



Steel Weld Epoxy System Part No. 47709

PRODUCT DATA BULLETIN

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.....	Black
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 ³ /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. @ ¼"
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: VG = Very Good F = Fair U = Unsatisfactory

PLEASE CONSULT FACTORY FOR OTHER CHEMICALS.

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

APPLICATION INFORMATION:

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.

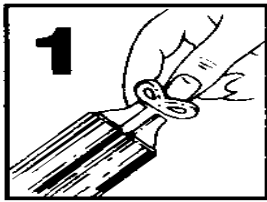
1. Remove all oils, dirt and grease by means of a strong cleaner/degreaser.
2. Roughen the surface by grit blasting (8-40 mesh grit) or grinding. A 3-5 mil profile is desired for most applications.
3. All abrasive preparation should be followed by another cleaning to remove any remnants from that process.
4. Ideal application temperature is 55°F - 90°F. Under cold conditions, heating the repair area to 100°F - 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.

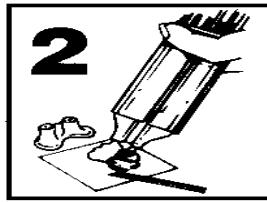
Packaging and Dispensing:

Steel Weld Epoxy System comes in a 25 ml syringe, carded, packed six units per case. The syringe is a high-tech, patented dispenser. The patented 1-2-3 dispenser makes it easy to dispense and mix the right amount for the job.



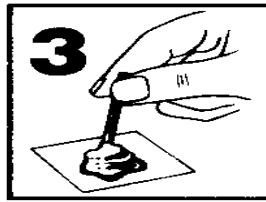
SNAP

Just snap off the cap. The snap off cap eliminates unsafe cutting of tube ends. The cap is reusable.



DISPENSE

When you dispense the product by pushing the glide plunger in, a mixing paddle will pop out.



MIX

Mix the right amount of product with the handy mixing paddle. Snap the cap back on. It's that simple.

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 2½ 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 micron finish

PRECAUTION:

For complete safety and handling information, please refer to the appropriate Material Safety Data Sheets prior to using this product.