



# BayOne

URETHANE SYSTEMS LLC

A Bayer MaterialScience LLC and PolyOne Joint Venture

## Advanced Technology Bulletin

## BayOne Polyurethane Systems— The Innovative Alternative to *Plastisols*

WHILE VINYL PLASTISOLS HAVE BEEN THE STANDARD ADHESIVE POTTING COMPOUND FOR YEARS, URETHANE SYSTEMS ARE BECOMING THE PREFERRED ALTERNATIVE BECAUSE THEY OFFER MORE THAN JUST COST SAVINGS. POLYURETHANE ADHESIVES OFFER PRODUCTION, QUALITY, AND SUSTAINABILITY ADVANTAGES IN A BROAD ARRAY OF APPLICATIONS HISTORICALLY SERVED BY PLASTISOLS.

### Polyurethane Potting Adhesives Offer Increased Production Efficiency

We tailor our products to operate most efficiently on your plant floor, taking advantage of the unique properties of polyurethane elastomers and foams to minimize materials consumption, plant footprint, and processing time. Here's how we can increase your production efficiency:

### Processing and Performance Characteristics

BayOne polyurethane systems are tailored for your unique combination of processing and performance requirements. For example, the material cost savings of the foam adhesive are achieved through the material's expansion properties, requiring a drastically lower shot size (75%-80% reduction) versus plastisol. In turn, our foam adhesives are formulated with a low viscosity for superior self-leveling properties with minimal wicking, helping you to keep your production cycle humming with a minimal shot size. From a performance standpoint, our urethane foam adhesives offer superior adhesion and durability compared to plastisols. At our demo

facility where we maintain production-rated dispense equipment, customers can assemble filters with machine-poured urethane systems for further qualification testing.



Polyurethane foam potting adhesives require a drastically lower shot size versus plastisol, resulting in material cost savings.

### Rapid Cure at Room Temperature

While plastisols must be heated to 350°F to fuse and develop adhesive properties, polyurethane systems rapidly cure at room temperature, typically within two to three minutes. Your process can be completed faster without the extended heat activation process typically required by plastisols (especially for larger parts) and you can increase overall production capacity. In fact, switching from plastisol to polyurethane has increased the production capacity for some filter manufacturers by forty percent. What's more, since curing occurs at room temperature, you can eliminate tunnel ovens and hot plates from your production line, reducing your energy spend, and reducing the size of your process' production line and overall footprint.

## Eliminate Components

In addition to adhesive systems, BayOne also offers moldable polyurethane foams and elastomers. In some cases, polyurethane systems may be substituted for other components that supported or contained plastisols. For example, filter manufacturers have been able to eliminate steel end caps and now use molded polyurethane to serve as a strong, durable end cap.



An example of BayOne moldable elastomers used for pool and spa applications.

## Consistent Results, Unrivaled Experience

With BayOne polyurethane systems, you can be confident that you will have a consistent, quality product . . . batch after batch. Our team of chemists have decades of experience in the filter applications area. We will work with you to tailor a polyurethane system for your application, ensuring the best results in the most efficient process. Our demo facility allows you to evaluate our products and assemble elements in a semi-production setting (versus hand-mixing samples). Once in production, our technical support team will be on-site to help ensure a smooth start-up.

### Our Commitment to Sustainability

BayOne understands that sustainability is vital to your process and we are dedicated to providing systems that can help you achieve your goals. Our polyurethanes:

- Reduce materials consumption
- Eliminate stack emissions
- Eliminate reportable emissions
- Are 100% MDI systems
- Reduce energy consumption

**Don't miss out on the benefits of BayOne polyurethane systems!  
Contact BayOne for more information.**

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