



Aluminum Wear Compound

Description: Blended aluminum-filled epoxy putty, used to repair fatigued metal surfaces where exceptional durability and ruggedness is required.

Intended Use: Product designed to repair leading edges of molds that have worn because of abrasion or constant use. Material can adhere to all metal surfaces and withstand wear and abrasion in a constant demolding application.

Product features:
Fills voids or pores in castings
Protects metal from bi-metallic corrosion
No-shrink curing

Limitations: Must cure for 24 hours to reach full physical properties

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

Color	Dark grey
Mix Ratio by Volume	4:1
Mix Ratio by Weight	9:1
% Solids by Volume	100
Pot Life @ 75F	50 min.
Specific Volume	15.38 in(3) / lb.
Cured Shrinkage	0.005 in/in
Specific Gravity	1.8 gm/cc
Temperature Resistance	Wet: 120°F; Dry: 250°F
Coverage/lb	65 sq.in./lb. @ 1/4"
Cured Hardness	88 D
Dielectric Strength	400 volts/mil
Compressive Strength	9,840 psi
Flexural Strength	7,260 psi
Cure Time	16 hours
Mixed Viscosity	Putty
Adhesive Tensile Lap Shear{GBS}	2,580 psi
Fixture Time	4 hours @ 1/2" thick
Specific Volume	15.38 in.[3]/lb.

Surface Preparation:

1. Thoroughly clean the surface with Devcon® Cleaner Blend 300 to remove all oil, grease, and dirt.
 2. Grit blast surface area with 8-40 mesh grit, or grind with a coarse wheel or abrasive disc pad, to create increased surface area for better adhesion (Caution: An abrasive disc pad can only be used provided white mesh is revealed). Desired profile is 3-5mil, including defined edges (do not "feather-edge" epoxy).
- Note: For metals exposed to sea water or other salt solution, grit-blast and high-pressure-water-blast the area, then leave overnight to allow any salts in the metal to "sweat" to the surface. Repeat blasting to "sweat out" all soluble salts. Perform chloride contamination test to determine soluble salt content (should be no more than 40ppm).
3. Clean surface again with Cleaner Blend 300 to remove all traces of oil, grease, dust, or other foreign substances from the grit blasting.
 4. Repair surface as soon as possible to eliminate any changes or surface contaminants.

WORKING CONDITIONS: Ideal application temperature is 55°F to 90°F. In cold working conditions, heat repair area to 100-110°F immediately prior to applying epoxy to dry off any moisture, contamination, or solvents, as well as to assist epoxy in achieving maximum adhesion properties.

Mixing Instructions:

- It is strongly recommended that full units be mixed, as ratios are pre-measured. ----
1. Add hardener to resin

2. Mix thoroughly with screwdriver or similar tool (continuously scrape material away from sides and bottom of container) until a uniform, streak-free consistency is obtained.

INTERMEDIATE SIZES (1,2,3 lb. units): Place resin and hardener on a flat, disposable surface such as cardboard, plywood, or plastic sheet). Use a trowel or wide-blade tool to mix the material as in Step 2 above.

LARGE SIZES: (25 lb., 30 lb., 50 lb. buckets): Use a T-shaped mixing paddle or a propeller-type Jiffy Mixer Model ES on an electric drill. Thoroughly fold putty by vigorously moving paddle/propeller up and down until a homogenous mix of resin and hardener is attained.

Application Instructions:

Spread mixed material to repair area and work firmly into substrate to ensure maximum surface contact. Aluminium Wear Compound fully cures in 24 hours, at which time it can be machined, drilled, or painted.

FOR BRIDGING LARGE GAPS OR HOLES

Place fiberglass sheet, expanded metal, or mechanical fasteners between repair area and Aluminium Wear Compound prior to application.

FOR VERTICAL SURFACE APPLICATIONS

Aluminium Wear Compound can be troweled up to 3/4" thick without sagging.

FOR MAXIMUM PHYSICAL PROPERTIES

Cure at room temperature for 12-16 hours, then heat cure for 2 hours at 150°F.

FOR 70°F APPLICATIONS

Applying epoxy at temperatures below 70°F lengthens functional cure and pot life times. Conversely, applying above 70°F shortens functional cure and pot life.

CURING INSTRUCTIONS

Aluminium Wear Compound will cure in a thick section, [>1/2" thick] at 75°F in 4 hours. The material will be fully cured in 16 hours for full chemical immersion.

Storage:

Store at room temperature.

Compliances:

None

Chemical Resistance:

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

Ammonia	Very good
Chlorinated Solvent	Very good
Hydrochloric 10%	Fair
Kerosene	Very good
Methanol	Poor
Sodium Hydroxide 10%	Very good
Sulfuric 10%	Fair
Toluene	Fair

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:

DE 087 20 lb.