

NovaPure® Cartridge Components

Unrivaled Quality...By Design

NOVAPURE®

NovaPure® components are developed and refined to provide the market with the best-in-class levels of quality, performance, and risk mitigation. Every component, every time. Initially available in stopper and syringe plungers, NovaPure components are being extended to cartridge-based drug delivery systems.



Developed for Performance, Consistency, and Quality

Ensuring in-depth product knowledge and understanding

- Design and manufacture controls aimed to minimize intra and inter lot variation of key product attributes
- Quality by Design principles drive predictable component performance

Ideal for Drug Product Protection

Vision verification and continuous improvement drive quality

- FluroTec® barrier film for enhanced drug product compatibility
- Low particulate levels

Designed for Cartridge Based Device Delivery

Drugs delivered via cartridge technology are becoming more complex

- Components compatible with 3mL glass cartridge systems intended for drug delivery devices
- Optimized design for low hold up volume and improved break loose and glide force profiles



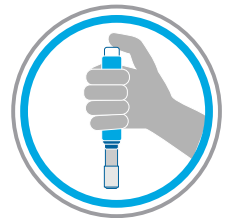
Drug Product Complexity is Rising

There is a trend in drug development, especially for biologics, to evaluate higher injection volumes and viscosities. This presents a unique challenge to companies as they assess primary packaging component technologies.



Cartridges are a Proven Container

The cartridge has been used as the primary container for the insulin and dental markets for many years. Because the cartridge is a proven container many companies are evaluating new drug products in syringes and cartridges to address requirements for larger volume injections.



Device Technology is Evolving

Historically, cartridge-based delivery systems would leverage the pen injector, but new and novel devices have been recently developed with cartridges as primary containers for wearable injectors and auto-injectors. The challenge is component technologies need to evolve to meet the needs of these new cartridge-based injector systems.



NovaPure 3mL Cartridge Components to Meet the Challenge

With an optimized design for functional performance and enhanced compatibility, NovaPure 3mL Cartridge Components were designed to meet the needs of cartridge-based drug delivery systems. For drug products that require the best-in-class level of performance, consistency, and quality, West is excited to expand its NovaPure components offering to include cartridge components.

For more information visit www.westpharma.com

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