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Subject: MDO - Instead of Plywood

Posted by [iplayforme](#) on Thu, 12 May 2022 23:01:45 GMT

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Hello all,

First post here.

I'm into a 2Pi tower build and have mixed feelings about my progress. It's going along OK but I'm disgusted with the plywood quality and price. \$80/sheet and it seems like crap. Plenty of voids and the face veneer is paper thin and keeps chipping. The glue is junk. Later found its soy based. Generally, the further along I get the more annoyed I am over it.

I know I could have used MDF but I hate the stuff and I think it's harder to work with. At least with ply I can plane my cuts a little it need be. I'd like MDF if it were CNC'd and the cuts perfect.

Has anyone tried MDO. It seems like a better product than most plywood. I think the glue is bound to be superior given its made for outdoors. At one point I wanted to build a boat and in the course of research found people using it instead of marine plywood.

Anyway, just asking.

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Subject: Re: MDO - Instead of Plywood

Posted by [Rusty](#) on Fri, 13 May 2022 11:33:20 GMT

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Do you have access to Baltic birch ply? It has no voids like even MDO has. As long as you're paying premo these days. It's the best quality. Really though, I don't think MDF is hard to work with. It cuts very easily. And very cheap.

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Subject: Re: MDO - Instead of Plywood

Posted by [Wayne Parham](#) on Fri, 13 May 2022 13:43:31 GMT

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You definitely don't want cabinets with any plywood other than Baltic Birch. Those voids aren't just a problem structurally - even more important to the sound - they are a problem acoustically. Debris breaks off within the voids and it buzzes. That's a very common problem for speakers made with plywood. So use either Baltic Birch plywood or MDF/HDF.

To tell the truth, MDF is actually better than Baltic Birch for sound. It is nearly a homogenous mix of wood pulp and glue so its resonant properties are easier to deal with. Knock on it with your knuckle and you'll hear what I mean - it's a dead thud. Most wood panels give a sharper rap, which clouds the midrange and give a distinctive "boxy" sound. So MDF to me is the best material to use unless the speaker will be moved a lot or subjected to high humidity, in which case

I would suggest Baltic Birch.

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Subject: Re: MDO - Instead of Plywood

Posted by [iplayforme](#) on Fri, 13 May 2022 18:24:43 GMT

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Well, I guess I better get comfy with MDF. I'll get these together for now and work on it. I have to admit I half-axed my effort a bit with cutting. Honestly it's been a while since I worked with wood and I tried to cut with a circular saw and then plane the edges true. I just don't want a table saw in the garage. I might try a track setup for the saw and or look at how I can use a router to make perfect edges. Thanks for the replies.

John

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Subject: Re: MDO - Instead of Plywood

Posted by [rvsixer](#) on Fri, 13 May 2022 21:54:27 GMT

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Cut your stock about 1/16" oversize on any exposed edges (be it baltic or MDF/HDF). Use a flush trim bit in a router for a perfect matching edge everytime.

Access to new Baltic birch right now is all but impossible due to a certain conflict. I am looking into Eucalyptus ply right now, its supposed to be void free etc. Otherwise I am going to use my most hated fab material MDF :evil: .

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Subject: Re: MDO - Instead of Plywood

Posted by [iplayforme](#) on Sat, 14 May 2022 00:22:50 GMT

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I actually threw in the towel on my cabinets for now. The plywood is such junk I can't stand to devote any more time on it. I cut the hole for the tweeter and the outer ply tore off all the way to the woofer hole. No wood taken with it on either side. The glue just failed. I called Lowes and have to call back tomorrow but I'm shooting for a refund and might dispute the CC charge. It's just \$160 worth of junk. It's getting hard for anyone that doesn't protest or play video games for fun.

