



PlastiLynx PXN Primer

Instructions for trial applications

Important:

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).

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

Before you get started:

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

- Ethanol, methanol, or other polar solvent. Purified 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, the recommended ratio of PlastiLynx-to-solvent is 0.2 - 2.0 mg of PlastiLynx per in² (0.03 - 0.31 mg per cm²).
- 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 isopropanol (or ethanol) 70% solution, or other substrate-dependent solvent, is strongly recommended.
- Apply PlastiLynx solution in a thin, even layer with a liquid dispenser of your choice.
 - **Important:** More is not better. Excessive application will weaken the effectiveness of bonds.

3. Allow Solvent to Evaporate

- Solvent must evaporate completely before proceeding.
- Evaporation times vary according to the solvent and material used:
 - Allow 30-to-45 minutes for solvents like methanol or ethanol.
 - When water is used as a solvent, evaporation may take 4+ hours.
- 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 365nm wavelength UV light source. The UV dosage required is 2.4 J/cm².
- 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	30 seconds
365nm	5.6 mW/cm ²	10 minutes

** Measured approx. 5" to 6" from the treated material surface in a UV curing chamber.*

Thermal Curing:

- PlastiLynx-treated materials can be thermally cured in 2 hours 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.