Devcon®
A brand of ITW Polymers Adhesives North America

**Technical Data Sheet**
**10/6/2010**

# Epoxy Plus™ 25

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

**Intended Use:** Bonds metals, thermoset plastics and structural parts.

**Product features:**
**Non-shrinking**
**High dielectric strength**
**Excellent durability and flexibility**

**Limitations:**

**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 | |
|---|---|
| Adhesive Tensile Lap Shear[GBS} | 2,750 psi @ 0.010" bondline |
| Dielectric Strength | 550 volts/mils |
| Gap Fill | Good |
| Impact Resistance | 10 ft.lb./in.(2) |
| Service Temperature | -40°F to 200°F |
| Shore Hardness | 74 Shore D |
| Solids by Volume | 100 |
| Specific Volume | 23.2 in.[3]/lb. |
| Tensile Elongation | 20% |
| Tpeel | 20-25 pli |

**TESTS CONDUCTED**
Cured Density ASTM D 792
Dielectric Strength, volts/mil ASTM D 149
Adhesive Tensile Shear ASTM D 1002
Cured Hardness Shore D ASTM D 2240
T-Peel Strength ASTM D 1876

| Uncured | |
|---|---|
| Color | Resin: Grey; Hardener: White |
| Fixture Time | 3-1/2 hrs. @ 72°F |
| Full Cure | 30 hrs. |
| Functional Cure | 24 hrs. @ 72°F |
| Mix Ratio by Volume | 1:1 |
| Mix Ratio by Weight | 57:43 |
| Mixed Density | 9.5 lbs./gal.:1.20 gm/cc |
| Mixed Viscosity | 70,000 cps |
| Viscosity | Resin: 60,000 cps; Hardener: 80,000 cps |
| Weight | Resin: 11.6 lbs/gal.; Hardener: 8.3 lbs./gal. |
| Working Time | 25 min. [28 gm @ 72°F] |

**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.

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

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:**

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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 days immersion) @ 75°F)*

| | |
|---|---|
| Acetic (Dilute) 10% | Fair |
| Ammonia | Excellent |
| Corn Oil | Very good |
| Cutting Oil | Excellent |
| Gasoline (Unleaded) | Poor |
| Glycols/Antifreeze | Excellent |
| Hydrochloric 10% | Very good |
| Mineral Spirits | Excellent |

| | |
|---|---|
| Motor Oil | Excellent |
| Sodium Hydroxide 10% | Very good |
| Sodium Hypochlorite | Very good |
| Sulfuric 10% | Very good |

**Precautions:** Please refer to the appropriate material safety data sheet (MSDS) prior to using this product.

**For technical assistance, please call 1-800-933-8266**

**FOR INDUSTRIAL USE ONLY**

**Warranty:** Devcon 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.

**Disclaimer:** All information on this data sheet is based on laboratory testing and is not intended for design purposes. ITW Devcon makes no representations or warranties of any kind concerning this data.

**Order Information:**

**14350 400 ml cartridge**
**14278 50 ml cartridge**