Environmentally Safe Polymers, Inc.

Technical Data

Updated 11/2004

POLYCAST #13
URETHANE CASTING PLASTIC SYSTEM

PRODUCT DESCRIPTION AND USAGE:
PolyCast #13 is a unique two component, moderate viscosity, low odor, urethane casting system designed for easy processing, low exotherm and rapid demolding. This system results in very tough plastics with smooth and glossy surfaces. The PolyCast #13 system can be used in conjunction with fiberglass or ceramic beads for reducing cost, reinforcement and lowering the overall density. PolyCast #13 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 low viscosity, clear amber liquids. When combined, a semi-transparent, amber colored rigid plastic is formed.

PHYSICAL PROPERTIES

HARDNESS:

ASTM D-2240	Shore D	80

FLEXURAL:

ASTM D-790	Strength:	8,500 psi
	Modulus:	200,000 psi

NOTCHED IZOD:

ASTM D-256	ft. lb./in.	1.5

LIQUID PROPERTIES

SOLIDS:

Weight:	100%
Volume:	100%

VISCOSITY:

Poly Component:	600-800 cps @ 77°F
Iso Component:	300-500 cps @ 77°F

SPECIFIC GRAVITY:

Poly Component:	1.06 g/ml
Iso Component:	1.18 g/ml

WEIGHT PER GALLON:

Poly Component:	8.82 lbs
Iso Component:	9.86 lbs

V.O.C.:
Contains no Volatile Organic Compounds.

FLASH POINT, PMCC:

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 at 50-90°F.

APPLICATION

MIXING:
Best mixing ratio is 1 to 1 by volume although, the mixing ratio could be in the range of (.8-1.3) to 1. 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 approximately 4 minutes, but can be controlled to give gel times between 30 seconds and 5 minutes when mixed at room temperature. When gelation occurs, the amber liquid mixture forms a semi-transparent, amber colored, rigid plastic. PolyCast #13 will be tack free in approximately 2 minutes after gelation occurs.

CURE & DEMOLD:
Plastic parts can be demolded in about 4 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 one day or less.

Our data is based on information from lab and field testing which we believe to be reliable and accurate. Environmentally Safe Polymers, Inc. makes no warranties, expressed or implied of the products use or its results, and assumes no obligation or liability in connection therewith.

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