Sü•'Pure

NEWS

New Super Pure Acrylic Polymer Eliminates Light Scatter in Custom Optics

Global Precision Optics of Anderson, South Carolina knows that commercial optical products must be made of high-quality materials. For over 15 years, the company has manufactured custom optical components for night vision, anamorphic and infrared systems, and industrial lasers for medical, military and home entertainment applications. In these industries, there is no tolerance for blurred images caused by impure lenses.

When Steve Turner, owner of Global Precision Optics, received a magnifying lens constructed of ACRYLITE® SuPure™ 8N 523 acrylic polymer from CYRO Industries (Rockaway, NJ), he was intrigued. "Optical glass typically has better clarity than acrylic, but the SuPure product looked very pure compared to glass," recalls Turner.

Free of material defects and contaminants, ACRYLITE SuPure polymers are produced using a proprietary manufacturing process and coupled with a packaging system that offers total end-to-end purity. But Turner had to see it to believe it.

High-Level Clarity Passes the Test

He tested the lens purity by shining a 5 milliwatt laser beam through the center of the ¼" thick ACRYLITE SuPure polymer lens. If impurities were present, the light would scatter and be visible as it passed through the lens. However, when the light beam was directed through the ACRYLITE SuPure polymer lens, only two identically shaped dots were visible, one where the laser entered the lens and the other at the exit site. Since the dots were matching, no light dispersion took place, proving the extreme purity of the polymer.

"This excited us because the clarity of the lenses is crucial to getting a crisp image, which is critical in the commercial optical industry," says Turner.

Currently, polished glass is used for optical applications requiring high-level purity and quality images. But, says Turner, "Acrylic is lighter, easier to manufacture and much cheaper than glass." The fragility of glass is also an impeding factor. Up until now, no plastic existed with the ACRYLITE SuPure polymer level of purity, says Turner, although many have tried. "In 99% of plastics, when you put a laser in front of it, you see scatter," he says.

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In some plastics, impurities and bubbling are visible with the human eye, but ACRYLITE SuPure polymer is pristinely clear and durable. It is weather-resistant and shows no adverse effects to UV light. SuPure acrylic polymers are available in various grades to offer high heat resistance, excellent flow properties and high molecular weight for stiffer polymers.

Acrylite® SuPure™ ACRYLIC POLYMER

To learn more about ACRYLITE SuPure polymers and receive a FREE cost-of-use assessment as well as information on a product trial, call 1.877-891-CYRO to arrange a meeting with a Strategic Account Manager or visit www.supure.com.

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