Improved Medical Polymer Offers Improved Strength and Innovative Surface Technology

DSM PTG, part of DSM Biomedical, a global leader in biomedical materials science, offers the Bionate II PCU, a versatile medical polymer with built-in surface technology designed for chronic implants. Bionate II PCU is a line extension of the well known Bionate Polycarbonate Urethane family, one of the industry's leading medical polymers for long-term implants and is backed by an established FDA Master File. The new polymer offers improved performance and processing characteristics for medical devices. It includes patented SAME technology, a built-in surface modification utilizing surface activity and self assembly of chemical groups attached to the ends of each polymer molecule during synthesis. This breakthrough technology enables medical devices to be equipped with permanent surface modification while maintaining excellent mechanical properties. It can also eliminate the need for secondary surface treatments once a device is made.

Cincinnati-based PMC Medical, a contract manufacturer delivering solutions in complex polymer molding and assembly, evaluated the processability of Bionate PCU versus Bionate II PCU. "Upon the conclusion of our experiments, we determined that DSM PTG's Bionate II PCU is more easily processed for injection molding applications," said Bob Langlois, executive director of applied technology.
In addition to providing controlled surface chemistry and better processing, Bionate II PCU also offers improved oxidative stability and greater strength than the first generation Bionate PCU.
"We believe Bionate II PCU with SAME technology offers a performance breakthrough in high-strength, biostable polymers for medical device designers. It is the next step in the continuous improvement of our biomedical thermoplastics, offering customizable surface chemistry for unique medical device designs," said Bob Ward, president and CEO of DSM PTG. "In the case of Bionate II PCU, we have made minor changes to a proven polymer family that improve the polymer's processability and oxidative resistance, and significantly increase its strength."

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