

# Epoxy Plus™ 25

**Description:** Rubber-toughened, high viscosity, structural adhesive with superior impact, peel and fatigue resistance.

**Intended Use:** Repairing furniture, jewelry, china, appliances. Bonds metals, thermoset plastics and structural parts.

**Features:** Non-shrinking. High dielectric strength. Excellent durability and flexibility.

**Typical Physical Properties:** Technical data should be considered representative or typical only and should not be used for specification purposes.

Cured 7 Days @ 75°F (24°C)	Typical Values	Standard Tests
Adhesive Lap Shear (GBS)	2,750 psi (19 MPa)	Tensile Lap Shear D1002
Dielectric Strength	550 volts/mil (21.65 Kv/mm)	Dielectric Strength ASTM D149
Gap Fill	1/4" (6.35 mm)	Shore Hardness D ASTM D2240
Impact Resistance	10 ft-lb/in <sup>2</sup> (21 Kj/m <sup>2</sup> )	T-Peel ASTM D1876
Service Temperature	-40°F - 200°F (-40C - 93°C)	
Shore Hardness	74 Shore D	
Solids by Volume	100%	
Specific Volume	23.2 in <sup>3</sup> /lb (0.838 cm <sup>3</sup> /g)	
Tensile Elongation	20%	
T-Peel	20-25 pli (3.5-4.4 N/mm)	

Uncured Properties @ 72°F (23°C)	
Color	Grey
Working Time	25 minutes
Fixture Time	2 hours
Functional Cure	3.5 hours
Full Cure	24 hours
Mix Ratio by Volume	1:1
Mix Ratio by Weight	1.32:1
Mixed Density	9.5 lb/gal (1.14 g/cm <sup>3</sup> )
Mixed Viscosity	70,000 cP

**Surface Preparation:** Clean surface by solvent-wiping any deposits of heavy grease, oil, dirt, or other contaminants. Surface can also be cleaned with industrial cleaning equipment such as vapor phase degreasers or hot aqueous baths. If working with metal, abrade or roughen the surface to significantly increase the microscopic bond area and increase the bond strength.

**Proper homogenous mixing of resin and hardener is essential for the curing and development of stated strengths.**

**Mixing Instructions:**

**25 ML DEV-TUBE**

1. Squeeze material into a small container the size of an ashtray.
2. Using mixing stick included on Dev-tube handle, vigorously mix components for one (1) minute.
3. Immediately apply to substrate.

**50 ML/400ML/490 ML CARTRIDGES**

1. Attach cartridge to Mark V™ [50ml] 400ml manual or pneumatic dispensing systems.
2. Open tip.
3. Burp cartridge by squeezing out some material until both sides are uniform (ensures no air bubbles are present during mixing).
4. Attach mix nozzle to end of cartridge.
5. Apply to substrate.

**Application Instructions:**

1. Apply mixed epoxy directly to one surface in an even film or as a bead.
2. Assemble with mating part within recommended working time.
3. Apply firm pressure between mating parts to minimize any gap and ensure good contact (a small fillet of epoxy should flow out the edges to display adequate gap fill.)

**For very large gaps:**

1. Apply epoxy to both surfaces.
2. Spread to cover entire area OR make a bead pattern to allow flow throughout the joint.

Let bonded assemblies stand for recommended functional cure time prior to handling.

**CAPABILITIES:**

Can withstand processing forces  
Do not drop, shock load, or heavily load

**Storage:** Store in a cool, dry place.

**Compliances:** None

**Chemical Resistance:** Chemical resistance is calculated with a 7 day, room temp. cure (30 day immersion) @ 75°F (24°C).

Acetic 10% (Dilute)	Fair	Hydrochloric 10%	Very Good
Ammonia	Excellent	Mineral Spirits	Excellent
Corn Oil	Very Good	Motor Oil	Excellent
Cutting Oil	Excellent	Sodium Hydroxide 10%	Very Good
Gasoline (Unleaded)	Poor	Sodium Hypochlorite	Very Good
Glycol/Antifreeze	Fair	Sulfuric 10%	Very Good

**Precautions:** **FOR INDUSTRIAL USE ONLY:** Please refer to the appropriate Safety Data Sheet prior to using this product.

**Warranty:** ITW Performance Polymers will replace any material found to be defective. Because the storage, handling and application of this material is beyond our control, we can accept no liability for the results obtained.

**Order Information:**

<u>Item No.</u>	<u>Package Size</u>
14278	50ml cartridge
14350	400ml cartridge

**Contacts:** [www.itwpp.com](http://www.itwpp.com)

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