Environmentally Safe Polymers, Inc.

Technical Data

Updated 11/2004

POLYEPS #23
SPRAY APPLIED STRUCTURAL PLASTIC

PRODUCT DESCRIPTION AND USAGE:
PolyEps #23 is a sprayable, two component structural polymer material designed for easy application to open molds or for spray-in-place structural applications. PolyEps #23 has numerous applications. These include production of plastic parts by spraying into molds, spray-in-place applications and reaction injection molding. Un-reinforced material demonstrates excellent structural integrity and impact resistance with good flexibility over a wide temperature range. However, some structural applications may benefit from the inclusion of reinforcing fibers.

COLOR:
Natural light amber. Colorants can be added to produce most colors except white.

PHYSICAL PROPERTIES

TENSILE:

ASTM D-638	Strength:	6,500 psi

HARDNESS:

ASTM D-2240	Shore D	70 ± 3

FLEXURAL:

ASTM D-790	Strength:	8,000 psi
	Modulus:	180,000 psi

NOTCHED IZOD:

ASTM D-256	ft. lb/in.	1.0

LIQUID PROPERTIES

SOLIDS:

Weight:	100%
Volume:	100%

VISCOSITY:

Poly Component:	900-1200 cps	@ 77°F.
Iso Component:	350-650 cps	@ 77°F.

SPECIFIC GRAVITY:

Poly Component:	1.02
Iso Component:	1.18

V.O.C.:
Conforms to all Air Pollution regulations. Contains no Volatile Organic Compounds.

FLASH POINT:
ASTM-D-56 (TCC) Greater than 200°F.

TOXICITY:
Iso component contains polymeric isocyanate requiring fresh air supply respirator, gloves and protective clothing during application.

STORAGE STABILITY:
One year in unopened containers @ 50-90°F.

MIXING:
PolyEps #23 components cannot be cross mixed with other urethane components. PolyEps #23 is cured with the same isocyanate component. The poly component should be stirred to resuspend any pigment that may have settled to the bottom.

POTLIFE:
8-15 seconds at 70°F and 5-10 seconds at 130°F. Do Not heat above 150°F.

APPLICATION

EQUIPMENT:
Normally applied with heated, plural component airless equipment which meters and pumps the components separately to be mixed at the spray gun. Impingement mixing at the gun has been successful. Material must be maintained above 100°F during application. Apply multiple passes to build thickness as desired. When building film thickness above ¼ inch (6 millimeters), it is necessary to allow the part to cool and relieve stress before demolding. PolyEps #23 can also be injected into closed molds, provided that the injection cycle is consistent with the short potlife of the material. Parts can be demolded in 5-8 minutes. However, better dimensional stability is achieved by allowing parts to cool prior to demolding. Two to seven days is required to develop maximum chemical and physical properties.

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.

P.O. Box 770639 - Orlando, FL 32877-0639 - Toll Free (877) 683-3173 - Toll Free Fax (877) 683-7002