User Manual

FINIXA®
paint processing products

PLASTIC REPAIR
MICRO EMISSION

SAFE AND SUSTAINABLE PLASTIC REPAIR.

More info!

⚠ WARNING!
Read this manual carefully before use.
Follow all instructions precisely. Failure to do so may result in damage or injury, for which we accept no liability.

Chemicar Europe NV
Baarbeek 2 B-2070 Zwijndrecht Belgium
T. +32 3 234 87 80 info@emm.com www.finixa.com

English

1. Introduction

The Finixa **Plastic Repair System – Micro Emission (PLI)** is a prepolymer-based polyurethane repair material specifically developed for professional and safe plastic repairs. This innovative system offers superior adhesion, flexibility, and structural integrity — without the use of diisocyanates — making it both healthier for the user and environmentally friendly.

No special certification is required to handle this product, due to its micro emission formulation.
However, please ensure that protection equipment is worn accordingly (gloves, eye protection and hearing protection).

This manual is to be used in consultation with the Technical data Sheet (TDS) for PLI Micro emission (PLI 21-22-23)

Fast (30 sec)
Ideal for bonding and repairing fixings and brackets.
PLI 21

Medium (90 sec)
Perfect for repairing tears and cracks.
PLI 22

Slow (3.5 m)
For repairing tears and cracks with a longer process time.
PLI 23

2. Key advantages

- **Micro Emission Technology** – Contains no diisocyanates: safe for health and environmentally friendly.
- **Higher Viscosity** – Easier to control and apply; prevents sagging.
- **Buildable Layer Thickness** – Allows precise control over repair depth.
- **Consistent Curing** – Curing and working times remain stable regardless of product quantity.
- **Bubble-Free Curing** – Ensures homogeneous structure without weak spots.
- **Thin Layer Efficiency** – Only 0.15 mm layer thickness needed for full cure and optimal adhesion.
- **Excellent Edge Stability** – Smooth sanding transition without visible ridges.
- **Structural Repairs Possible** – Suitable for permanent load-bearing repairs.
- **Cross-Material Bonding** – Adheres to plastics, carbon, and metals.
- **Long Shelf Life** – Up to 2 years under proper storage conditions.

3. Typical applications

The PLI system can be used for repairing or restoring automotive plastic :

- Filling holes or gaps
- Repairing cracks and fractures
- Structural and cosmetic bonding
- Temporary repairs (until replacement parts arrive)
- Permanent structural restoration

4. Comparison with Alternative Repair Methods

Method	Advantages	Disadvantages
Plastic Welding	Low cost	Limited to same material type; no gap-filling capacity; sensitive melting point; recycled plastics often incompatible
Epoxy Systems	Low cost	Brittle after curing; long curing times; prone to air bubbles; lower adhesion
Conventional PU Systems (without prepolymer)PU)	-	Low viscosity; poor layer build-up; curing affected by product quantity (exothermic reaction); contains more diisocyanates; shorter shelf lifeadhesion
Finixa PLI (Prepolymer PU)	Safe, consistent, strong, and durable	None relevant for standard repair processesadhesion

5. Selecting the Right Version: Fast – Medium – Slow

Each PLI version lists four processing times on the cartridge:

1. **Open Time** – Period during which the product remains liquid.
2. **Work Time** – Time available for manipulation and bonding.
3. **Sand After** – Minimum curing time needed before sanding.
4. **Clamp-Free Time** – Time until the repair becomes self-supporting.

Selection guidelines:

- Complex repair - Slow version
- Small/simple repair - Fast version
- Medium for general use

Choose the version based on:

- Size and complexity of the repair
- Whether the repair is structural or cosmetic
- Technician's experience
- Expected working time

6. Preparing for Repair

A successful plastic repair requires both mechanical and chemical adhesion.

