

EpoxyLite[®] E 223 Maintenance Magic Repair Kit

DESCRIPTION: A two container epoxy adhesive supplied in squeeze tubes. Both the resin and hardener are opalescent pastes which, when mixed, cure to tough rigid solid.

REPAIRS, MENDS, SEALS, CAULKS, INSULATES, WATERPROOFS

Typical applications: Repairs broken tools, glassware, ceramics and porcelain. Seals pipes, cans, leaks, seams, rivet and bolt heads, insulated electrical connections and wires. Waterproofs vessels, joints, wood, etc. Tubes make it ideal for production line bonding; also for inclusion in Component Kits for field assembly.

CURED PROPERTIES: Typical lap shear strength on aluminum to aluminum panels, > 10 Mpa (1500 psi), equivalent results on Formica, most polyesters, etched synthetic and natural rubbers, sodium etched PTFE, steel, copper, magnesium, etc. Suitable for continuous service at 120°C (248°F.). Higher temperatures may be tolerated for short durations. Cured adhesive resists moisture, acids, alkalies, corrosive salts, petroleum solvents, lubrication oils, alcohols, ketones and jet fuels.

Adhesive Strength, Shear	10 MPa	Heat Distortion Point.	82°C (180°F)
Tensile Strength	55 MPa	Water Absorption, 24 hrs	0.1%
Compressive Strength	110 MPa	Shore D Hardness	85
Shrinkage	0.2%		

Dielectric Strength, 25°C (77°F)...500 V/mil (20 mils thick)
 Dielectric Constant, 25°C (77°F)...3.3 @ 1 kHz
 Volume Resistivity, 25°C (77°F)...2 x 10¹⁵ ohm/cm

SURFACE PREPARATION: All bonding surfaces must be clean and free of oils and grease to obtain maximum adhesion. Degreasing, solvent wipe, or chemical cleaning is recommended for metals. For plastics, ultrasonic cleaning with denatured alcohol is usually adequate. Any release agent deposited on the plastic during the manufacturing process must be removed, a plasma etch may be effective. In a limited number of cases, the plastic surface should be roughened. In a few cases such as low density PE, untreated PTFE, PET, highly flexible vinyl, etc., no satisfactory surface preparation has been found. Some nylons require a phenol etch and polystyrenes should be struck with solvent. Linear polyethylene should be passed over an oxidizing flame until the surface sheen is removed.

Note: Tubes as shipped are hermetically sealed to offer long storage life. Cut away seal uniformly around inside periphery of orifice. This orifice meters the correct amount when equal lengths are squeezed out. Reseal with plastic screw caps.

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MIXING PROCEDURE:

- A. Mix on any flat surface that may be discarded.
- B. Squeeze one length of EpoxyLite® E 223 Resin on mixing surface. Use a uniform pressure to secure an even bead. "Stretching" or "bulging" will unbalance curing ratio.
- C. Close by and parallel to the Resin, squeeze an equal length bead of EpoxyLite® C 223 Hardener. For even cut-off tilt tube orifice against mixing surface.
- D. Mix thoroughly with stirrer (2 to 3 minutes).

APPLICATION METHOD: Spatula or wooden stirrer; apply mixed paste to parts and position them. Contact pressure is adequate. EpoxyLite® E 223 may also be used with glass cloth to build high strength, cure-in-place laminates

HANDLING PRECAUTIONS: Avoid contact with skin. Use under conditions of good ventilation. Use soap and water after skin contact. READ MSDS and KEEP AWAY FROM CHILDREN. If unfamiliar with handling epoxy systems, please see bulletin TI-100 "Handling Precautions for Epoxy Resins".

CURE SCHEDULE: Applied adhesive will set in 60 minutes at 25°C (77°F). Cure overnight. Heating will speed cure.

STORAGE LIFE: Store below 25°C / 77°F in a dry controlled environment out of direct sunlight. This material should be suitable for use stored under these conditions in the original sealed containers for twelve (12) months from the date of shipment.

The above properties are typical values and are not intended for specification use.

ELANTAS PDG, Inc. warrants the chemical composition of its products within stated tolerances, but does not guarantee that a product will be appropriate for any particular application. Any recommendation, performance of tests or suggestion is offered merely as a guide and is not a substitute for a thorough evaluation by the user. No representative of ELANTAS PDG, Inc. has the authority to offer a warranty that a product will perform satisfactorily in manufacturing a product and no such representation should be relied upon.