

# PLEXIGLAS® HT121-LPL® ACRYLIC RESIN

**Maximize Light Output Over Long Path Lengths and Reduce the Number of LEDs Required**

Plexiglas® HT121-LPL® acrylic resin is a highly heat-resistant acrylic resin, formulated specifically for long path length (LPL) automotive applications such as signature lighting and thick lenses. In addition to the already robust optical properties, chemical resistance, and outdoor stability of Plexiglas® resins, **Plexiglas® HT121-LPL® resin has significantly improved light transmission and heat stability**, ensuring the polymer's water-white clarity is maintained after injection molding and in its end-use application.



**ARKEMA**  
INNOVATIVE CHEMISTRY



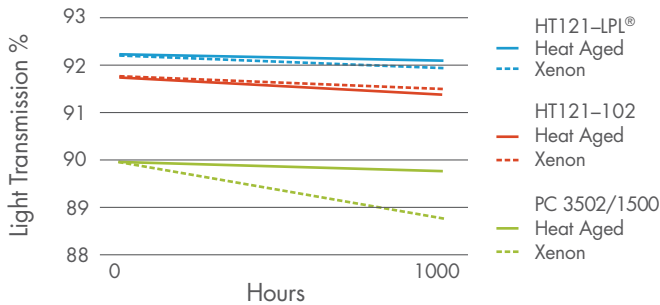
Above: Plexiglas® HT121-LPL® Performance Comparison Trials.

The exceptionally low absorption coefficient and high ABBE value of Plexiglas® HT121-LPL® acrylic maximizes light output and color continuity in long path length applications. This provides engineers unparalleled freedom of design. HT121-LPL® acrylic resin has low birefringence and naturally resists scratching. While other materials suffer a dramatic decrease of light transmission and an increase in color over long path lengths, these properties remain virtually unchanged in Plexiglas® HT121-LPL® acrylic resin.

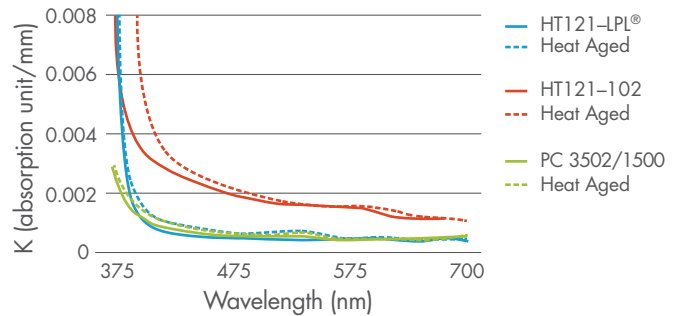
Property	Method	Units	HT 121-LPL®	HT 121-102	PC 3503/1500*
<b>Light Transmission @ 3.2mm</b>	ASTM D1003	%	92.2	91.7	89.9
<b>Haze @ 3.2mm</b>	ASTM D1003	%	<1	<1	1.5
<b>Yellowness Index @ 3.2mm</b>	ASTM E313	NA	0.5	0.7	0.8
<b>Refractive Index @ 402nm</b>	Metricon	NA	1.509	1.508	1.622
<b>Refractive Index @ 518nm</b>	Metricon	NA	1.497	1.496	1.593
<b>Refractive Index @ 634nm</b>	Metricon	NA	1.492	1.491	1.581
<b>ABBE # VE</b>	Metricon	NA	57.0	57.1	29.7
<b>ABBE #VD</b>	Metricon	NA	56.5	56.7	29.5
<b>Thermo-optic Coefficient</b>	dn/dt	10 <sup>-4</sup> /°C	-1.0	-1.1	-1.0

\*Average values of two commercially available polycarbonate grades

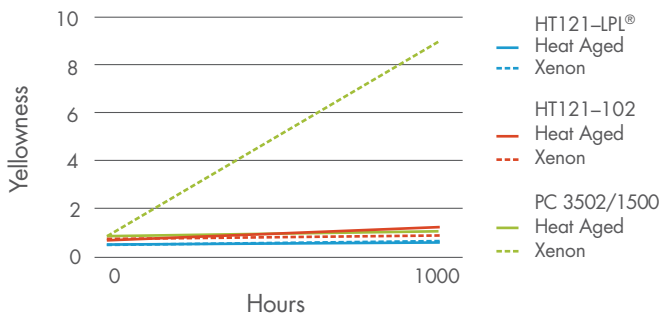
**% Light Transmission @ 3.2mm Before/After Heat Aging @ 85°C and Xenon SAE J2527 Exposure**



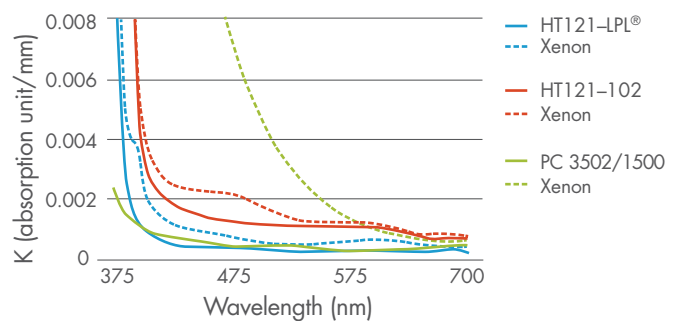
**Coefficient of Absorption Before/After 1000 Hours Heat Aging @ 85°C**



**% Yellowness ASTM E313 @ 3.2mm Before/After Heat Aging @ 85°C and Xenon SAE J2527 Exposure**



**Coefficient of Absorption Before/After 1000 Hours Xenon SAE J2527 Exposure**



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