



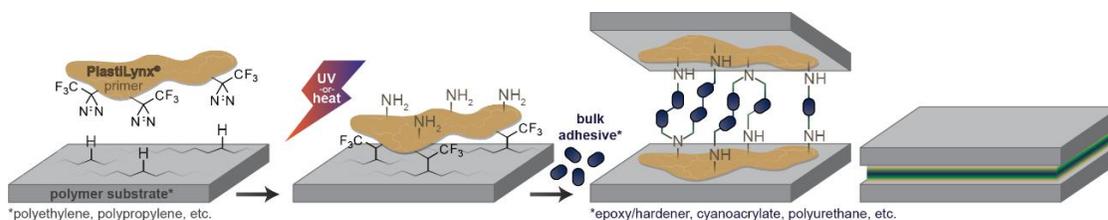
Preliminary Technical Datasheet

PlastiLynx[®]

Multifunctional Polymeric Diazirine Adhesive Primer

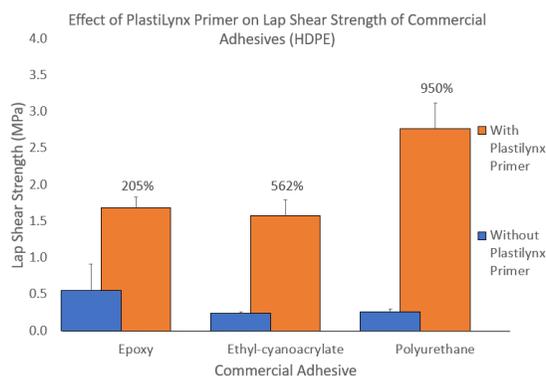
Low surface energy polymers (polyethylene, polypropylene, etc.) are essential for a wide range of applications because of their light weight and high strength. Adhesion of these materials, however, is notoriously difficult and usually requires surface activation using a high energy source or corrosive chemicals.

PlastiLynx[®] takes a totally different approach to adhesion. When activated with moderate heat or UV light, this polymeric diazirine readily inserts itself into the C-H (N-H, O-H) bonds on the surface of the unreactive polymer, forming strong chemical bonds. The resulting activated polymer can then be chemically bonded to like polymers or other materials using commercial adhesives such as epoxy, cyanoacrylate, polyurethane, etc. And because the Polymer/PlastiLynx/adhesive system is completely covalently bonded, the bond is strong and abrasion resistant.



Features and Benefits

- Surface-activating adhesive primer or sizing agent for unreactive polymers.
- Forms strong, irreversible, covalent bonds rather than conventional mechanical bonds.
- Quick and simple activation using UV light or moderate heat.
- Based on peer-reviewed and journal-published science.



Physical Properties and Applications

Physical	Clear colourless viscous liquid at RT.
Solubility	Dispersible in water and a range of polar organic solvents including acetone, methanol, ethanol, etc.
Application	Applied neat or dissolved in a solvent.
Storage	Fridge/freezer, away from light.
Activation/Curing	UV irradiation (350-365nm) or heat (110 to 120°C). UV activation possible in as little as 30 seconds.
Confirmed Substrates	Aliphatic polyolefins including polyethylene (UHMWPE, HDPE, LDPE), polypropylene, PET, PVC, etc.
Potential Industry Uses	Aerospace, automotive assembly, medical devices, performance textiles, composites, or wherever low surface energy polymers are used.

Rashid Nazir, et al, "Polyamine-Diazirine Conjugates for Use as Primers in UHMWPE-Epoxy Composite Materials," ACS Appl. Polym. Mater. 2022, 4, 1728-1742