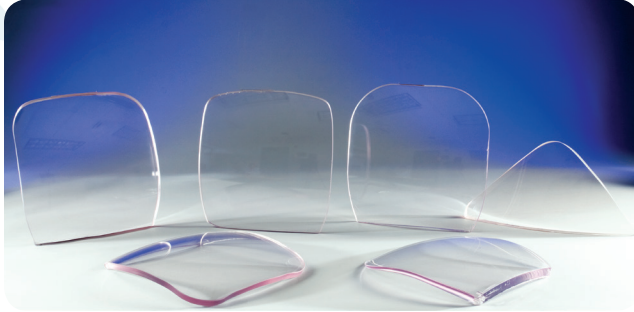


TRANSPARENCY BULLETIN

OPTICOR™

Advanced Transparency Material



Open windows of opportunity for designs with *Opticor* Advanced Transparency Material.

PPG Aerospace has created the industry's first new transparent plastic in more than 50 years: *Opticor* Advanced Transparency Material. This innovative high-performance plastic provides unprecedented performance and endless possibilities to give aerospace transparency designers a unique medium for translating ideas into reality.

Opticor Advanced Transparency Material is superior to commonly used plastics for cockpit and passenger-cabin window applications. It has exceptional craze resistance and retains optical clarity. That means better views for passengers and crews, with less maintenance, much longer. It is lighter weight for enhanced aircraft fuel efficiency. And it has much better fire resistance than stretched acrylic.

In extensive comparison testing, *Opticor* Advanced Transparency Material outperformed stretched acrylic especially in resistance to abrasion, chemicals, ultraviolet degradation and fire. It is simply better.

PPG Proprietary Technology

Unique qualifications enable PPG alone to bring this proprietary transparency technology innovation to the industry. With decades of aerospace transparency experience, marketplace leadership, a history of game-changing innovations and unparalleled chemistry technical know-how, PPG has developed a high-performance plastic ideally suited for aviation applications.

Opticor Advanced Transparency Material Characteristics

- Lower density than stretched acrylic
- Less thermal expansion than acrylic to maintain shape
- Much lower moisture absorption
- Resists crazing, based on long-term stress-craze testing, to maintain optical quality
- Excellent substrate for metallic and nonmetallic coatings

Stretched acrylic has been the standard for passenger-cabin windows for decades, yet service-life shortcomings have been well known. To meet the industry's needs for enhanced performance, PPG aerospace transparency scientists conducted exploratory research aimed at developing a better material. With chemicals expertise gained as a result of developing aircraft transparency interlayers, they were able to create a new plastic with the characteristics to meet the demanding needs of the aerospace industry today and in the future.



Unique non-uniform shapes can be created with *Opticor* Advanced Transparency Material.

Opticor Advanced Transparency Material Performance Advantages Over Stretched Acrylic

- High craze resistance
- Greater abrasion resistance
- Improved weathering
- No in-plane cracking
- High impact strength
- Lighter weight
- Excellent fire resistance
- Lower ultimate creep values when subjected to constant load

Performance Plus Possibilities

Opticor Advanced Transparency Material not only provides topflight performance but also design possibilities for creating one-of-a-kind windows in non-uniform shapes. It opens up the ability for creating optimized geometries that offer aerodynamic benefits, attractive aesthetics and weight savings. Aircraft designers can select from a wide range of thicknesses.

PPG is investing in the equipment for manufacturing Opticor Advanced Transparency Material to assure control over quality and supply.

Now being used in the passenger-cabin windows of a new business jet, Opticor Advanced Transparency Material has successfully met the required Federal Aviation Administration qualification tests in support of the aircraft type certificate.

Our team of transparency experts is ready to discuss your ideas for application of today's most advanced transparency material. With Opticor Advanced Transparency Material, PPG can open windows of opportunity for your designs.



Achieve aerodynamic benefits, attractive aesthetics and weight savings with Opticor Advanced Transparency Material in optimized geometries.

For the PPG Aerospace transparencies sales office or application support center nearest you, please visit our website at www.ppgaerospace.com.



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