



# PLASTIC STEEL<sup>®</sup> PUTTY (A)



## PRODUCT DESCRIPTION:

A steel-filled epoxy putty for general maintenance and repairs. For filling, rebuilding, and bonding metal surfaces.

## FEATURES/BENEFITS

- Applies easily, needs no special tools
- Bonds to most metals, concrete
- Machinable (see back page)
- Resistant to most chemicals
- Qualified under Mil. Spec. DOD-C-24176B

## RECOMMENDED APPLICATIONS

- Repairs worn or fatigued metals
- Patches castings
- Making jigs and fixtures
- Rebuilds pump and valve bodies
- Restores bearing journals and races

### **Typical Physical Properties: Cured 7 days @ 75°F.**

Color.....	Dark Grey
Mixed Viscosity.....	Putty
% Solids by Volume.....	100
Cured Density.....	2.33 gm/cc
Cure Shrinkage, ASTM D 2566.....	0.0006 in/in.
Specific Volume, .....	11.9 in <sup>3</sup> /lb.
Pot Life @ 75°F (1 lb. mass.).....	45 minutes
Compressive Strength, ASTM D 695.....	8,260 psi
Tensile Shear, ASTM D 1002.....	2,800 psi
Cured Hardness Shore D, ASTM 2240.....	85D
Dielectric Strength, volts/mil, ASTM D 149.....	30
Coverage.....	48 sq.in./lb. @ 1/4"
Temperature Resistance:	
Wet	100°F
Dry	250°F

## Chemical Resistance: 7 days room temperature cure, ( 30 days immersion)

Kerosene	VG	Methanol	U
10% Hydrochloric acid	VG	Toluene	F
Chlorinated solvent	VG	Ammonia	VG
10% Sulfuric acid	VG	10% Sodium Hydroxide,	VG

Key: E=Excellent, VG=Very Good, F=Fair, U=Unsatisfactory

Epoxyes are very good in water, saturated salt solution, leaded gasoline, mineral spirits, ASTM #3 oil and propylene glycol. Epoxyes are generally not recommended for long-term exposure to concentrated acids and organic solvents.

**PLEASE CONSULT FACTORY FOR OTHER CHEMICALS.**

## **Directions for Use:**

Proper surface preparation is essential to the success of any epoxy application. In all cases the surface should be clean, dry, free from oils, and rough.

1. Remove all oils, dirt and grease by means of a strong cleaner/degreaser (Devcon Cleaner Blend 300 is suitable for this process.)
2. Roughen the surface by grit blasting (8-40 mesh grit) or grinding. A 3-5 mil profile is desired for most applications.
3. All abrasive preparation should be followed by another cleaning to remove any remnants from that process.
4. Ideal application temperature is 55 - 90°F. Under cold conditions, heating the repair area to 100 - 110°F is recommended.
5. Add hardener to resin and mix thoroughly with a screwdriver or putty knife until a uniform, streak-free consistency is obtained, (about 4 minutes).

## **Mix Ratio - Resin to Hardener: Weight. 9:1, Volume 2.5:1**

6. Spread mixed material over the repair area and work firmly into the substrate to ensure maximum surface contact.
7. To bridge large gaps or holes, use fiberglass tape, expanded metal or mechanical fasteners.

## **CURE:**

Working time is 45 minutes @ 75°F

Functional (75%) cure is achieved in 16 hours @ 75°F

For maximum physical properties, heat cure for 4 hours at 200°F after curing at room temperature for 2-1/2 hours.

## **MACHINING:**

Allow material to cure for at least 4 hours before machining.

Lathe Speed: 150 ft./minute

Cut: Dry

Tools: Carbide Top Rake 6° (+/- 2°) - Side/Front 8° (+/- 2°)

Feed Rate (rough): Travel speed .020 Rough cut .020 - .060

Feed Rate (finishing): Travel speed .010 Finish cut .010

Polishing: Use 400 to 650 emery paper wet. Material should polish to a 25-50 micro inch

## **PRECAUTION:**

Use in accordance with Material Safety Data Sheet.

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.

## **Warning: For Industrial Use Only.**

## **ORDERING INFORMATION:**

<u>Stock No.</u>	<u>Unit Size</u>
10110	1 lb.
10120	4 lb.
10130	25 lb.*

9/26/00

\* Packaged with a slow hardener. Pot life is 90 minutes.