

## CASTING AND INJECTION MOLDING PLASTIC SYSTEM

### ■ Description

VFI-150 is a unique two component, moderate viscosity casting system designed for easy processing and rapid demolding. This system results in very tough plastics with smooth and glossy surfaces. The VFI-150 system can be used in conjunction with fiberglass or ceramic beads for reducing cost, reinforcement and lowering the overall density. The system is also available in faster versions for reaction injection molding.

### ■ Usage

VFI-150 has numerous application possibilities such as structural parts, furniture parts, interior building parts, sporting goods, ornamental molding, automotive parts, decorative figurines, picture and mirror frames and other similar items.

### ■ Color

Both the Iso and Poly components are moderate viscosity, clear amber liquids. When combined, a rigid amber to translucent thermoset plastic is formed. Custom colors are available on request.

## Physical Properties

### ■ Tensile

ASTM D-638  
Strength: 2,000 psi  
Elongation: 175%

### ■ Notched Izod

ASTM D-256  
ft. lb./in 1.4

### ■ Hardness

ASTM D-2240  
Shore D 70 ± 3

## Liquid Component Properties

### ■ Solids

Weight: 100%  
Volume: 100%

### ■ V.O.C.

Contains no Volatile Organic Compounds.

### ■ Viscosity

Poly Component:  
300-400 cps @ 77°F  
Iso Component:  
600-800 cps @ 77°F

### ■ Flash Point, PMCC

Poly Component: 240°F  
Iso Component: 370°F

### ■ Boiling Point

Poly Component: >530°F  
Iso Component: >400°F

### ■ Specific Gravity

Poly Component:  
1.04 – 1.10 g/ml  
Depending upon color.  
Iso Component:  
1.16 g/ml

### ■ Storage Stability

12 months in unopened containers @ 50° - 90°F.

## Application

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### ■ Mixing

The mixing ratio is 1 to 1 by volume or 112 parts by weight of the isocyanate component to 100 parts polyol. Hand mix thoroughly for 30 seconds. Power mixing is mandatory when mixing more than a quart or if ceramic beads are used.

### ■ Pot Life

Pot life is between 30 - 70 seconds when mixed at room temperature. When gelation occurs, the clear liquid mixture forms an amber to translucent rigid plastic. VFI-150 will be tack free in approximately 30 seconds after gelation occurs. Faster curing variations are available to meet reaction injection molding cycles.

### ■ Cure & Demold

Plastic parts can be demolded in about 5 times of gel-time. The warmer the mold (up to 130°F), the shorter the demolding time. The material will reach its maximum physical properties in two to seven days.

**Corporate Office: P.O. Box 344 / Brookfield, WI 53008 / 800-307-9218 / 262-787-0400 / Fax: 262-787-0500**

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