



## Cesa™ Light Diffusion Additives for the Transportation Industry

Lighting is a central aspect in the interior design of a vehicle, for reasons both aesthetic and functional. Consumers, accustomed to light adjustment options in their homes, want the same level of comfort in passenger cars. Cesa™ Light Diffusion Additives enable manufacturers to develop consumer-pleasing automotive lighting systems that also meet OEM's demands for manufacturability and cost management.

Our experience in formulating of light diffusion additives enables us to meet our customers' goals for light diffusion and light transmission while providing more design and production flexibility than standard polymers. We offer solutions for the

transparent and translucent thermoplastics used in the automotive industry (typically PMMA and PC).

Sometimes an application calls for increased hiding power; sometimes designers want excellent light transmission and diffusion. Our expertise is in understanding a designer's idea and developing the appropriate formulation to turn it into a manufacturing reality.

Cost efficient formulations have been developed to meet a wide range of technical and design requirements.

**Our light diffusion additives deliver a customer-specified mixture of light transmission, light diffusion, and hiding power.**

### **What is light diffusion?**

Light diffusion describes the way a lens diffuses—spreads—the light from a light source. Diffusing the light creates a soft, comfortable lighting experience. The art is in managing the light so it is effectively diffused but still bright enough to meet functional demands. Automotive lighting

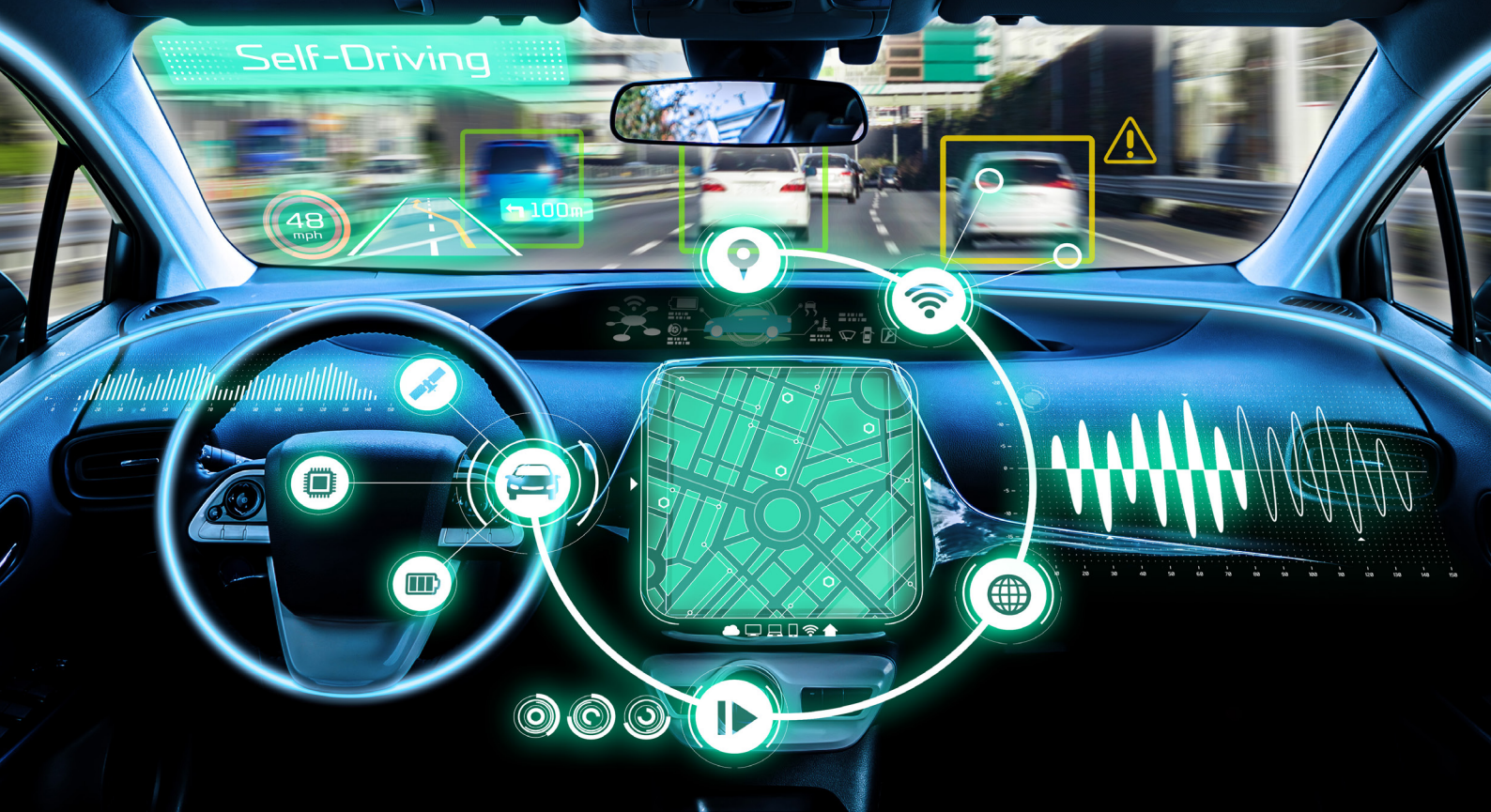
applications typically require high diffusion plus a high transmission rate.

### **What is light transmission?**

Light transmission refers to what percentage of the light generated by the source is passed through a lens.

### **What is hiding power?**

Hiding power describes whether you can see the light source (for example, an LED) through the lens, or not. Most applications require that the light source be somewhat or well hidden.



## Ready to learn more about Avient's light diffusion additives?

Contact your local Avient representative and let's start the development process.

Information we may require includes:

- Which material will be used to manufacture the lens?
- What is the thickness of the lens?
- How far will the lens be from the light source?
- How strong (lumens) is the light source?
- Do you have a sample of the current lens? If so, please provide it and tell us:
  - a. Do you want the same performance?
  - b. Or do you want an improvement in terms of...
    - Hiding power?
    - Light transmission?
    - Color adjustment?

With this information, we can begin to develop a formulation to meet your application's requirements.

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