Follow these steps carefully:

Personal Protection

Always wear:

- Nitrile gloves
- Safety glasses
- Hearing protection (when grinding or sanding)

Surface Preparation

1. Degrease all bonding surfaces using a non-aggressive water-based cleaner, preferably Finixa TSP-600 “Foam-It” supplied in the PLI 20 kit. Clean both sides of the part and ensure the surfaces are wiped completely dry after cleaning.
2. Once cleaned, do not touch surfaces with bare hands. Always use nitrile gloves to avoid oil or mineral contamination.
3. Sand the plastic with P60 grit (or coarser) at low machine speed to prevent melting.
4. Bevel the repair edges 8–10 mm wide to create more surface area and ensure flat bonding.
5. Drill small holes (Ø3–4 mm) along cracks and at sharp corners to stop propagation and create a “riveting effect” when filled with PLI.
6. Blow the repair surface area clean by using compressed air.

7. Chemical Adhesion Preparation

1. Spray a thin layer of adhesion promoter (Finixa TSP030) on both sides of the repair area.
2. Allow 10 minutes flash-off time before proceeding.
3. Cut the PLI15 reinforcing mesh and PLI16 contour film to the correct size.

8. Product Application

1. Select the appropriate **PLI version** (Fast, Medium, or Slow).
2. Before attaching the mixing nozzle, dispense a small amount from both cartridge chambers to ensure both components flow correctly.
3. Attach the nozzle and **verify uniform mixing** this by observing a constant flow each of the two glue components into the nozzle from the individual cartridge chambers.
4. Apply **PLI directly onto the reinforcing mesh (PLI15).**
   a. Keep the nozzle imbedded **inside the glue material** during the application process to **avoid air entrapment**.
5. Apply the mixture to the **inner side** of the repair area, ensuring it penetrates through drilled holes (for the “rivet effect” and ensuring mechanical adhesion).
6. Place the **contour film (PLI16)** on the front side and gently shape for a smooth surface.
7. Allow the product to **cure** until the contour film can be easily removed — this indicates proper curing.
8. If needed, apply an **additional thin layer** of PLI and reshape using contour film.
   a. (No sanding in between applying additional PLI is needed)

9. Finishing and Protection

1. Once cured and sandable, sand the surface and finish with **Finixa Plastic Filler (GAP70)** if required.
2. For long-term durability, trim the reinforcing mesh (PLI15) from the back side and apply a **thin sealing layer** of PLI to prevent moisture penetration.
   a. In this process we should encapsulate all the fiberglass threads (PLI15) in PLI glue.

10. Storage and Handling Tips

- **Do not** reattach the original cap, as reversed installation can cause premature curing inside the cartridge. Instead leave the used **mixing nozzle** still attached to the cartridge for storage and future use.
- Store cartridges in a cool, dry environment (**recommended 15–25°C**).

11. Do's and Don'ts

DO

- Always wear nitrile gloves and protective gear.
- Clean only with **non-aggressive** solvent-free cleaners (e.g. Finixa TSP 600 "Foam-It").
- Choose **Fast / Medium / Slow** based on repair complexity.
- Sand coarsely but **avoid heat generatio**n.
- Create bevels and drill holes for better adhesion and crack prevention.
- Apply a **thin, even layer** of adhesion promoter and allow proper flash-off.
- Ensure PLI is **well mixed** and applied without air inclusion.

DON'T

- Touch repair areas with bare or greasy hands.
- Use **solvent-based degreasers** that reduce adhesion.
- Rush the process or ignore curing times.
- Sand at high speed (risk of melting plastic).

12. Conclusion

The **Finixa PLI Micro Emission Repair System** provides a **safe, efficient, and professional method** for plastic repair, ensuring both **structural integrity** and **visual quality.** Its unique prepolymer polyurethane formulation guarantees consistent results while meeting the **highest health, safety, and environmental standards.**

FINIXA®
paint processing products

WARNING!

Read this manual carefully before use. Follow all instructions precisely. Failure to do so may result in damage or injury, for which we accept no liability.

More info!

Chemicar Europe NV
Baarbeek 2 B-2070 Zwijndrecht Belgium
T. +32 3 234 87 80 info@emm.com www.finixa.com