



Tooling News

PRECISION BOARD PLUS HDU



**"One product,
many uses"**

Vacu-forming With HDU

North American Aviation

North American Aviation's list of accomplishments reads like a who's who of U.S. Aviation Superpowers. They have been an intricate part of our country's dominant air transportation industry since the early 90's. Specializing in composite interior and exterior aircraft parts, NAA sports a state of the art in-house Tooling, Design, and CNC division. Be it low temperature or high temperature, fiberglass or carbon fiber, pre-preg or epoxy molds, master models or mockups, they have the experience to produce the most difficult configurations with precision and accuracy.



With the elevation of today's technology and advancement in superior materials, NAA naturally uses the top of the line tooling board from **Coastal Enterprises**. I had the opportunity to speak with the director of Tooling and CNC div., Tyler Allen, about their department's use of Precision Board Plus and how it has become an integral part of their company's success. The engineering team will begin by designing a part, send the final design file to Tyler's department, launching his group into action CNC'ing the pattern.

When vacuum forming, if the tool is going to see heat, they like to use **Precision Board High Temp Plus, PBHT-60**, which will hold its configurations at a casual 300 degrees, they will then drill holes into the board and vacuum form kydex or lexan parts off that tool. When they are using Precision Board Plus on small production runs it is stable enough to machine and make the parts directly. Utilizing it for Master Molds NAA will procure **PBHT-30** or **PBHT-40**, mill it and manufacture a production tool out of the HDU master. Here is a picture of an interior vacu-formed part made from Precision Board Plus by NAA.

Tyler's first step to finishing Precision Board Plus is to apply an industrial lacquer as a sealant, sand smooth, and then apply mold release wax to ensure an accurate and detailed part. Because the HDU has been lightly coated with the release wax the composite can be easily removed from the mold with minimal disruption of the actual part.



Another way NAA utilizes Tooling Board is by using our Low Temp Precision Board Plus for vacuum and CNC holding fixtures. Instead of building a heavy aluminum composite holding fixture they use a block of PBLT-30 or PBLT-40 cut the pattern and relief into it, select the tooling hole locations and hold the parts to cut. After using our high temp material as a master tool they will then come back and machine relief into it and use that as a CNC holding fixture. The advantage to using HDU as a holding fixture is the fact that it is much lighter than aluminum, it offers practical pliability in case of machine error and it does not affect their router bits when cutting relief. Imagine drilling 8" inches into hardened aluminum, how much fun do you think that bit is having?

Tyler and NAA are witnessing a composite tooling boom with the innovation of new technologies and the development of new aircraft. This increase is especially notable because of the OEM's block point design changes that are being implemented to refine and upgrade interiors allowing for sleeker ultramodern designs. These advances in technology have produced quite the workload for companies like North American Aviation who are ready and able to handle the increase in composite tooling. For more information or to view their list of capabilities visit North American Aviation's website at www.naavinc.com.



Custom Bonding

Let Us Bond Your Next HDU Tooling Block



Coastal Enterprises offers a unique custom bonding service designed to save you time and money. All we need is a rough drawing of the tool you will be building and we will bond Precision Board Plus to your specifications using our high-strength **EP-76** bonding epoxy. EP-76 even offers the ability to match the durometer of the Precision Board Plus used, meaning bond

lines will machine as easily as the material. For more information on our Custom Bonding Service or to request a quote, go to precisionboard.com.



Call (800) 845-0745 or visit
www.PrecisionBoard.com for a
FREE sample of Precision Board Plus.
email: hdu@precisionboard.com

Great Pricing • Fast Shipments • Made in USA



Fast Curing HDU Adhesive Video

Bond HDU to a Full Cure in 30 Minutes

Quickly bond or laminate sections of **Precision Board Plus HDU** and be ready to machine, cut or carve in minutes with **PB Fast Set**. Create complex shapes, conserve material or make use of otherwise scrap pieces of HDU from your bone yard. For more information on PB Fast Set or to watch the video and learn the simple techniques, visit precisionboard.com.

PRECISION BOARD PLUS

Precision Matched for Your HDU Needs

Widest Range of Densities Available

4 through 75 pound densities all in stock, with custom densities on request.

Any Thickness You Require

From 1/4" to 24" and everything in between.

WIDEST VARIETY OF SHEET SIZES AVAILABLE

- 20"x60" • 45"x60" **NEW** • 5'x8'
- 24"x60" • 4'x8' • 5'x10'
- 30"x80" • 4'x10' **ALL IN STOCK AND READY TO SHIP**

Life of The Sign Warranty



To request a written, personalized copy of our "Life of The Sign Warranty" for a sign you've made using Precision Board Plus, contact us at: www.precisionboard.com

Interested in Having Your Company Featured in Our Newsletter?

You may have noticed we like to share interesting stories from our customers about their projects using Precision Board Plus. If you would like us to feature your company in one of these stories, we want to hear from you.

Here's what we're looking for:

- In process photos working with Precision Board Plus
- Finished project photos
- Advice for those who are new to Precision Board Plus
- Tips for working with HDU

Send us an e-mail at hdu@precisionboard.com along with any interesting details about the project.

These newsletters are sent to thousands of our customers and are a great way to build recognition for your company and share your expertise.

Certified Green

Precision Board Plus has been reformulated with eco-friendly, "Green" urethane components. The new Plus formulation has achieved a certified "Carbon Balance" of 3 to 1 and a "Rapidly Renewable Resource Content" of 23.9%. This major environmental improvement has also produced a tighter cell structure which results in more chips and less dust when cutting and machining.

Precision Board Plus now assists in meeting LEED requirements for obtaining USGBC and ICC 700 Building Credits.



Coastal Enterprises also offers a complete line of companion primers, adhesives and specialty coating products.



Call (800) 845-0745 or visit www.PrecisionBoard.com for a **FREE** sample of Precision Board Plus.
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