



Preliminary Technical Data Sheet

PlastiLynx PXN

Multifunctional, PFAS-Free Universal Primer

Product Description

PlastiLynx PXN is a fluorine-free, diazirine-grafted polyamine crosslinker that is designed as a universal surface-activating primer for hard-to-bond, low surface energy polymers. PlastiLynx treatments form a permanent, non-damaging layer of covalent bonds along a substrate surface which, once cured by heat or UV-light, is made receptive to all manner of adhesives, dyes, and coatings. Used in combination with commercially available adhesives (cyanoacrylates, polyurethanes, epoxies, etc.), PlastiLynx PXN enables superior adhesion and new functionality.

Physical Properties

Appearance

Pale yellow viscous liquid at room temperature, odorless

Solubility

Wide range of organic solvents, including ethanol, methanol, purified water, and other polar solvents

Reactivity

Crosslinks via carbene insertion into aliphatic C-H, N-H, O-H bonds

Application Technique

PlastiLynx PXN must be mixed with solvent to form a solution before use. Best results are attained when applied to a smooth, clean, and dry surface. Typically apply as a thin layer and allow solvent to evaporate completely before activation. For reference, 0.2 - 2.0 mg per in² (0.03 - 0.31 mg per cm²) of PlastiLynx is sufficient coverage (ASTM 3163) in priming applications. In adhesion applications, 2.0 - 10 mg of PlastiLynx per in² (0.31 - 1.55 mg per cm²) is recommended.

Activation

Thermal Curing

Between 110°C - 120°C (230°F - 250°F), 2 hours

Photo Curing

Long-wave ultraviolet (UV) irradiation (365nm). UV dosage: 2.4 J/cm².

Duration varies by UV intensity:

- 80 mW/cm² for 30 seconds
- 5.6 mW/cm² for 10 minutes

Compatible Substrates

Any commodity polymer (except certain fluoropolymers), regardless of surface energy. Optimally designed to work with including polyethylene and polypropylene, PET, PA, PVC, etc.

Uses

- Surface-activating adhesive primer or sizing agent for unreactive polymer substrates (films, solids, and fibers)
- Transform surface properties of hard-to-bond polymers, making them highly receptive to commodity adhesives, coatings or dyes
- Interfacial adhesive for composites

Storage

For best results, store neat (unmixed) in a freezer at or below -20°C / -4°F. Avoid heat and UV light.

Shelf Life

When freezer-stored, PlastiLynx PXN is expected to remain stable for 4+ years. For best performance, solutions should be refrigerated and used within 1-2 months of preparation.

Environmental / Health

Non-hazardous, non-toxic, and fluorine (PFAS) free.

Disclaimer

To the best of our knowledge, all technical data contained herein is true and accurate as of the date of issuance and subject to change without prior notice. Given that many factors beyond the control of XLYNX Materials can affect the use and performance of XLYNX products in a particular application, the user is solely responsible for evaluating the product and determining whether it is fit for a particular purpose and suitable for the user's method of application.