Technical Data Sheet
Version 3. 04/2023

DFense Blok™ Quick Patch

Description: 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.

Intended Use: 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.

Features: **Eliminates downtime, Exceptionally fast cure for emergency patching, Applies to vertical and overhead surfaces, Easy to mix, Ceramic beads for wear resistance**

Limitations: Suitability of product is determined by the end user for their application and process.

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 (24°C)	
Adhesive Tensile Shear	2,495 psi (17.2 MPa)
Coefficient of Thermal Expansion (x10-6)	31 in/in.°F (55.8 cm/cm.°C)
Color	Grey
Compressive Strength	6,166 psi (42.5 MPa)
Cured Hardness	84 D
Cured Shrinkage	0.0010 in/in (cm/cm)
Dielectric Constant	51
Flexural Strength	4,880 psi (33.7 MPa)
Recoat Time	20-30 minutes
Specific Gravity	1.86
Temperature Resistance	Dry 200°F (93°C)

Uncured Properties @ 72°F (23°C)	
% Solids by Volume	100
Coverage (1/4" / 6.35mm)	60 in2/lb (853 cm2/Kg)
Cure Time	6 hrs
Functional Cure	30 mins.
Mix Ratio by Volume	1:1
Mix Ratio by Weight	1:1
Mixed Viscosity	Non-Sag Putty
Pot Life @ 75 °F	4 mins.

Standard Tests
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

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 (13-32°C). In cold working conditions, directly heat the repair area to 100-110°F (38-43°C) 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 (21°C) APPLICATIONS
Applying epoxy at temperatures below 70°F (21°C) lengthens functional cure and pot lifetimes. Conversely, applying above 70°F (21°C) shortens functional cure and pot life.

Storage:

Store at room temperature, 70 °F (21°C).

Compliances:

None

Chemical Resistance:

Chemical resistance is calculated with a 7 day, room temp. cure (30 days immersion) @ 75°F (24°C)

1,1,1-Trichlorethane	Very good
Ammonia	Excellent
Gasoline (Unleaded)	Fair
Hydrochloric 10%	Very good
Methanol	Poor

Trisodium Phosphate	Very good
Methyl Ethyl Ketone	Poor
Sodium Hydroxide, 50%	Excellent
Sulfuric 10%	Very good

Precautions:

FOR INDUSTRIAL USE ONLY: Please refer to the appropriate **S**afety **D**ata **S**heet prior to using this product.

Warranty:

ITW Performance Polymers 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.

Order Information:

Item No.	Package Size
11350	9 lb. (4.1 Kg)

Contacts:

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