



Preliminary Technical Data Sheet

PlastiLynx PLD-1002/3003

Multifunctional Polymeric Diazirine Adhesive Primer

Product Description

PlastiLynx PLD-1002/3003 is a diazirine-grafted polyamine crosslinker that is optimally designed as a surface-activating primer for polyolefin solids and textiles, but can also be deployed as a single-agent adhesive for hard-to-bond, low surface energy polymers. Used in combination with commercially available adhesives, PlastiLynx replaces mechanical and other joining methods to enable new functionality and significantly enhance the strength of bonds. PlastiLynx treatment forms permanent, non-damaging covalent bonds along the substrate surface which are receptive to adhesives, dyes, and coatings.

Physical Properties

Appearance	Solubility	Reactivity
Light amber viscous liquid at room temperature, odorless	Wide range of organic solvents, including ethanol, methanol, purified water, and other polar protic solvents	Crosslinks via carbene insertion into aliphatic C-H, N-H, O-H bonds

Application Technique

PlastiLynx PLD-1002/3003 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	Photo Curing
Between 80°C - 90°C (175°F - 195°F), 2 hours	Long-wave ultraviolet (UV) irradiation (365nm or 395nm)

Compatible Substrates

Any commodity polymer (except certain fluoropolymers), regardless of surface energy. Optimally designed to work with polyethylene and polypropylene, PET, 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 exposure to heat and UV light.

Shelf Life

When freezer-stored, **PlastiLynx PLD-1002/3003** is expected to remain stable for 2+ years. For best performance, solutions should be refrigerated and used within 1-2 months of preparation.

Environmental / Health

Non-hazardous. Contains fluorine. Toxic if swallowed. Avoid release to the environment.

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.