

THE SCIENCE OF INK FLOW MANAGEMENT

Nibs and reservoirs



POREX: CREATING THE SCIENCE OF INK FLOW MANAGEMENT

A history of groundbreaking innovation and complete dependability

For more than 50 years, POREX® nibs and reservoirs have defined consumer expectations for writing instruments of all shapes, sizes and varieties. The world's largest manufacturers have depended on the quality and consistency of our components to earn their buyers' loyalty and capture their dominant global market share.



Create a Superior End Product Quicker and With Less Resources

With Porex as your resource in *The Science of Ink Flow Management*, you no longer have to worry about designing the “right” nib to match your reservoir, and vice versa.

Our dedicated ink flow management team will design optimized nib and reservoir combinations, utilizing years of experience with pore volume, pore size, capillarity, fluid dynamics and chemical interactions as the basis for the system design. POREX® proprietary test methods for measuring ink flow and marker performance focus on your key performance parameters such as ink laydown, leaking, ink life, cap off time and ink settling.

POREX® Writing Instrument Product Development Process



1. Analyze customer needs and goals

Engineers and scientists perform functional and design analysis to ensure critical customer requirements are met.



2. Apply material science expertise

Unique challenges require expert material selection as well as technical application expertise.



3. Engineer custom product solutions

Concept development, prototyping, and testing is an iterative process that yields multiple options for customers.



4. Finalize product development

Our rigorous quality control and production standards ensure industry-leading consistency.

Since 1961, POREX® nibs have defined the performance standard for writing instruments.

Today, our sintered particle and bonded fiber nibs are still the top choice for leading companies around the globe.

With polyethylene (PE) and polyester fiber (PET) options, our nibs provide ideal ink laydown, leak resistance, longevity, and overall performance in any application, from water-based highlighters to alcohol-based white board markers. Comprehensive customizations are available for special performance features and material formulations that place our customers' products above the competition. And with the highly reproducible POREX® manufacturing process, the billionth POREX® nib will be the same as the first.

The shapes, sizes and dimensions for every writing instrument

- Vented Nibs
- Bullet Nibs
- Conical Nibs
- Chisel Nibs
- Multi Line Nibs
- Mini Stampers (assorted shapes)
- Alphabetical / Numerical Stampers

Sintered Particle Nibs (PE)

Smooth, velvety write-feel with precise dimensional control

Our PE nibs offer more than a luxuriously smooth write-feel to end users, they provide companies that market on a global scale with industry-leading consistency and reliability.

Our engineers select the optimal material formulation for each specific customer and application. We then determine the ideal mix of porosity and capillarity before we mold nibs to perfection. The end result is a writing instrument with exceptional flow and highly controlled ink laydown.

Sintered Particle Nibs (PE)	
Nib Materials	Polyethylene (PE)
Writing Applications	Highlighters Coloring pens Stampers Whiteboard markers
Compatible Inks	Water-based Solvent-based
Customizable Options	Write-feel Ink flow Size and dimensions

Polyester Fiber Nibs (PET)

Versatility and dependability with high color purity

Our polyester fiber (PET) nibs deliver consistent writing performance with nearly any kind of ink.

We select the ideal polyester fiber and bonding resin combination for customer requirements and then cut and grind each nib to perfect shape—each and every time. With complete control over porosity and dimensionality, our polyester fiber nibs deliver uniform flow, measured write-out, and lasting durability.

Polyester Fiber Nibs (PET)	
Nib Materials	Polyester fibers (PET)
Writing Applications	Coloring pens White board markers Highlighters
Compatible Inks	Water-based Solvent-based Metallics
Customizable Options	Ink flow Capillarity Size and dimensions



XPE® RESERVOIRS

The industry standard for writing instrument ink control

Our XPE reservoir provides the critical wicking capabilities and capillary action for maximum ink release. The controlled density throughout the structure of the reservoir allows the maximum percentage of ink to be released from the reservoir, reducing ink fill volumes and improving sustainability.

XPE® Reservoirs	
Core Materials	Polyester Polypropylene
Exterior Materials	Extruded polypropylene Extruded nylon Extruded polyester Film and nonwoven
Applications	Coloring pens White board markers Highlighters Permanent markers and more
Inks	Water-based Solvent-based Metallics High pH
Customizable Options	Performance features Fiber types Fiber densities Wrap materials Sizes and dimensions

HIGH-EFFICIENCY RESERVOIRS

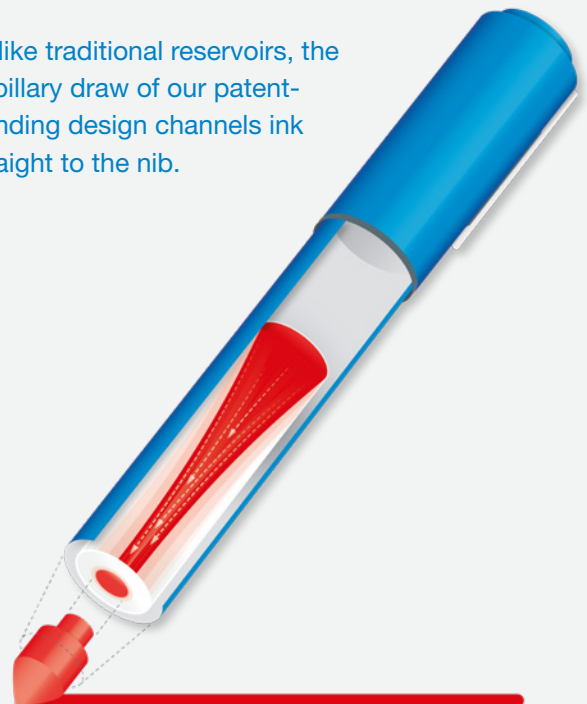
Redefining ink flow management

Our newest reservoir provides cost savings, sustainability, and a superior performance for consumers.

The patent-pending gradient density creates a strong capillary draw within each reservoir. Ink is physically pulled from the outer circumference into the reservoir's inner core. This channels the ink directly onto the nib, providing a higher ink flow and ink laydown, reducing the amount of ink left behind in the reservoir.

Manufacturers of premium writing instruments now have two choices. They can increase the ink laydown for more vibrant marking, and/or use less ink in the system to reduce cost. These high efficiency reservoirs require 5–10% less ink, which is ideal for applications that use expensive solvent based inks, like white board markers and permanent markers. With less ink remaining in the reservoir at the end of life, this also reduces ink waste.

Unlike traditional reservoirs, the capillary draw of our patent-pending design channels ink straight to the nib.





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