8th Edition

Heat-Free Conductive

Simple. Reliable. One Push.

ONE-HAND MIXING®

PELNOX, LTD.

What is ONE-HAND MIXING®

ONE-HAND MIXING® is a **two-component conductive adhesive** that cures at room temperature. It is supplied in a **cartridge with a built-in static mixer**.

Unlike conventional two-component systems that require weighing and manual mixing, ONE-HAND MIXING® allows you to dispense properly mixed adhesive with a **single push.**

Structure of ONE-HAND MIXING®

Simply remove the cap and attach the mixing tip.The product is then ready for use.

Please ensure proper left-right alignment when attaching the mixing tip

Ease of Use

- ✓ The cartridge design keeps hands clean during operation.
- ✓ The correct mixing ratio is automatically dispensed by pushing the plunger.
- ✓ A static mixer ensures thorough mixing before discharge.
- ✓ The small-diameter nozzle enables precise dispensing in narrow or detailed areas.

When You Need…

- **Conductive bonding without heat**

  ☞ Cures at room temperature
  Fully reacts even in thick or large areas
  Slow curing allows repositioning before final set

- **Bonding metals that are difficult to solder**

  ☞ Excellent adhesion to Cu, Al, SUS (stainless steel), and other metals
  Compatible with glass, plastic films, and paper

- **Easy storage**

  ☞ Room temperature storage
  No refrigeration required

- **Flexible conductive circuits**

  ☞ Tough cured film with flexibility
  Follows substrate bending without failure

- **Use in harsh environments**

  ☞ Resistant to solvent wiping after cure
  Scratch-resistant (coin / fingernail)
  Minimal degradation after repeated low-to-high temperature cycling

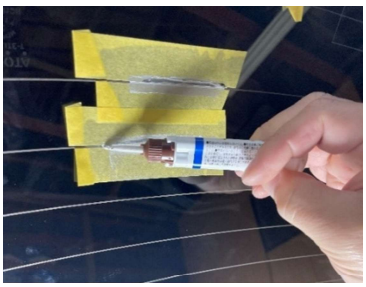
- **Low electrical resistance**

  ☞ Achieves low volume resistivity in the 10^{-4} Ω·cm range
  Comparable to solder despite room-temperature curing

Enables conductive bonding in applications where solder cannot be used.

Typical Applications

- **Rear window defroster / defogger repair**



☞ Non-sag viscosity for vertical surfaces
Excellent adhesion to glass and metal
Resistant to cleaners and abrasion

- **Easy conductive bonding without soldering**

☞ No heat source required
Repositioning possible before cure
Accelerated curing possible with mild heating (e.g., hair dryer)

- **Heat-sensitive components**

☞ Ideal for circuit designs sensitive to thermal stress
One-push component fixation and electrical connection

- **Ultra-low temperature environments**

☞ Maintains adhesion under repeated cycling between -196°C and room temperature
Suitable for aerospace, cryogenic, and research applications

- **PCB grounding material**

☞ Ideal for narrow spaces where grounding contacts cannot be used
High viscosity allows connection with minimal pressure

- **Outdoor conductive bonding**

☞ No soldering iron required
Dispense and allow to cure on site

Key Specifications

	ONE-HAND MIXING®
Container	Cartridge with static mixer
Color	Gray
Pot life (25°C)	approx. 40 minutes
Tack-free time (25°C)	approx. 2 hours
Electrical resistance stabilization time (25°C)	Over 2 days
Stable volume resistivity(25°C dry)	2×10-4 Ω·cm
Typical resistance (through thickness conduction, 25°C dry)	≤ 20 mΩ (Test area: 5 × 10 mm, thickness: 130 μm)
Approximate Drying Time Using a Hair Dryer **(900 W, Low Heat Setting)**	Approx. 10 minutes for through-thickness conduction Approx. 20 minutes for in-plane conduction
Adhesion substrates (25℃)	Good adhesion to Fe, Cu, Al, stainless steel, FR-4, ABS, etc.
Shelf life	6 months after purchase

Note: The above values are typical data and not specification values.

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