



VFI-176 POLYURETHANE MOLD MAKING ELASTOMER SYSTEM

Overview

■ **Description**

VFI-176 is a unique, moderate viscosity casting designed for easy processing and rapid de-molding. This system produces a high hardness elastomer with good rebound properties. Both the ISO and Poly are moderate viscosity fluids.

■ **Usage**

VFI-176 application possibilities include:

- Low temperature flexible molds
- Potting of mechanical parts to control vibration
- Poured in place supports for equipment Resilient furniture parts

■ **Color**

Standard color is amber. For information on custom colors, contact Volatile Free, Inc.

Physical Properties

■ **Hardness**

ASTM D-2240
 Shore A 80-83

■ **Tensile**

ASTM D-412
 Strength 1,021 psi
 Elongation 405%
 Elastic Modulus 2,118 psi
 Yield 302 psi
 Permanent Set 15% max

■ **Tear Resistance**

ASTM D-624 Die C
 252 pli

■ **Solid Material Density**

67.21 PCF

■ **Shrinkage:**

0.5%-1.0%
 Depending upon cure temperature.

Weather & Environmental Performance

■ **Weatherability**

This is an Aromatic Polyurethane. UV light will only change the appearance of the material.

■ **Service Temperature**

-40° F to 180° F.

■ **Fire Resistance**

Not rated.

Liquid Component Properties

■ **Ratio**

- **By Volume**
1:1
- **By Weight**
"A" side 101.9
"B" side 100

■ **Yield**

In³ per gallon 231

■ **Solids**

100%

- **Viscosity**
 - "A" side 1200 ± 400 cps @ 77°F
 - "B" side 1300 ± 300 cps @ 77°F
- **Liquid Density & Specific Gravity**
 - "A" side 9.07 lbs/gal (S.G. 1.086)
 - "B" side 8.90 lbs/gal (S.G. 1.067)
- **VOC**

Contains no volatile organic compounds.
- **Toxicity**

ISO component contains polymeric Isocyanate requiring respirator, gloves, eye protection and protective clothing during application.
- **Reactivity**
 - **Pot Life:** Pot life is 4-5 minutes at 77°F. When gelation occurs, the clear mixture forms a translucent, rubbery compound.
 - **De-mold Time:** VFI-176 will be slightly tacky for some time. However; it can be de-molded in approximately 5 times the pot life.
- Thin films applied to cold surfaces may require up to 4 hours curing before reaching enough film strength to be removable. A faster curing product is available to meet the need for a quicker cycling of molds.
- **Cure Time:** The material will reach maximum physical properties in 3 to 10 days.
- **Storage Stability**

Warning! VFI-176 is sensitive to moisture. Store in a dry place between 60-90°F. Do not preheat over 100°F without mixing. Shelf life is 6 months for the ISO (A) side and 6 months for the Poly (B) side in original unopened container. All containers must be sealed when not in use. Containers that have been opened should be used within one week. To prolong the shelf life of the containers, it is recommended that a blanket of nitrogen be applied to the container or desiccant cartridge inserted into the container opening.

Application

- **Equipment**

Hand mix, power mixed or injection equipment. For equipment requirements and specific instructions, contact Volatile Free, Inc.
- **Material Preparation**

The product must be over 70° F for proper mixing. Both Poly and ISO must be premixed before using.
- **Mixing**

Hand mix thoroughly for 30 seconds. Power mixing is mandatory for quantities over ½ gallons or if ceramic beads are used.
- **Limitations**

To verify this product is appropriate for your specific application, consult with Volatile Free, Inc.'s technical department.
- **Clean-up Solvent**

Xylene, MEK. For reduced fire hazard use glycol ethers or environmentally acceptable chlorinated solvents.
- **Thinning**

Do not thin. VFI-176 components cannot be cross mixed with any other coating components.
- **Precautions**

See Safety Data Sheet for complete safety data.
- **Packaging**
 - 5 gallon pails
 - 15 gallon ponies
 - 55 gallon drums
 - 270 gallon totes

For more information, contact us today at **800-307-9218**

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