Altuglas®, lighting solutions for your innovations
For more than 70 years, Altuglas® acrylic resins have played a vital role in the development of creative & durable solutions in lighting applications. Following the increasing demand for innovative LED lighting solutions, our team has used extensive experience in lighting & acrylic materials to develop and launch a complete portfolio of dedicated resins, from optically clear to highly diffuse, and reflective. These new families of resins offer unique sets of properties to meet the new technical requirements brought by challenging applications such as: thick optical lenses, efficient light diffusers & reflectors, long light guides...

Altuglas® acrylic resins are broadly used in numerous markets such as architecture & construction, automotive & transportation, lighting, consumer goods & design, electronics, medical, visual communication... A close collaboration with customers for development of new products pushes the Altuglas International teams to constantly innovate to meet all the latest technical needs and specifications.
Altuglas® crystal clear for efficient light transport

Over the years, Altuglas® crystal clear resins have demonstrated their outstanding performance and benefits for the transport of light. They are widely used today in highly demanding applications such as automotive cluster lenses, long light guides, and thick optical lenses, as well as optical parts for lighting fixtures in general lighting, etc.

Altuglas® HT 121 – Thick lenses

Altuglas® HT 121 integrates high temperature resistance

As a premium crystal clear grade, Altuglas® HT 121 combines outstanding optical performance & higher heat resistance, with a Relative Thermal Index (RTI) of 100°C (UL certified) the highest RTI for a PMMA resin presently on the market.

As light sources become more powerful and luminaires more compact, Altuglas® HT 121 is the material of choice for challenging market needs. In addition, Altuglas® HT 121 provides excellent durability, with outstanding UV & scratch resistance.

Altuglas® HT 121, light guide
Altuglas® Diffuse: a complete family of products for light diffusion

Altuglas® Diffuse innovative solutions offer a unique set of properties that LED Lighting designers have dreamed of: better diffusion of intense LED point light sources to provide an even illumination, without sacrificing significant light transmission. With Altuglas® Diffuse, luminaires achieve higher lumens/watt efficiency while providing uniform ambient lighting.

**Features**

The Altuglas® Diffuse family of resins provides LED luminaire OEMs and optics suppliers with:

- Excellent light diffusion
- Superior light transmission
- Choice of smooth or textured surface on extruded lenses
- Outstanding UV resistance & weatherability
- Excellent surface gloss & scratch resistance
- Ease to extrude, injection mold, thermoform & cut
- Recyclability

Typical diffuser parts made from Altuglas® Diffuse

*Typical pictures from Altuglas demonstration Light box*
Altuglas® Opal and Altuglas® Frosted solutions are well established market solutions for various luminaire designs. The Opal family can enhance the aesthetics of any luminaire with an elegant white satin look.

With Altuglas® Diffusion solutions, our partners and customers will always find materials that meet their needs.
ALTUGLAS® REFLECT – LIGHT OUTPUT MAXIMIZATION AND DURABILITY

In LED lighting systems, a highly reflective enclosure is key to efficiently recycle the light and maximize light output. Altuglas® Reflect has been engineered to achieve maximum reflectivity (or reflectance), without the need for subsequent coating or metallization. Altuglas® Reflect possesses Altuglas® resins historical weatherability and durability in harsh environments. While other resins can begin to yellow over time, the Altuglas® Reflect resins maintain their reflective performance and brilliant white appearance over the long term. This long-lasting performance makes Altuglas® Reflect an ideal choice for LED lighting fixtures.
The new Altuglas® Diffuse and Altuglas® Reflect families are now referenced on the OPTIS online library.

OPTIS Library is a free online design resource, intended for the fast growing community of OPTIS software users. These Altuglas® Diffuse and Altuglas® Reflect models bring them free materials which can be integrated into OPTIS software. It is definitely a time saving solution to design 3D parts, getting reliable simulation of optical properties, without need to produce real parts.

<table>
<thead>
<tr>
<th>Lighting range - Technical properties</th>
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<tbody>
<tr>
<td><strong>Diffuse 100 series</strong></td>
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<tr>
<td>Rheology - Melting Index</td>
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<tr>
<td>Vicat softening Point (80%)</td>
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<tr>
<td>Heat Deflection Temperature (1.82MPa)</td>
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<td>Flexural Modulus</td>
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<tr>
<td>Light transmittance</td>
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<tr>
<td>Hiding Power (T1²/T0²)</td>
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<tr>
<td>Diffusion Factor (T20°+T70°)/2*T5°</td>
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<tr>
<td>Half Angle Value (50% of Max. Light transmittance)</td>
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<tr>
<td>Total Reflectance</td>
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* Different levels of impacts & MFI available, depending on series.
Welcome to the world of Altuglas International, subsidiary of Arkema group

Altuglas International, a global integrated leader in PMMA is heavily involved in the technical plastic sector – from MMA monomer to PMMA acrylic glass – creating and manufacturing innovative products to suit customers’ needs worldwide. Its 1,300 highly committed staff make their contribution daily in our three businesses (MMA, sheet and PMMA resins). Its four great brand names are references: Altuglas®, Plexiglas® (Americas), Oroglas®, Solarkote®.

www.altuglasint.com

Our lighting range:

- Optical Clear resins:
  - Altuglas HT 121
  - Altuglas DRT
  - Altuglas HFI 15
  - Altuglas V920T
  - Altuglas V825T

- Altuglas Diffuse:
  - Diffuse 101, 102
  - Diffuse 301, 302, 303
  - Diffuse 501, 502

- Altuglas Opal:
  - Altuglas DRT Opal 010
  - Altuglas M7T Opal 010
  - Altuglas VM Opal 010
  - Altuglas V046 Opal 010, 012

- Altuglas Frosted:
  - Altuglas DRT Frosted
  - Altuglas HFI7 Frosted
  - Altuglas V825T Frosted
  - Altuglas V920T Frosted

- Altuglas Reflect:
  - Reflect M31