



A brand of ITW Polymers Adhesives North America

## Technical Data Sheet

1/26/2012

# DFense Blok™ Quick Patch

<b>Description:</b>	Alumina ceramic bead-filled epoxy system with a very fast cure speed, allowing for emergency patching of processing equipment. Provides wear and abrasion resistance for extended service life.
<b>Intended Use:</b>	Patch holes, leaks and cracks in all types of processing equipment such as: scrubbers, ash handling systems, pipe elbows, screens, chutes, recontour chippers, bins, hoppers, bunkers, separators, digester tables, exhausters, launderers, housing fans, crushers and breakers.
<b>Product features:</b>	<p><b>Eliminates downtime</b></p> <p><b>Exceptionally fast cure for emergency patching</b></p> <p><b>Applies to vertical and overhead surfaces</b></p> <p><b>Easy to mix</b></p> <p><b>Ceramic beads for wear resistance</b></p>
<b>Limitations:</b>	None

*Technical data should be considered representative or typical only and should not be used for specification purposes.*

### Typical Physical Properties:

#### Cured 7 days @ 75° F

<b>Adhesive Tensile Shear</b>	<b>2,495 psi</b>
<b>Coefficient of Thermal Expansion</b>	<b>31 in/(in x °F)] x 10(-6)</b>
<b>Color</b>	<b>Gray</b>
<b>Compressive Strength</b>	<b>6,166 psi</b>
<b>Cured Hardness</b>	<b>84 D</b>
<b>Cured Shrinkage</b>	<b>0.0010 in/in</b>
<b>Dielectric Constant</b>	<b>51</b>
<b>Flexural Strength</b>	<b>4,880 psi</b>
<b>Recoat Time</b>	<b>20-30 minutes</b>
<b>Specific Gravity</b>	<b>1.86</b>
<b>Specific Volume</b>	<b>14.89 in(3)/lb</b>
<b>Temperature Resistance</b>	<b>Dry 200 °F</b>

#### TESTS CONDUCTED

Adhesive Tensile Shear ASTM D 1002
Coef. of Thermal Expansion ASTM D 696
Compressive Strength ASTM D 695
Cured Hardness Shore D ASTM D 2240
Cure Shrinkage ASTM D 2566
Dielectric Constant ASTM D 150
Flexural Strength ASTM D 790

#### Uncured

<b>% Solids by Volume</b>	<b>100</b>
<b>Coverage / lb</b>	<b>60 sq. in/lb @ 1/4"</b>
<b>Cure Time</b>	<b>6 hours</b>
<b>Functional Cure</b>	<b>30 minutes</b>
<b>Mix Ratio by Volume</b>	<b>1:1</b>
<b>Mix Ratio by Weight</b>	<b>1:1</b>
<b>Mixed Viscosity</b>	<b>Non-Sag Putty</b>
<b>Pot Life @ 75 °F</b>	<b>4 minutes</b>

### 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 metal 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 Devcon® 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, directly heat repair

area to 100-110°F prior to applying epoxy and maintain at this temperature during product cure to dry off any moisture, contamination or solvents, as well as to achieve maximum performance 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 over the repair area and work firmly into the substrate to ensure maximum surface contact. Dfense Blok™ Quick Patch cures rapidly. For optimum end use performance, it is critical to mix and apply product within the 4 minute pot life. Application Tip: Use plastic bag provided in kit as application tool. Position hand inside of bag and place mixed product (outside of bag) into palm. Press Dfense Blok™ Quick Patch firmly against the repair area. The plastic bag will promote easier spreading/smoothing of the product across the desired area. NOTE: The plastic bag is an application tool only and is not intended to replace the need for chemical resistant (and possibly heat resistant) gloves. Use proper Personal Protective Equipment in accordance with the Material Safety Data Sheet.

**FOR BRIDGING LARGE GAPS OR HOLES**

Place fiberglass sheet, expanded metal or mechanical fasteners between repair area and Dfense Blok™ Quick Patch prior to application.

**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, 70 °F.

**Compliances:**

None

**Chemical Resistance:**

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

1,1,1-Trichloroethane	Fair	Trisodium Phosphate	Fair
Ammonia	Fair		
Gasoline (Unleaded)	Very good		
Hydrochloric 10%	Fair		
Methanol	Poor		
Methyl Ethyl Ketone	Poor		
Sodium Hydroxide 50%	Fair		
Sulfuric 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:**

11320 1 lb. kit