



Environmentally Safe Polymers, Inc.

Technical Data

Updated 11/2004

POLYSTEEL #85 POLYUREA HYBRID INDUSTRIAL POLYMER

PRODUCT DESCRIPTION AND USAGE:

PolySteel #85 is a 100% solids, plural component, one to one by volume, polyurea-urethane hybrid coating. PolySteel #85 was specifically developed for use as an industrial finish for the protection of steel against abrasion and chemical attack.

COLOR:

Black and gray. Contact your E.S.P. Representative for other colors.

PHYSICAL PROPERTIES

CHEMICAL RESISTANCE:

Good resistance to inorganic bases, acids and hydrocarbon solvents. Fair resistance to oxygenated and chlorinated solvents. Good resistance to hot water up to 180°F.

TENSILE:

ASTM D-412
Strength: 2800 psi
Elongation: 175%
Permanent Set: 10% maximum

HARDNESS:

ASTM D-2240
Shore A 90
Shore D 40

TEAR RESISTANCE:

ASTM D-624
Die C 320 pli

ABRASION RESISTANCE:

Excellent

LIQUID PROPERTIES

SOLIDS:

Weight: 100%
Volume: 100%

VISCOSITY:

Poly Component: 400-550 cps @ 77°F.
Iso Component: 400-550 cps @ 77°F.

DENSITY:

Poly Component: 1.025
Iso Component: 1.14

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:

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

APPLICATION

Thoroughly mix the colored component in order to re-suspend any pigment that may have settled out. Apply, using hot airless spray equipment capable of producing 1000 psi, and maintaining an application temperature of 120-130°F. The mixing ratio shall be maintained within 0.95 to 1.1 volume of isocyanate to 1 volume of polyol. Impingement mixing, air purge spray guns are suggested for ease of application. PolySteel #85 gels in 2-5 seconds and cures to handle in 10-30 seconds when applied using heated airless spray equipment. Allow 1 to 4 hours for complete cure before placing coated surface into service. Other properties that can be enhanced include anti-static properties and low coefficient of friction additives to enhance wear properties. Please contact your E.S.P. Representative for additional information.

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.