



# Flexane® Urethanes



A tough rubber-like urethane compound for making a broad range of repairs, tooling and molding applications.

## **FLEXANE 80, FLEXANE 94**

### **FEATURES/BENEFITS**

- Two-part compound mixes easily
- Putty trowels on smoothly
- Liquid pours evenly and self-levels
- Cures medium hard
- Low shrinkage
- Bonds to metal, concrete, rubber, wood and fiberglass with primers

### **RECOMMENDED APPLICATIONS**

- Repairs and rebuilds conveyor belts
- Lines process equipment to dampen noise
- Concrete control joints
- Casting flexible molds, fixtures and parts
- Potting and encapsulating compounds

<b>Typical Physical Properties:</b>		FL80	FL80	FL94
		Putty	Liquid	Liquid
Color.....	Black	Black	Black	Black
Mix ratio resin: curing agent, ratio % by weight.....	72:28	77:23	69:31	69:31
Specific volume, in. <sup>3</sup> /lb.....	23.5	26.5	26.5	26.5
Coverage/lb. @ 1/4" thick in sq. in.....	94	106	106	106
Viscosity with hardener (cps).....	Putty	10,000	6,000	6,000
Pot life of 1 lb. in minutes at 75°F (1 lb. mass).....	20	30	10	10
Demolding time, (hours).....	10	10	5	5
Operating temperature maximum°F.....	dry: 180; wet: 120	same	same	same
Cured hardness, Shore A.....	87	87	97	97
Tensile strength, psi ASTM D 412.....	1700	2100	2800	2800
Cure shrinkage, in./in. ASTM D 2566.....	0.0014	0.0018	.0014	.0014
Dielectric strength ASTM D 149 volts/mil....	350	350	350	350
Tear resistance, pli ASTM D 624.....	300	350	415	415

### **APPLICATION INFORMATION**

#### **Surface Preparation**

**Metal Surfaces:** Thoroughly clean the area that is to be repaired, rebuilt or lined, by using Cleaner Blend 300 (stock #19510). All oil, grease, and dirt must be removed before applying Flexane material. All surfaces must be roughened by grinding with a coarse wheel or an abrasive disc pad.

**Rubber Surfaces:** Thoroughly clean the rubber area with an abrasive pad and Cleaner Blend 300. You may take a grinding wheel and roughen the rubber surface. The rubber surface must be coarse and free from oil and dirt clogged in the "pores" of the rubber. Using Cleaner Blend 300 wipe or roughen surface until the color of the rubber substrate no longer appears on cloth. The rubber should look new or a deeper black in color.

**Priming Surfaces:** On metal surfaces apply a coat of FL10 Primer and allow to dry tack free for 15 minutes. Any metal surfaces that require the maximum tear resistance and are being used as a submersible application or wet environment you should use both FL10 and FL20 Primer. On rubber surfaces apply a coat of FL20 Primer and allow to dry tack free for 15-20 minutes. Use this Primer on all types of rubber and urethane surfaces. On porous rubber surfaces, it may be necessary to do multiple coats.

**Maximum Adhesion:** Sandblast the application surface using an angular abrasive to achieve a minimum depth profile of 2-3 mils. Blast to near white finish specification SSPC-SP5 (Steel Structure Painting Council). After sandblasting, application surface should be primed immediately to prevent oxidation.

**MIXING:** Mix at 65°-85°F. Add curing agent to the Flexane® resin and stir vigorously for 2 minutes. Be sure to mix along the bottom and side of the container. Transfer material to the plastic container, wipe the spatula clean and stir again for 2 more minutes. For Flexane quantities larger than 1 lb. use an electric drill and Jiffy Mixer to mix the Flexane material. Make sure the mixer attachment is completely submerged during the mixing process. If not, you will be mixing in large amounts of air and this will cause bubbles in the finished product.

#### **APPLICATION:**

**Liquids:** First brush a thin coat of Flexane over the substrate. Then pour from one side of the mold to the other evacuating the air as the Flexane fills the area. Gently blow hot air over the finished surface to ensure a perfect mold with no blow holes.

**Putty:** Trowel the Flexane putty into the area. Use a spatula to compress the urethane onto the surface. This helps "wet out" the urethane and stop any blow holes or air pockets which can interfere with the adhesion.

**CURE:** Allow the Flexanes to cure for 6 hours before returning equipment to light service. Once cured, the repair may be ground flush using a 24 or 36 grit open coat sanding disc. Be careful to keep the grinder moving and do not overheat the work surface. Allow Flexane 94 Liquid or Flexane 80 Liquid to cure 24 hours before running molds in operation. Demold Flexane Liquids approximately 5-10 hours. Full cure takes 7 days @ 70°F.

**Flexane Accelerator (#15990)** is used for speeding up the cure of Flexane at temperatures as low as 32°F. 1/2 tsp. (2gms) of Accelerator will reduce the cure time of 1 lb. of Flexane by 50%. Do not use more than 2 tsp. of Accelerator with each 1lb. of Flexane.

**Flex-Add (#15940)** Flexibilizer is used with Flexane 80L to produce a urethane of any desired durometer below 80. Allows custom mixing of urethane for specific application requirements. Use the following chart to determine the amount of Flex-Add to use with 1 lb. of Flexane 80L to obtain the desired durometer.

Flex-Add	2 oz.	4oz.	6oz.	8oz.	10oz.	12oz.	14oz.	16oz.
Durometer	74	70	66	62	58	54	50	46

**Primers.** FL-10 Primer - Provides excellent adhesion to all metals; use with all Flexanes; Use with FL-20 for applications on metal surfaces that are exposed to water immersion; use with FL-20 for applications on metal requiring adhesion greater than 50pli.

FL-20 Primer - Provides excellent adhesion to rubber, wood, fiberglass and concrete; use with all Flexanes.

Primer Selection. Primers are required for bonding Flexane to most substrates. Choose the recommended primer or combination from the chart below:

Substrates	FL-10	FL-20	FLEXANE PRIMER	
			Stock No.	Size
Metal, dry (adhesion 25pli)	X	---		
Metal, dry (adhesion >50pli)	X	X		
Metal (water immersion)	X	X	FL-10 15980	4 oz.
Concrete		X	FL-20 15985	4 oz.
Rubber		X		
Cured Flexane		X		
Wood		X		
Fiberglass		X		

#### **ORDERING INFORMATION:**

Flexane 80 Putty		Flexane 80 Liquid		Flexane 94 Liquid		FlexAdd		Flexane Accelerator	
Stock No.	Unit	Stock No.	Unit	Stock No.	Unit	Stock No.	Unit	Stock No.	Unit
15820	1 lb.	15800	1 lb.	15250	1 lb.	15940	8 oz.	15990	12 oz.
15850	4 lb.	15810	10 lb.	15260	10 lb.				

**PRECAUTION:** For complete safety and handling information, please refer to the appropriate Material Safety Data Sheets prior to using this product.

**For technical assistance, please call 1-800-933-8266.**

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.