



A brand of ITW Polymers Adhesives North America

## Technical Data Sheet

4/9/2012

# 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, hoppers, bunkers, separators; protect exhausters, chutes, launders, housing fans, crushers and breakers.

**Product features:** **Extends Equipment Operating Cycles**  
**Epoxy Primer FC included (For use as primer)**  
**Non-sagging**  
**Outstanding Wear Resistance**

**Limitations:** None

**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

<b>Adhesive Lap Shear (CRS)</b>	<b>1,565 psi (w/o beads)</b>
<b>Compressive Strength</b>	<b>13,910 psi</b>
<b>Coverage/lb</b>	<b>44 sq. in./lb. @ 1/4"</b>
<b>Cured Hardness</b>	<b>87D</b>
<b>Flexural Strength</b>	<b>8,735 psi</b>
<b>Specific Gravity</b>	<b>2.50 gm/cc</b>
<b>Specific Volume</b>	<b>11.35 in.(3)/lb.</b>
<b>Taber Abrasion, Weight loss (grams)</b>	<b>0.065 (w/o beads)</b>
<b>Temperature Resistance</b>	<b>250 °F</b>
<b>Tensile Strength</b>	<b>4,260 psi</b>

### Uncured

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

**ADDITIONAL SURFACE PREPARATION & MIXING INSTRUCTIONS:**

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". 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 application.

**FOR VERTICAL SURFACE APPLICATIONS**

Wear Guard™ Ultra 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 the 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)*

Sodium Hydroxide 10%	Excellent
Sulfuric 10%	Excellent

**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:**

**11475 30 lb.**