



Wet Surface Repair Putty (UW)

Description: Makes (effective) repairs to metal, concrete, wood surfaces in wet and dry environments.

Intended Use: Industrial Use: Repairing and refitting pipes, valves, pumps, and tanks. Repair concrete vessels and piping in wet environments. This product will bond to a wet or damp surface.

Features:
Bonds to aluminum, concrete, and many other metals
Bonds to ferrous and non-ferrous metals
Non-rusting
Bonds to wet surfaces, patches, and seals metals
Non-sagging

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
Coefficient of Thermal Expansion (x10-6)
Compressive Strength
Cured Shrinkage
Dielectric Constant
Dielectric Strength
Flexural Strength
Hardness
Modulus of Elasticity
Solids by Volume
Temperature Resistance

Typical Values

2,685 psi (18.5 MPa)
18 in/in.°F (32.4 cm/cm.°C)
5,625 psi (38.8 MPa)
0.0020 in/in (cm/cm)
8.6
150 volts/mil (5.9 kV/mm)
4,990 psi (34.4 MPa)
82 Shore D
7.5 psi x10⁵ (5.2 GPa)
100
Wet: 120°F (49°C); Dry: 250°F (121°C)

Standard Tests

Adhesive Tensile Shear ASTM D 1002
Cure Shrinkage ASTM D 2566
Coef. of Thermal Expansion ASTM D 696
Compressive Strength ASTM D 695
Cured Hardness Shore D ASTM D 2240
Dielectric Strength, volts/mil ASTM D 149
Dielectric Constant ASTM D 150
Flexural Strength ASTM D 790
Modulus of Elasticity ASTM D 638

Uncured Properties @ 72°F (23°C)

Color: Grey
Coverage (1/4" / 6.35mm): 68 in2/lb (967 cm2/Kg)
Functional Cure: 24 hours
Mix Ratio by Volume: 1:1
Mix Ratio by Weight: 1.4:1
Mixed Viscosity: Putty
Pot Life @ 75°F (24°C): 45 min.
Recoat Time: 10-12 hours
Specific Gravity: 11.7 lb/Gal (1.4 g/cm3)
Volume: 17 in3/lb (0.61 cm3/g)

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 - 90°F (13 - 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:

Spread mixed material on repair area and work firmly into substrate to ensure maximum surface contact. Underwater Repair Putty fully cures in 24 hours, at which time it can be machined, drilled, or painted

FOR MAXIMUM PHYSICAL PROPERTIES

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

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.

For Underwater or submerged repairs consider the following:

- Remove all dirt, barnacles, flaking paint, and algae/seaweed from the substrate.
- Wipe area with a clean cloth to remove any film on the surface. Obviously, you cannot degrease underwater, but wiping and turning a clean cloth often will remove any film on the surface.
- Abrade the surface if possible. (Use mechanical means or a file to accomplish.)
- The oxidation can be removed by mechanical means, such as water, grit-blasting, or by chemical means.
- Make the repair as soon as possible to avoid surface contamination.

Storage:

Shelf life 3 yrs from manufacture. See package label. 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)

Ammonia	Very good
Chlorinated Solvent	Poor
Hydrochloric 10%	Fair
Kerosene	Very good
Methanol	Poor
Sodium Hydroxide 10%	Very good
Sulfuric 10%	Fair
Toluene	Very good

Precautions:

FOR INDUSTRIAL USE ONLY: Please refer to the appropriate Safety Data Sheet 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:

<u>Item No.</u>	<u>Package Size</u>
11801	1 lb. (454 g) kit

Contacts:

www.itwpp.com

ITW Performance Polymers (EMEA)
Bay 150, Shannon Industrial Estate
Shannon, County Clare, Ireland V14 DF82
TEL: +353 61 771 500
FAX: +353 61 471 285
Email: customerservice.shannon@itwpp.com

ITW Performance Polymers (US)
30 Endicott Street
Danvers, MA 01923 USA
TEL: 855 489 7262
FAX: 978 774 0516
Email: info@itwpp.com

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chemical-concepts.com

800.220.1966

410 Pike Road • Huntingdon Valley, PA 19006