

EOTech Uses Somos® Protofunctional™ Resins For Prototyping Holographic Gunsight

EOTech Inc. (www.eotech-inc.com) Ann Arbor Michigan, has utilized several new generation ProtoFunctional™ resins, DSM Somos® 9100 and DSM Somos® 7100, to produce prototype models of the main housing component for its new Holographic Diffraction Sight.

The HOLOGraphic sight is a revolutionary breakthrough in optical sighting systems. The HOLOGraphic sight delivers unparalleled and repeatable accuracy, instant alignment confirmation, huge gains in low light visibility, and integral range finding- all within one sighting system.



The development cycle of only 9 months was achieved by utilizing 3D modelling techniques using SDRC IDEAS software and 3D stereolithography utilizing DSM Somos® ProtoFunctional™ resins. Several models were constructed to check fit, function, for the review of tooling design, for the packaging requirements and photo shoots for the packaging.

Somos® 9100 was chosen because it replicates polypropylene's tensile strength and elongation at yield, thereby enabling EOTech and its service bureau, Morris Technologies (www.morristech.com), Cincinnati, Ohio, to accurately test form and function. The resins in the Somos® 9100 series are high-speed liquid photopolymers that produce robust, functional, and accurate parts using stereolithography machines. Each resin has a wide processing latitude and excellent tolerance to a broad temperature and humidity range during and after build as well as offering superior chemical resistance. The Somos® 9100 series offers a good balance of properties between rigidity and functionality. These materials are especially useful in applications where durability and robustness are critical requirements, such as automobile components, electronic housings, medical products, large panels and snap-fit parts.

The Somos® 7100 series, also used, is a humidity-tolerant, high heat-deflection-temperature, low curl, high-speed liquid that produces rigid, minimal bubble, high accuracy parts. It produces exceptional, undistorted, thin walls and down-facing surfaces and exhibits good processing latitude.

A true diversity of technology is built into the HOLOsight, making it easy to use, durable, and cost effective for the users. For example: today's F-14 Tomcats use holographic heads-up displays for proven target acquisition and fire control systems. The patented HOLOGraphic sight adapts this technology from the fighter jockey's cockpit and delivers it to the shooter. The use of high tech lasers, optics, electronics, and rugged injection molded components, is unparalleled in the gun and archery sight industry. Because the sight is mounted on firearms that produce tremendous and repetitive recoil shock (shock loads in excess of 3000 g's), all of the injection molded components are designed to be tough and very precise while keeping costs low.

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