



Carbide Putty

Description:	Silicone carbide-filled epoxy putty for economical protection against wear and abrasion		
Intended Use:	Applications involving particulate less than 1/16": pipe elbows, pulverizers and slurry lines, cyclones and exhausters fans, chutes		
Product features:	Non-sagging Extremely wear resistant Room temperature cure		
Limitations:	None		
Typical Physical Properties:	<i>Technical data should be considered representative or typical only and should not be used for specification purposes.</i> Cured 7 days @ 75° F		
	Color	Grey	TESTS CONDUCTED
	Mix Ratio by Volume	4:1	Cured Hardness Shore D ASTM D 2240
	Mix Ratio by Weight	8:1	Compressive Strength ASTM D 695
	% Solids by Volume	100	Dielectric Constant ASTM D 150
	Pot Life @ 75F	50 min.	Modulus of Elasticity ASTM D 638
	Specific Volume	15.9 in.(3)/lb.	Adhesive Tensile Shear ASTM D 1002
	Cured Shrinkage	0.0009 in./in.	Dielectric Strength, volts/mil ASTM D 149
	Specific Gravity	1.75 gm/cc	Coef. of Thermal Expansion ASTM D 696
	Temperature Resistance	Wet: 120°F; Dry: 250°F	Cure Shrinkage ASTM D 2566
	Coverage/lb	64 sq.in./lb. @ 1/4"	Flexural Strength ASTM D 790
	Cured Hardness	85D	Thermal Conductivity ASTM C 177
	Dielectric Strength	200 volts/mil.	
	Dielectric Constant	25.0	
	Adhesive Tensile Shear	1,350 psi	
	Compressive Strength	8,160 psi	
	Modulus of Elasticity	8.0 psi x 10(5) in.	
	Flexural Strength	5,480 psi	
	Coefficient of Thermal Expansion	14 [(in.) / (in) x°F)] x 10(-6)	
	Thermal Conductivity	1.25 [(cal x cm) / (sec x cm(2)x°C)]x10(-3)	
	Cure Time	16 hrs.	
	Recoat Time	3 - 6 hrs.	
	Mixed Viscosity	Putty	
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:**

ADDITIONAL SURFACE PREPARATION INFORMATION:

If grit blasting is not possible, and expandable metal cannot be used, apply Devcon Brushable Ceramic at 11-18 mils to prime the metal surface. Allow to cure for approximately 2 hours, or until a fingernail can almost depress the primed surface. Immediately apply Carbide Putty to the surface. DO NOT let the "prime coat" fully cure before applying Carbide Putty.

Spread mixed material on repair area at a minimum thickness of 1/4". Work firmly into substrate to ensure maximum surface contact. Carbide Putty fully cures in 16 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 Carbide Putty prior to application.

FOR VERTICAL SURFACE APPLICATIONS

Carbide Putty can be troweled up to 3/4" thick without sagging.

FOR MAXIMUM PHYSICAL PROPERTIES

Cure at room temperature for 2.5 hours, then heat cure for 4 hours @ 200°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.

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

1,1,1-Trichloroethane	Very good	Phosphoric 10%	Fair
Ammonia	Very good	Potassium Hydroxide 40%	Very good
Gasoline (Unleaded)	Very good	Sodium Hydroxide 50%	Very good
Hydrochloric 10%	Fair	Sodium Hypochlorite	Very good
Methanol	Poor	Sulfuric 10%	Fair
Methyl Ethyl Ketone	Poor	Toluene	Very good
Methylene Chloride	Poor	Trisodium Phosphate	Very good
Nitric 10%	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:**

**10050 3 lb.
10080 20 lb.**