I ordered 3 sheets of MDO from a place somewhat nearby called Harbor sales. It's called Medex. Supposed to be somewhat moisture resistant which is pretty immaterial but their talking formaldehyde free adhesive which makes me nervous. A lot of "friendly" adhesives seem weaker. They say 30 days till it ships so I might try to get Lowes to give me MDF in exchange, but I am starting to think everything they sell at those big stores is of a lesser grade.

I have nearly all the steel and wood to build an ultralight airplane. It's called a Legal Eagle. The project never really got off the ground, so to speak. I paid \$2500 for that order 7 years ago. Paid

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extra for German steel tube. I can't imagine what that would cost today. I'm sure most of it is not available.

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Subject: Re: MDO - Instead of Plywood  
Posted by [rvsixer](#) on Sat, 14 May 2022 00:26:57 GMT  
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Hah small world, I did a homebuilt too....my username should give it away lol.

Hmmm I just did a google search for Medex. Seems its not MDO but a more environmentally friendly MDF? Do I have an incorrect link?::  
<https://www.roseburg.com/product/medex/>

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Subject: Re: MDO - Instead of Plywood  
Posted by [iplayforme](#) on Sat, 14 May 2022 01:26:31 GMT  
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Hat's off! That's a real undertaking. I wonder how many people can wrap their mind around what an accomplishment that is. By all appearances there's no better choice than a Vans. They seem to really have it together. I was always lusting after something with tandem seating. I guess that's the RV8. I also liked the Bearhawk Patrol, but that's tube and fabric with all aluminum wings. Anyway, congratulations that is a great accomplishment and end product.

I meant to say MDF. I guess I have MDO on the brain. I was knocking on some cheap parts express speakers I put together and have to say they do feel nice and dead. So I'm going to try MDF.

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Subject: Re: MDO - Instead of Plywood  
Posted by [Rusty](#) on Sat, 14 May 2022 11:38:40 GMT  
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Well. Building a pair of speakers ought to be a walk in the park next to an airplane. That's really putting your skills on the rudder so to speak. Taking a look at your Legal Eagle reminds me of that old movie. Those Magnificent Young Men in Their Flying Machines. I think the technology has matured a bit since the era that movie depicted. As they sang, "they go up-iddy up, up, then go down-diddy down, down. My sisters husband flies. He has a unfinished kit type craft. Two seater. My sister will no longer be a passenger she says. The engine cut out from vapor lock once after take off. They landed safely. But she vowed never to be co-pilot again. He takes the dog with him now.

Your circular saw guide and a router will do a neat trick on that MDF. That's how I built my

speakers. Do post pics please.

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Subject: Re: MDO - Instead of Plywood

Posted by [iplayforme](#) on Sun, 15 May 2022 18:59:32 GMT

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You're right Rusty. You should see what's involved in that wing. Someday I have to get started. I'm sure RVsixxer can tell you, you have to do a little something each day and eat the elephant one bite at a time. Not saying I know this from experience but that's the advice on kit planes and I guess anything else that big. The guy that designed the Legal Eagle, Leonard Milholland is 98 now. the EAA did some interviews with him a while back. Such a great example of that generation. He pretty much rolled his sleeves up and set out to design an ultralight legal aircraft and surprised a lot of people. It may not look too impressive, but for what it is, it's quite strong and has no bad habits. Many compare it to a Piper cub in the way it flies.

I bought a True Trac saw setup which looks pretty handy and they refunded my money for that crappy plywood. I have 3 sheets of that Medex on the way for \$80 each delivered. I'm going to use a two part glue called Unibond. It's the same as Weldwood Plastic Resin just a liquid not powder. Totally un-necessary, but in testing various epoxies and glues for that Legal Eagle project I came to like that kind of glue. Pretty easy to mix and has a nice long open time. Dries like a rock and I believe is related to the adhesive that binds MDF together. I like epoxy too but I built 2 small boats years ago and got just a little sensitized to it. I'll use it when need be but still avoid it. I can veneer with the Unibond I think too.

Will post pics. Going to make every effort to make Wayne proud. These will go to my nephew some day so I'll give some consideration to that.

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