

## 2 Ton® Epoxy

**Description:** Extremely strong, medium-cure, water-resistant clear adhesive that will self-level after application.

**Intended Use:** Bonding parts in a structural environment or potting electronic components and assemblies.

**Features:** Cures without shrinking. Good impact resistance. Produces strong, rigid bond on metal, ceramics, wood, concrete, glass, or combinations.

**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)	2,250 psi (15.5 MPa)	Adhesive Lap Shear ASTM D1002
Dielectric Strength	600 volts/mil (23.6 kV/mm)	Dielectric Strength ASTM D149
Compression Strength	11,000 psi (75.8 MPa)	Compressive Strength ASTM D695
Hardness	83 Shore D	Cured Hardness ASTM D2240
Impact Resistance	6.5 ft. lb./in <sup>2</sup> (13.6 kJ/m <sup>2</sup> )	
Service Temperature	-40°F - 200°F (-40°C - 93°C)	
Solids by Volume	100	
Specific Volume	25.2 in <sup>3</sup> /lb. (0.91 cm <sup>3</sup> /g)	
Tensile Elongation	1%	
T-Peel	2-3 pli (0.35 - 0.53 N/mm)	

Uncured Properties @ 72°F (23°C)	
Color	Clear
Working Time	8-12 minutes
Fixture Time	30-35 minutes
Functional Cure	2 hours
Full Cure	16 hours
Mix Ratio by Volume	1:1
Mix Ratio by Weight	1.2:1
Mixed Density	9.17 lb/gal (1.10 g/cm <sup>3</sup> )
Mixed Viscosity	8,000 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**

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

**50 ML/200ML/400ML CARTRIDGES**

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

**Application Instructions:**

- Apply mixed epoxy directly to one surface in an even film or as a bead.
- Assemble with mating part within recommended working time.
- 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:**

- Apply epoxy to both surfaces.
- 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. A shelf life of 3 years from date of manufacture can be expected when stored at room temperature (22°C)

in their original containers. The expiry will be displayed on the product packaging.

**Compliances:** None

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

Acetic 10% (Dilute)	Poor	Hydrochloric 10%	Poor
Acetone	Fair	Isopropanol	Poor
Ammonia	Very Good	Kerosene	Excellent
Corn Oil	Excellent	Methyl Ethyl Ketone	Poor
Cutting Oil	Excellent	Mineral Spirits	Excellent
Ethanol	Poor	Motor Oil	Excellent
Gasoline (Unleaded)	Poor	Sodium Hydroxide 10%	Very Good
Glycol/Antifreeze	Excellent	Sulfuric 10%	Poor

**Precations:** **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:**

Item No.	Package Size
14310	25ml Dev-Tube™
14260	50ml cartridge
20222	200ml cartridge
14355	400ml cartridge
14360	9lb kit

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

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