

## One-of-a-Kind Wine Vault for California Homeowner 'Clearly' Different Than Conventional Wine Rack



### Evonik Cyro Acrylic Transforms Room into Unique Wine Cellar

When most people think of wine cellars, they envision dark wood and deep textures. That could be changing, however, as a custom wine rack made for a connoisseur's personal wine cellar utilized a clear acrylic material from Evonik Cyro that had everyone in the neighborhood talking because of its entirely new look.

Whether red, white, blush or blends, there are literally hundreds of wine varieties and more are being created every day. For wine devotees—whether an individual, restaurant or critic—wine cellars are a common location for their favorite bottles. This distinguished collector wanted an uncommon element to this traditional safe haven for wine – transparent racks. The reason was logical. He wanted to clearly see what wine bottles he had in stock without having to remove them from the racks.

### Clearly a unique design

Wood comes in many colors, but clear is not one of them. The first obstacle faced for Architectural Plastics, Inc., the distribution, design, fabrication, and production company awarded the project, was finding a material with the structural integrity to support the weight of thousands of full wine bottles, while still being transparent. Evonik Cyro's ACRYLITE GP .944 acrylic sheet addressed the criteria established by the homeowner.

ACRYLITE GP acrylic sheet is a cell-cast acrylic sheet made to exacting standards. It offers excellent optical characteristics, thickness tolerances, light stability, low internal stress levels for consistent performance and many times the breakage resistance of standard window pane glass.

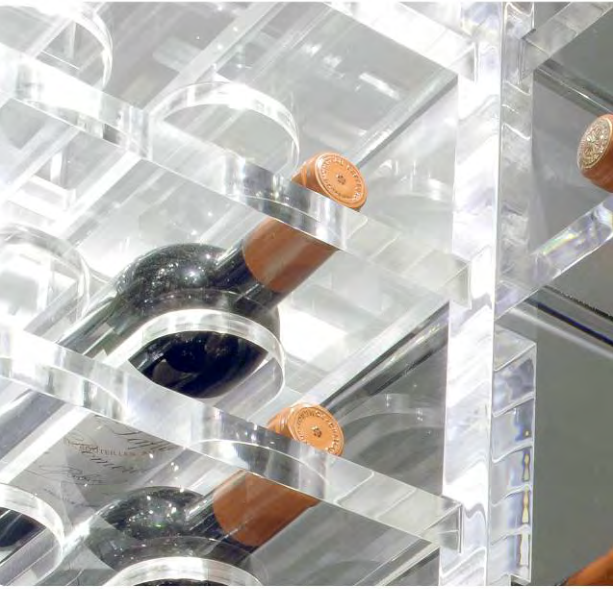
"We have worked with Evonik Cyro for over 30 years and continue to use them because of the quality of their products," said Pierre Miremont, owner of Architectural Plastics. "We knew what we were looking for and decided on the ACRYLITE GP because of its strength, clarity, and longevity for joint gluing."



### Once the acrylic was chosen, Architectural Plastics began building.

"The room was meant to resemble a bank vault in several ways: the walls, doors and countertops are all stainless steel," explained Miremont. "The wine rack had to fill a room 8' x 17' x 10' high and be able to house approximately 2,800 bottles. We ended up using nearly 9,000 lbs. of 1" and ½" thick acrylic for the wine vault."

Contained within the stainless-steel "vault," wine racks rise above a countertop, 36" off the floor and run along all four walls. Below the countertop are various bins and drawers to hold wine cases or various sizes of wine bottles, all of which are also designed in clear acrylic. The drawers have no metal hardware, and move in and out on 1" wide UHMW plastic slides—the only non-clear plastic in the room. Vertical shelving racks begin above the countertop and run to the ceiling.



Overhead, three bridges run left to right and hang 3' from the ceiling. The larger bridges, when full of wine bottles, weigh close to 1,400 pounds. They are supported by stainless steel brackets at the ceiling and the ends of the bridges rest on wine racks at each wall.

### No Toast until the Job is Done

Conceptually, the design was sound, but when it came time to begin fabrication and installation, challenges arose. The biggest was the room itself, as the initial design of the wine racks assumed the room was perfectly square.

"Since there wasn't supposed to be any space between the racks and because they completely encompass the room, mathematically, it had to be as close to square as possible. Unfortunately, that wasn't the case," said Miremont.

One common way to fix the problem would have been shimming, or using small fillers of similar material to fill gaps between larger sections. However, using crystal clear acrylic made this impossible as the fillers would be easily seen by anyone who walked into the vault. Since, they couldn't adapt the rack to the room, they adapted the room to the rack.

"In order to make sure there were no visible flaws, we had to accommodate field realities," continued Miremont. "Because everything was clear, there was no margin for error and every flaw was visible. The construction crew had to rebuild the room three times to get it as close to square as possible."

There was another problem. In the corners between the wall racks, empty spaces existed where exposed electrical equipment ran up from floor to ceiling—an eye-sore behind the crystal-clear acrylic. In order to remedy the situation, Architectural Plastics used ACRYLITE GP P95 sand-blasted clear acrylic sheet to construct L-shaped pedestals to obstruct the wiring from view.

"Once the pedestals were in place, all electrical hardware was completely hidden," said Miremont. "It took some ingenuity, but in the end, it was well worth the extra effort."





## A Cellar to Make Everyone Blush with Envy

Beauty and innovation are difficult to achieve alone, but combining them takes added time and effort. Architectural Plastics was willing to put in that little extra something and the results revealed the rewards of their hard work.

"The owner and everyone involved with the project were delighted with the finished wine cellar. Aesthetically, it is amazing to stand in the room with the interplay of light and clear acrylic in a stainless steel room. I would imagine it akin to being on the inside of a diamond—a delight to experience the various facets of the material as light travels through it," said Miremont.

Aesthetic appeal wasn't lost on only the designers and the owner. Rumors of the project had spread and people from the area came by periodically to check on the status of the remodeling as completion neared.

"People would come to watch us install the cellar over a period of a month just to see the progress," continued Miremont. "Although the owner's house was impressive in and of itself, no one had ever seen anything like the acrylic wine rack."

Now installed, the wine rack has delivered on the criteria put forth by the owner. Given the challenges, the wine rack is certainly something that deserved having a toast made in its honor.

*Architectural Plastics, Inc., Petaluma, California, helps designers, architects, corporations and museums go from concept to finished product. For more information visit [www.archplastics.com](http://www.archplastics.com) or call 800-557-5151.*

*For more information on ACRYLITE® GP acrylic sheet contact: Evonik Cyro LLC, 379 Interpace Parkway, Parsippany, NJ 07054, USA; Tel: 800-631-5384; Fax: 973-541-8445; or visit [www.cyro.com](http://www.cyro.com).*

### Evonik Cyro LLC

Evonik Cyro LLC is an Evonik Degussa Corporation group company. Headquartered in Parsippany, NJ, Evonik CYRO is a leading manufacturer of durable solid surface sheet and molding compounds, and bulk and performance monomers. Evonik Cyro manufactures and markets its durable solid surface sheet products under the ACRYLITE® trade name in the Americas. These same products are manufactured and marketed under the PLEXIGLAS® trade name throughout the rest of the world.

### Evonik Industries

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### EDITOR'S NOTE ON STYLE:

The proper treatment of Cyro is initial cap Cyro.  
Our ACRYLITE trademark is all caps.