Elastomer Enhances Clearweld Laser Technology

Creating successful medical applications that deliver effective, safe, and accurate patient solutions often requires forging partnerships with the right mix of technological know-how. Natvar, a manufacturer of extruded products for the medical market, and Gentex Corp., a leader in colorless laser welding technologies, recently partnered to develop the Sure Bond tubing solution. This new tubing with Gentex's patented Clearweld additive technology enables medical tubing to be laser welded to transparent medical components used in intravenous therapy, hemodialysis, cardiovascular, urinary drainage, catheterization, neonatal, and angioplasty applications.

The Clearweld additive eliminates the need for solvent or adhesive bonding, which often leaves behind residual bonding material. Key to the success of the project was the role of Eastman Chemical Company, who applied its medical plastics expertise and assisted both companies in the selection of its Ecdel elastomer as the outer layer of Natvar's 252 tri-layer tubing used for the delivery of unstable medications. The elastomer is the material critical in ensuring that the Sure Bond layer is clear, has optimal joint strength, and excellent product integrity.
As part of its ongoing medical initiative, Eastman worked with Natvar and Gentex to conduct material testing and determine what product was most compatible with the Clearweld technology. The company's Ecdel elastomer was chosen because of its optimal laser welding characteristics, particularly its ability to remain crystal clear and to form a strong bond rapidly.

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