglass insulation, have you ever used Quiet Batt?
https://www.soundproofcow.com/product/quiet-batt-30-soundproofing-insulation/?attribute_size=16in+on+center+spacing+(42sqft)&gdffi=d462e8110af047aba70108dac6bd4aa2&gdfms=B32F998E05FE4A36A6A355EDFFB77653&gclid=Cj0KCQjwtr_mBRDeARIsALfBZA7bR-UhJrC7IeBeXVCy1q4jB7QgYeyOpAXZFSUzpzgUcirx3VkpVQ4aAtlgEALw_wcB

Subject: Re: R11/R13 Fiberglass Insulation and Environmental Health
Posted by Wayne Parham on Tue, 07 May 2019 02:40:28 GMT
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I've tried a handful of products, some that were somewhat close to R11/R13 and some that were almost totally useless. So after a handful of trials, I decided to stick with R11/R13. That's tested by measurements and that's what I trust.
