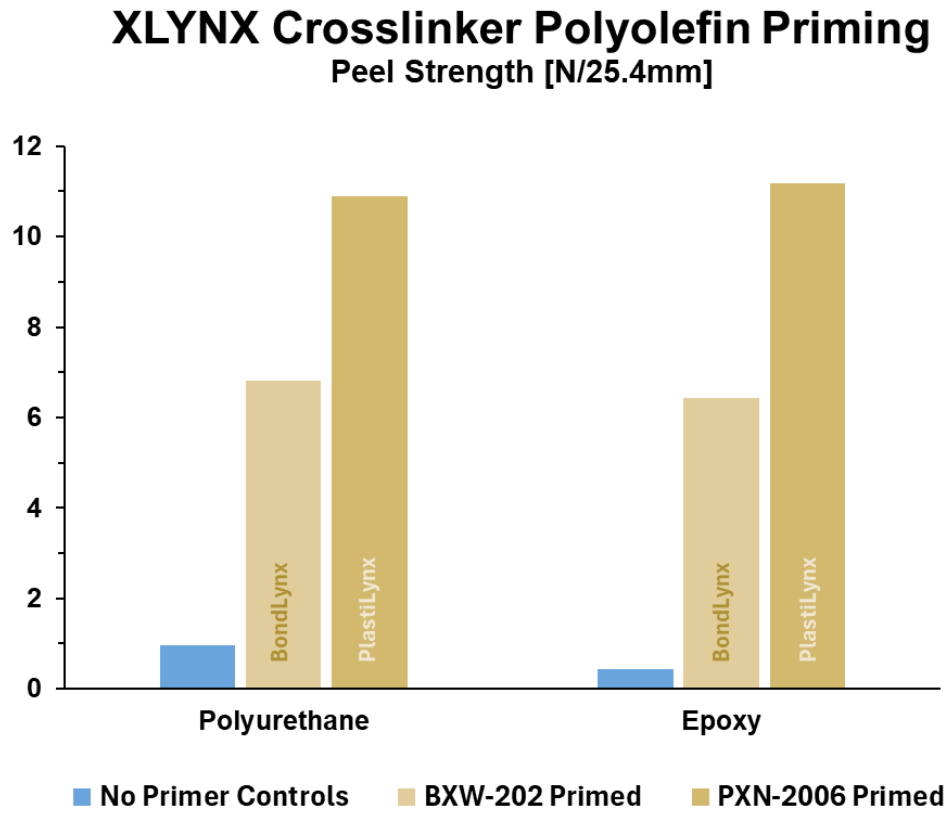
Making Connections:

The XLYNX Materials Newsletter

March 2025



Stronger Bonds Where It Matters Most: Adhesion Innovations for Polyolefins

For manufacturers in electronics and CASE industries, reliable adhesion to polyolefin substrates like UHMWPE and HDPE has long been a barrier to innovation. Whether in wearable devices, conformal coatings, structural adhesives, or specialty sealants, surface preparation challenges often limit material choice and performance. At XLYNX Materials, we're changing that.

In our latest round of peel adhesion testing, PXN-2006 and BXW-202—two of our diazirine-based crosslinkers—delivered significant performance gains in 180° peel strength on polyolefin surfaces. Using ASTM D903 test methodology, UHMWPE films were bonded to HDPE boards with both epoxy and polyurethane adhesives. Across both adhesive systems, primed surfaces outperformed non-primed samples by a substantial margin.

Our best-performing system to date, PlastiLynx, reached ~12N/25.4mm in peel strength—an impressive benchmark given the notoriously poor adhesion profile of polyolefins. These results are from preliminary validations, with additional optimizations in process that are expected to drive performance even higher.

While the current dataset includes two adhesive chemistries, expanded testing is underway to validate performance across additional systems. Early indicators strongly support broad applicability—particularly in electronics assembly and CASE formulations where polyolefins offer mechanical and chemical advantages but have historically posed adhesion difficulties.

For formulators and product engineers seeking to enable new design possibilities without compromising bond integrity, XLYNX crosslinking primers offer a simple, scalable solution.

If you're working with polyolefins in coatings, encapsulants, sealants, or structural adhesives, reach out to our technical team. Let's explore how PlastiLynx PXN-2006, or BXW-202 can enhance surface functionality and deliver adhesion performance you can count on.

Contact Us

PXN-2006: Advanced Adhesion at a Lower Cost

In line with our goal of enabling innovation, PXN-2006, a universal primer engineered to improve adhesion on UHMWPE, HDPE, and other low-surface-energy substrates is now available at a lower cost. This offering presents a strategic opportunity to incorporate advanced crosslinking technology into your system design.

Connect with us to discuss your applications and request samples, datasheets, or a tailored quote. Let's

explore how PXN-2006 can enhance your formulation strategy.

Contact Us

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Newsletter Archive

We're Here to Help

What adhesion, stabilization or photopatterning challenge is your business facing?

Let's talk.

Our platform of diazirine crosslinking technology is proven to improve performance across a wide range of applications, and can be customized for specific material substrates.

To learn more, contact us at any time:

info@xlynxmaterials.com

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For questions, pricing and sample order information

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