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Technical Data Sheet
Version 5. 04/2023

Flexane® 80 Liquid

Description: A medium-viscosity castable, non-shrinking urethane compound.

Intended Use: Industrial Use: Reproduce low- to medium-volume or discontinued rubber parts; form flexible molds and non-scratching holding fixtures/linings; encapsulate wire and electronics subject to impact, vibration, expansion, and contraction

Features: **10-hour demolding time, Room temperature curing urethane/no heat required, Mixes and pours easily**

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	Standard Tests
Cured Shrinkage	0.0018 in/in (cm/cm)	Dielectric Strength, volts/mil ASTM D 149
Dielectric Strength	350 volts/mil (13.8 kV/mm)	Tensile Strength (Urethanes) ASTM D 412
Functional Cure	16 hours	Cured Hardness Shore D ASTM D 2240
Hardness	87 Shore A	Cure Shrinkage ASTM D 2566
Maximum Elongation	650%	Tear Resistance ASTM D 624
Maximum Operating Temperature	Dry: 180°F (82°C); Wet: 120°F (49°C)	Maximum Elongation ASTM D 412
Percent Solids by Volume	100	
Taber Abrasion (H-18, dry)	0.273 cm3 (1000g, 1000revs)	
Tear Resistance	350 pli (61.3 N/mm)	
Tensile Strength	2,100 psi (14.5 Mpa)	

Uncured Properties @ 72°F (23°C)	
Color	Black
Coverage (1/4" / 6.35mm)	106 in2/lb. (1508 cm2/kg)
Demolding Time	10 hrs.
Mix Ratio (wt)	77 resin : 23 curing agent
Mixed Viscosity	10,000 cP
Pot Life	30 min. @ 75°F (24°C)
Specific Volume	26.5 in3/lb (0.957 cm3/g)

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 5-15 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 (18°C- 29°C)

FOR 1 LB. UNITS:
1.Follow application instructions and mix thoroughly

FOR 10LB. UNITS:
Use a propeller-type Jiffy Mixer Model ES on an electric drill.

Mix until color is uniform and consistent (approx. 4-6 min.).

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
Rubber	FL-20 Primer
Wood	FL-20 Primer
Fiberglass	FL-20 Primer
Concrete	FL-20 Primer

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Rigid Plastics FL-20 Primer (2 coats)

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 and gently wave over the surface to break all the air bubbles.
3. Allow to cure ten (10) 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

Flex-Add Flexibilizer is used with Flexane 80 Liquid to produce a urethane with a durometer below 87A. This allows for custom mixing of urethanes for specific applications requirements. (See Flex-Add TDS for further information)

Flexane Accelerator is used to increase Flexane's cure speed at temperatures as low as 32°F (0°C). One-half tsp. (2 gms) of Accelerator reduces the cure time of 1 lb (0.45 kg). 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 in a cool, dry place.

Compliances: None

Chemical Resistance:

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

1,1,1-Trichloroethane	Poor
Aluminum Sulfate 10%	Very good
Cutting Oil	Fair
Gasoline (Unleaded)	Poor
Hydrochloric 10%	Very good
Hydrochloric 36%	Very good
Isopropanol	Poor
Methyl Ethyl Ketone	Poor

Phosphoric 10%	Very good
Potassium Hydroxide 40%	Very good
Sodium Hydroxide 50%	Very good
Sodium Hypochlorite	Very good
Xylene	Poor

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
15800	1 lb. kit America / 500 gm Kit EMEA
15810	10 lb. Americas

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Disclaimer:

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