

Southeastern PA Cold War Historical Society

Celebrating
our 16th
year



*Preserving History Through the Memories
of Those Who Created It*

The Greater Philadelphia Region has a rich aerospace heritage!

To celebrate **America250**, we'll be sharing some of the region's aerospace heritage throughout 2026!
Look for our monthly posts and Happy Birthday America!



250 AMERICA PA
NONPROFIT AFFILIATE



250 AMERICA PA
BUCKS COUNTY

Did you know?

A chemical company with its American division located in Philadelphia, PA, played a large role in the commercialization of acrylic plastic?

PLEXIGLAS®

THE ORIGINAL BY RÖHM



Otto Rohm



Otto Haas

The Rohm and Haas Company was founded in 1907 in Esslingen, Germany through the partnership of German chemist Otto Röhm and German businessman Otto Haas.

Otto Haas opened the American division of the business on September 1, 1909, from an office on Front Street in Philadelphia, while Otto Röhm remained in Germany to run a company that would eventually become Röhm GmbH.

Rohm and Haas also opened a factory in Bristol, PA in 1916.





Group photograph featuring Otto Haas with workers and their families at the Rohm and Haas plant in Bristol, PA (1921)

A brief history of polymethyl methacrylate (PMMA), aka *Plexiglas*, *Perspex*, or *Lucite*



Polymethyl methacrylate (PMMA) was discovered in the early 1930s by British chemists Rowland Hill and John Crawford at Imperial Chemical Industries (ICI) in England. ICI registered the product under the trademark *Perspex*.



About the same time, chemist and industrialist Otto Röhm of Rohm and Haas AG in Germany attempted to produce safety glass by polymerizing methyl methacrylate between two layers of glass. The polymer separated from the glass as a clear plastic sheet, which Röhm gave the trademarked name *Plexiglas*. Both *Perspex* and *Plexiglas* were commercialized in the late 1930s.



In the United States, E.I. du Pont de Nemours & Company (now DuPont Company) introduced its own PMMA product under the trademark *Lucite*.

The first major application of PMMA took place during World War II

Both Allied and Axis forces used PMMA for submarine periscopes and aircraft windscreen, canopies, and gun turrets. American B-17 bombers carried ball turrets made from **Plexiglas**. German aircraft, such as the Heinkel HE 111, featured **Plexiglas** canopies and nose panels.

What made this story even more extraordinary was that Rohm and Haas—the company behind **Plexiglas**—had operations on both sides of the Atlantic. While the American branch, based in Philadelphia, supported the Allies, the German branch supplied **Plexiglas** for the Luftwaffe and Wehrmacht.



PLEXIGLAS®

Plexiglas was chosen for the cockpit enclosure of the Brewster XF2A-1 because of the many advantages it offers aeronautical engineers. Its light weight, aging resistance, and high impact strength, make Plexiglas ideal for transparent aircraft enclosures. It is interesting to note how the curved Plexiglas sections conform exactly to the streamlined fuselage of the plane.

RÖHM & HAAS COMPANY, INCORPORATED
222 West Washington Square, PHILADELPHIA, PA.

12 AERO DIRECT



Another new product from Du Pont Plastics

SOLD BY SIGHT...THROUGH "LUCITE"
Better view... more sales-appeal... with a Du Pont Plastic

So close you can almost touch it! Yet that hot hot metal popcorn is protected while it's sizzling displayed... under a cover of sparkling transparent "Lucite," formed all in one piece. No seams or lines to obstruct your view... its heat-resisting frames or heavy aluminum or customer. The heat-resistant "Lucite" means crystal-clear, all-round vision and safe handling. And because it is one piece means lower assembly costs.

Because of the high tensile and flexural strength of Du Pont "Lucite," the one-piece top assures dependable performance. Its shatter-resistant guards against damage from brooks and blows. The manufacturer found all these properties... plus light weight, beauty, and durability... in "Lucite" acrylic resin.

