XLYNX

MAKE IT STRONGER

We're here to help

These instructions are intended as general guidelines. Achieving optimal crosslinking results may require fine-tuning to account for material substrates, solvents, application methods, environmental conditions, etc.

We encourage you to consult with our team before getting started. Our knowledgeable experts are available to answer your questions and provide advice specific to your unique applications.

If you have questions, concerns, or feedback, contact your XLYNX representative, or send us a message at info@xlynxmaterials.com.

For more information, updates, and video demonstrations, visit us at: www.xlynxmaterials.com

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PlastiLynx PXN Primer

Instructions for trial applications

Important:

PlastiLynx (neat, unmixed) is a pale yellow viscous liquid at room temperature. If there are concerns about the state of your sample, contact XLYNX Materials before proceeding.

PlastiLynx (neat, unmixed) should always be stored in the freezer.

Prepared solutions (PlastiLynx mixed with solvent) can be refrigerated when not in use.

Avoid exposure to sunlight and temperatures above 40°C (100°F).

Before you get started:

Depending on your application, you'll need the following:

- Ethanol, methanol, or other polar protic solvent. Water can also be used, but requires additional time for evaporation.
- Vial or container for mixing PlastiLynx with solvent.
- Liquid dispenser (pipette, dropper, brush, etc.).
- Device for heat or UV-light curing, such as:
  - UV curing chamber
  - Handheld UV curing device
  - Thermal curing oven
- Adhesive - Polyurethane adhesives are generally recommended, but cyanoacrylates and epoxies are also effective (depending on the substrates being tested).
- Standard personal protective equipment for safe handling of chemicals (e.g., gloves, masks, eyewear).

Step-by-Step Instructions:

1. Prepare PlastiLynx Solution

- PlastiLynx must be mixed with solvent before application.
- For reference: 0.8 gsm of PlastiLynx (dry coat weight) is sufficient coverage in priming applications.
- Mix or agitate the solution until PlastiLynx has completely dissolved. Ensure a homogeneous solution has been achieved and there is no visible residue on the side walls of the vial or floating particulates.
- Refrigerate and/or limit exposure to light until ready to use.

2. Apply PlastiLynx Solution

- Ensure the material surfaces you are treating are as smooth as possible, with no raised edges or surface defects.
- Surfaces should be cleaned before applying PlastiLynx. Precleaning with ethyl acetate is recommended (alternative: use isopropanol or ethanol 70% solution, or other substrate-dependent solvent)
- Apply PlastiLynx solution in a thin, even layer with a liquid dispenser of your choice. For overlap shear applications, a mass range of 0.8 - 3 gsm is recommended as a starting point, however, optimization will be required to best complement specific adhesives.

3. Allow Solvent to Evaporate

- Solvent must evaporate completely before proceeding.
- Evaporation times vary according to the solvent and material used. Allow sufficient time for your solvent to evaporate from the substrate.
- A freeze dryer or ventilated fume hood may be used to accelerate the drying process, but temperatures must remain below 40°C (100°F).

4. Cure Treated Materials

- Once solvent has evaporated, PlastiLynx PXN can be cured by either UV light (photocuring) or heat (thermal curing).

UV-Curing:

- Optimum photocuring is achieved with 365 nm wavelength UV light source. The UV dosage required is 0.16 J/cm^2.
- Photocuring duration will depend on the intensity of UV light and the light transmittance of the materials used. For reference:

Wavelength	Intensity*	Duration
365nm	80 mW/cm^2	2 seconds

** Measured approx. 7.5" from the treated material surface in a UV curing chamber.*

Thermal Curing:

- PlastiLynx-treated materials can be thermally cured in 90 minutes at a temperature between 110°C-120°C (230°F-250°F).
- If the melting point of your treated substrate is a concern for thermal heating, consult XLYNX for alternatives.
- Note: Thermal curing may cause PlastiLynx-treated areas to slightly yellow.

5. Next Steps

- Once cured, PlastiLynx-treated surfaces are now receptive to commodity adhesives, dyes, or coatings.
- When using commodity adhesives, follow the manufacturer's instructions for application and curing times, but do not engage in any further surface preparation of the PlastiLynx-treated area.