



Environmentally Safe Polymers, Inc.

Technical Data

Updated 11/2004

POLYGLASS #39 CLEAR ALIPHATIC URETHANE HYBRID COATING

PRODUCT DESCRIPTION AND USAGE:

PolyGlass #39 is a 100% solids, two component, batch or plural mix, high performance aliphatic urethane hybrid coating. It may be applied by brush, roller, single component or plural component spray. It is characterized by outstanding chemical and solvent resistance, excellent weatherability, gloss retention and excellent adhesion to a variety of substrates. PolyGlass #39 is composed of low toxicity, aliphatic trimer isocyanate which reacts with a polyol made up of a slow reacting amine. The pot life is 30-40 minutes at 75°F and cures tack free in 2-3 hours. PolyGlass #39 was specifically developed for use as a clear protective top coat over other coatings or casting materials where improved chemical and staining resistance is needed.

COLOR:

Clear. Contact your E.S.P. Representative for other colors.

PHYSICAL PROPERTIES

WEATHERABILITY:

No significant loss of gloss, cracking, checking or loss of film integrity noted after weatherometer exposure equivalent to 5 years of exterior weathering.

CHEMICAL RESISTANCE:

Good hydrolytic stability to 180°F. Good resistance to inorganic bases, acids and hydrocarbon solvents, fair resistance to oxygenated and chlorinated solvents.

GLOSS:

ASTM-523	20° Gardner	72
	60° Gardner	88

ABRASION RESISTANCE:

ASTM D-4060
1 kg load, 1000 cycles cs-17 wheel, ~90 mg loss.

MEK DOUBLE RUBS:

TM-2 Method #9
200 Double Rubs – No Effect

SERVICE TEMPERATURE:

-60 to 300°F.

WATER ABSORPTION:

ASTM D-471
24 Hours @ room temperature 1.0%

WATER VAPOR PERMEABILITY:

ASTM E-96 BW.
100% R.H. Difference @ 73°F. 0.05 Perm Inches

LIQUID PROPERTIES

COVERAGE:

Sq.Ft./Gal./Mil 1600

SOLIDS:

Weight: 100%
Volume: 100%

V.O.C.:

Conforms to all Air Pollution Control regulations.
Contains no Volatile Organic Compounds.

FLASH POINT:

ASTM D-56 (Tag Closed Cup) Above 200°F.

STORAGE STABILITY:

Polyol: One year @ 50-90°F.
Isocyanate: Two years @ 20-100°F.

MIXED VISCOSITY:

Polyol component: 650-800 cps @ 77°F.
Iso component: 650-800 cps @ 77°F.

MIX RATIO:

1:1 by volume

APPLICATION

PRIMER:

Self-priming on most surfaces. Exhibits excellent adhesion to aromatic polyureas and polyurethanes.

MIXING:

1:1 by volume.

POT LIFE:

When initially mixed, the viscosity is approximately 700 cps and quite thixotropic. It is sprayable at 1200-1600 psi for approximately 30 minutes. It is also brushable for approximately 30 minutes and may be roller applied for up to 50 minutes.

POLYGLASS #39

EQUIPMENT:

For single component airless equipment, use pumps capable of producing 2000 psi at the spray gun. For brushing and rolling, use brushes and medium nap rollers of high quality in order to avoid leaving fibers in the applied film. Spray plural component equipment may also be used with some heating if desired. A Binks 43P gun with a Simpson static mixer is recommended for plural application.

CURE:

PolyGlass #39 stays wet for approximately 1 hour, then becomes tack free in 2-3 hours. Cures to handle in 3-5 hours. Develops chemical resistance and physical properties in 48 hours.

PRECAUTIONS:

See Material Safety Data Sheet for complete safety data. When spraying a particulate matter mask is necessary for protection from the isocyanate matter. Protect from exposure to moisture. Water will cause the "A" component (ISO) to generate carbon dioxide with resulting high pressure in closed containers.

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.