



A brand of ITW Polymers Adhesives North America

## Technical Data Sheet

4/17/2012

# Flexane® High Performance Putty

|                          |   |
|--------------------------|---|
| <b>Description:</b>      | A tough, rubber-like urethane compound for making a broad range of repairs to protect against wear, abrasion, and noise reduction.  |
| <b>Intended Use:</b>     | Protect equipment surfaces from wear and abrasion.<br>Protect processing equipment such as coating hoppers, lining chutes, pump volutes, impellers, and fan housings.   |
| <b>Product features:</b> | <b>Excellent tear resistance</b><br><b>Mixes easily</b><br><b>Bonds (with primers) to metal, concrete, rubber, wood, and fiberglass</b><br><b>Highly resistant to impact and abrasion</b><br><b>Trowels on smoothly</b>   |
| <b>Limitations:</b>      | Keep from freezing. The resin may crystallize if exposed to temperatures below 50°F. This does not affect the properties of the product. If after opening, resin has an opaque, whitish color, apply lid and allow can to stand at 70°F overnight or until resin becomes clear. |

**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>Abrasion Resistance</b>           | <b>140 mg loss per 1,000 revolu</b> |
| <b>Color</b>                         | <b>Black</b>                        |
| <b>Coverage/lb</b>                   | <b>94 sq.in./lb. @ 1/4"</b>         |
| <b>Cured Hardness</b>                | <b>78A</b>                          |
| <b>Cured Shrinkage</b>               | <b>0.12 in./in.</b>                 |
| <b>Demolding Time</b>                | <b>10 hrs.</b>                      |
| <b>Dielectric Strength</b>           | <b>350 volts/mils</b>               |
| <b>Functional Cure</b>               | <b>16 hours</b>                     |
| <b>Maximum Elongation</b>            | <b>600%</b>                         |
| <b>Maximum Operating Temperature</b> | <b>Dry: 180°F; Wet: 120 °F</b>      |
| <b>Mix Ratio</b>                     | <b>94 resin:6curing agent / wt.</b> |
| <b>Mixed Viscosity</b>               | <b>Putty</b>                        |
| <b>Percent Solids by Volume</b>      | <b>88</b>                           |
| <b>Pot Life</b>                      | <b>10 min. @ 75°F</b>               |
| <b>Specific Volume</b>               | <b>23.5 in.(3)/ lb.</b>             |
| <b>Tear Resistance</b>               | <b>400 pli</b>                      |
| <b>Tensile Strength</b>              | <b>4,500 psi</b>                    |

**TESTS CONDUCTED**

|   |
|---|
| Cure Shrinkage ASTM D 2566                |
| Tensile Strength (Urethanes) ASTM D 412   |
| Maximum Elongation ASTM D 412             |
| Tear Resistance ASTM D 624                |
| Dielectric Strength, volts/mil ASTM D 149 |
| Cured Hardness Shore D ASTM D 2240        |

**Surface Preparation:**

For METAL SURFACES, thoroughly clean area to be repaired, rebuilt, or lined with Devcon® Cleaner Blend 300. Remove any oil, grease, or dirt. Roughen surface by grinding with a coarse wheel or an abrasive disc pad. To prime this surface, apply a coat of Devcon FL-10 Primer and allow to dry tack-free for 15 minutes. If the metal surface requires maximum tear resistance or is exposed to moisture, or if submerged in water, use Devcon® FL-10 and Devcon® FL-20 Primer.

For RUBBER SURFACES, thoroughly clean area with an abrasive pad and Devcon® Cleaner Blend 300. Surface can also be roughened with a grinding wheel so that it is coarse and free from oil and dirt that may clog the "pores" of the rubber. Wipe or roughen surface with Cleaner Blend 300 until the cloth no longer picks up the color of the rubber. The rubber should appear new or deeper in color. To prime this surface, apply a coat of Devcon® FL-20 Primer and allow to dry tack-free for 15-20 minutes. Use Devcon® FL-40 Primer on "hard-to-bond" rubber surfaces as this gives ultimate peel resistance. Multiple coats may be necessary for porous rubber surfaces.

For MAXIMUM ADHESION, sandblast the surface with an angular abrasive until a minimum depth profile of 2-3 mils is met. Blast to near-white finish specification SSPC-SP5 (Steel Structure Painting Council). Prime surface immediately after sandblasting to prevent oxidation.

**Mixing Instructions:**

---- To ensure proper cure speeds and hardness, mix Flexane at a temperature between 65°F-85°F. ----  
FOR 1 LB. UNITS

1. Add hardener to resin.
2. Vigorously mix with screwdriver or spatula for two minutes, while continuously scraping material away from sides and bottom of container. NOTE: Flexane putties will thicken rapidly during these first two minutes of mixing, but this DOES NOT mean that the polymer is curing.
3. Transfer the mixed material to the plastic container (included in kit).
4. Wipe spatula clean, and stir again for two more minutes.
5. Continue to mix until a uniform, streak-free consistency is obtained.

FOR 4 LB. UNITS

Use a propeller-type Jiffy Mixer Model ES on an electric drill.

Mix until color is uniform and consistent (approx 4-6 min.), while continuously scraping material away from sides and bottom of container.

NOTE: Completely submerge propeller, otherwise large amounts of air will be added resulting in air bubbles on the finished product's surface.

**Application Instructions:**

---- FOR MAXIMUM ADHESION, apply a suitable Devcon primer to all substrates prior to application. ----

|                |                        |
|----------------|------------------------|
| Metals         | FL-10 Primer (2 coats) |
| Rubber         | FL-20 Primer           |
| Wood           | FL-20 Primer           |
| Fiberglass     | FL-20 Primer           |
| Concrete       | FL-20 Primer           |
| Rigid Plastics | FL-20 Primer           |

1. Brush a thin coat of Flexane over the substrate, then pour from one side of the mold to the other side, so as to evacuate any air as the Flexane fills the area.
2. Gently blow hot air over the finished surface to ensure a perfect mold with no blow holes or air entrapment. Use a hot air gun and gently wave over the surface to break all the air bubbles.
3. Allow to cure six (6) hours before returning equipment to light service. The repair may then be ground flush using a 24 or 36 grit sanding disc. Do not overheat the work surface. Full cure takes seven (7) days @ 70 °F.

**ADDITIONAL INFORMATION**

Flexane Accelerator is used to increase Flexane's cure speed at temperatures as low as 32 °F. One-half tsp. (2 gms) of Accelerator reduces the cure time of 1 lb. of Flexane by 50%. Use 2 tsp. or less of Accelerator for each 1 lb. of Flexane. See Flexane Accelerator TDS for further information.

**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 | Poor      | Potassium Hydroxide 40% | Very good |
| Aluminum Sulfate 10%  | Very good | Sodium Hydroxide 50%    | Very good |
| Cutting Oil           | Fair      | Sulfuric 50%            | Fair      |
| Hydrochloric 10%      | Fair      | Xylene                  | Poor      |
| Isopropanol           | Poor      |                         |           |
| Methyl Ethyl Ketone   | Poor      |                         |           |
| Phosphoric 10%        | Fair      |                         |           |
| Phosphoric 50%        | 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:**

**15330 1 lb. kit**