In your business there may be a place for Du Pont "Lucite" or other

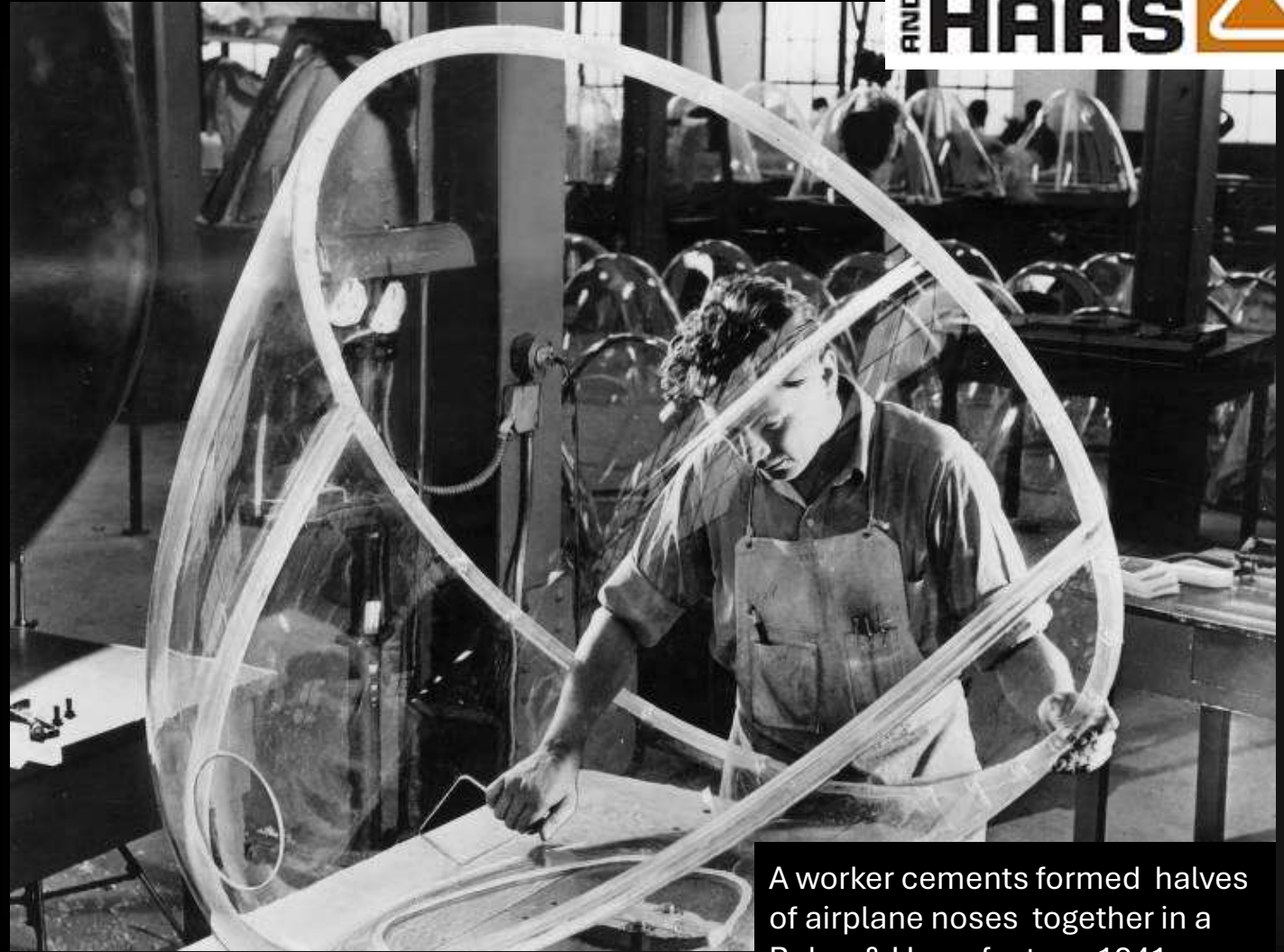
Du Pont plastics, as a means of developing a fast-selling new product or giving an old one new confidence, new beauty, and increased sales-appeal. Write now for literature. E. I. Du Pont de Nemours & Co. (Inc.), Room 7411, Arlington, N. J.

Younger models designed and manufactured by the General Electric Company, 1000 Park Ave. East, New York. For "Lucite" brand by Du Pont Manufacturing Co., 1000 Park Ave. East, N. J.



Lucite also appeared in aircraft canopies, gun turrets, submarine periscopes and boat windshields.

In 1941, America produced over 18,000 military aircraft, with 85% of the required plastics purchased from Rohm and Haas. Between 1937 and 1942, Haas's production of *Plexiglas* increased one hundred times over. In the same time frame, the price per square foot of *Plexiglas* sheeting dropped from \$2.86 to \$1.02 as production efficiencies were achieved. In 1936, the American company had sold \$13,000 worth of plastics. In 1941, the figure was \$8.9 million.



A worker cements formed halves of airplane noses together in a Rohm & Haas factory, 1941.



General view of an unidentified male employee polishing a curved panel of *Plexiglas* designed for use on the nose of an aircraft attack bomber. Several finished panels are visible in the background. Per notations accompanying the photograph, the polishing and buffing of the panels was the final step in the production of the bomber noses. This photograph was likely taken at the Rohm and Haas Company plant located in Bristol, Pennsylvania.



Man polishing Plexiglas at Rohm and Haas facility
- Science History Institute Digital Collections

Installation of
Plexiglass panels on
a Douglas A-20
attack bomber at
Rohm and Hass
Factory in Bristol, PA

(Sources: Bucks County
History Facebook Group and
Installation of Plexiglas panel
at Rohm and Haas facility -
Science History Institute Digital
Collections)



Following World War II, virtually every major retailer, auto dealership, and gas station soon used internally lit *Plexiglas* signs



General Motors' Guide Lamp division in Anderson, Indiana, became one of the largest buyers of *Plexiglas*, which had become available in powder form and in many colors for taillights, knobs, and dashboard parts.

Over time, acrylics like *Plexiglas* and *Lucite* became everyday materials, with incorporation into screens, lenses, virtual reality headsets, building panels, retail signage, jewelry, and art installations, medical equipment and more.