Technical Data Sheet
Version 3. 04/2023

Wear Guard™ Ultra

Description: Alumina ceramic bead-filled epoxy system with outstanding abrasion resistance for severe service conditions.

Intended Use: Repair scrubbers, ash handling systems, pipe elbows, screens and ceramic lined chutes; recontour chippers, bins, bunkers, separators, diester tables; protect exhausters, chutes, launderers, housing fans, crushers, and breakers.

Features:
Extends Equipment Operating Cycles
Epoxy Primer FC included (For use as primer)
Non-sagging & Outstanding Wear Resistance
Outstanding 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)	Typical Values
Adhesive Tensile Shear	1,565 psi (10.8 MPa) (w/o beads)
Compressive Strength	13,910 psi (95.9 MPa)
Coverage (1/4" / 6.35mm)	44 in2/lb (626 cm2/Kg)
Flexural Strength	8,735 psi (60.2 MPa)
Hardness	87 Shore D
Specific Gravity	20.9 lb/Gal (2.5 g/cm3)
Specific Volume	11.35 in3/lb (0.41 cm3/g)
Taber Abrasion, Weight loss (grams)	0.065 (w/o beads)
Temperature Resistance	250°F (121°C)
Tensile Strength	4,260 psi (29.4 MPa)

Standard Tests
Compressive Strength ASTM D 695
Cured Hardness Shore D ASTM D 2240
Coef. of Thermal Expansion ASTM D 696
Flexural Strength ASTM D 790

Uncured	
Color	Gray
Functional Cure	16 hours
Mix Ratio by Weight	R:18.8/H:7.8/Beads:73.4
Mixed Viscosity	Non-sag Putty
Pot Life @ 75°F (24°C)	20 minutes
Recoat Time	1 - 2 Hours
Solids by Volume	100%

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°C to 32°C). In cold working conditions, directly heat 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:

ADDITIONAL SURFACE PREPARATION INFORMATION:
Mix and apply Devcon® Epoxy Primer FC (included) to prime the surface (0.0125" max. thickness). Immediately apply

Wear Guard™ Ultra to the surface.

WEAR GUARD™ ULTRA MIX INSTRUCTIONS:
-Add hardener to the resin container & mix thoroughly.
-Transfer resin/hardener mix to the 5-gallon pail.
-Slowly add beads while agitating (Use a T-shaped mixing paddle or a propeller-type Jiffy Mixer Model ES on a heavy-duty electric drill)
-Thoroughly mix until a uniform consistency of the resin/hardener/beads is obtained.
-Spread material on repair area at a minimum thickness of 1/4" (6 mm). Work firmly into substrate to ensure maximum surface contact. Allow to fully cure (16 hours).

FOR BRIDGING LARGE GAPS OR HOLES
Place fiberglass sheet, expanded metal, or mechanical fasteners between repair area and Wear Guard™ Ultra prior to to application.

FOR VERTICAL SURFACE APPLICATIONS
Wear Guard™ Ultra can be troweled up to 3/4" (19mm) thick without sagging.

FOR MAXIMUM PHYSICAL PROPERTIES
Cure at room temperature for 2.5 hours, then heat cure for 4 hours @ 200°F (93°C).

FOR ± 70°F (21°C) APPLICATIONS
Applying epoxy at temperatures below 70°F (21°C) lengthens functional cure and pot life times. Conversely, applying above 70°F shortens functional cure and pot life.

Storage: Shelf Life is approximately 2 years from date of manufacture when store at room temperature, 70 °F (21°C) and in their unopened original containers.

Compliances: None

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

Sodium Hydroxide 50%	Excellent
Sulfuric 10%	Excellent

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**
11475	30 lb. (13.6 kg)

Contacts:

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