VOLATILEFREE INC
MANUFACTURERS OF HIGH PERFORMANCE POLYMERS

Data Sheet
VFI-1655

CASTING AND INJECTION MOLDING PLASTIC SYSTEM

Description

VFI-1655 is a unique two component, moderate viscosity casting system designed for easy processing and rapid demolding. This system results in tough plastics with smooth and glossy surfaces. The VFI-1655 system can be used in conjunction with fiberglass or ceramic beads for reducing cost, reinforcement, and lowering the overall density.

Usage

VFI-1655 has numerous application possibilities such as furniture parts, interior building parts, sporting goods, ornamental molding, decorative figurines, and other similar items.

Color

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

Physical Properties

Tensile

ASTM D-638

Strength:	3,400 psi
Elongation:	75%

Hardness

ASTM D-2240

Shore D	62 ± 2

Notched Izod

ASTM D-256

ft. lb./in	9.0

Liquid Component Properties

Solids

Weight:	100%
Volume:	100%

Viscosity

Poly Component:
300-500 cps @ 77°F
Iso Component:
500-700 cps @ 77°F

Specific Gravity

Poly Component:
1.00 - 1.10 g/ml
Depending upon color.
Iso Component:
1.16 g/ml

V. O. C.

Contains no Volatile Organic Compounds.

Flash Point

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

Boiling Point

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

Storage Stability

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

Application

Mixing

The mixing ratio is 1 to 1 by volume or 116 parts by weight of isocyanate to 100 parts polyol. Hand mix thoroughly for 30 seconds. Power mixing is mandatory in the case of large quantities or if ceramic beads are used.

Pot Life

Pot life is between 70 - 85 seconds when mixed at room temperature. When gelation occurs, the clear liquid mixture forms an amber to translucent rigid plastic. VFI-1655 will be tack free in approximately 60 seconds after gelation occurs. Faster curing variations are available to meet reaction injection molding cycles.

Cure and Demold

Plastic parts can be demolded in about 3 times 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.

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