



# Environmentally Safe Polymers, Inc.

## Technical Data

Updated 11/2004

### **POLYROOF #78 U.L. RATED POLYUREA HYBRID ROOFING POLYMER**

#### **PRODUCT DESCRIPTION AND USAGE:**

PolyRoof #78 is a 100% solids, plural component one to one by volume polyurea-urethane hybrid coating. PolyRoof #78 was specifically developed for use as a U.L. Rated, spray applied protective coating for waterproofing metal and built-up roofs and for protection of polyurethane spray foam.

#### **COLOR:**

Aluminum. NOTE: Aluminum color is dispersed in the isocyanate component.

#### **PHYSICAL PROPERTIES**

##### **WEATHERABILITY:**

ASTM G-53 Weatherometer exposure equivalent to 15 years with no visible deterioration or change in physical properties.

##### **FIRE RESISTANCE:**

ASTM E-108 / UL-790 Class A over polyurethane foam insulation.

##### **CHEMICAL RESISTANCE:**

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

##### **TENSILE PROPERTIES:**

ASTM D-412  
Strength: 1500 psi  
Elongation: 200-300%  
Permanent Set: 10% maximum

##### **HARDNESS:**

ASTM D-2240  
Shore A 70-75

##### **TEAR RESISTANCE:**

ASTM D-624  
Die C 125 pli

##### **ABRASION RESISTANCE:**

Excellent.

##### **WATER ABSORPTION:**

ASTM D-471 1.0% maximum

#### **LIQUID PROPERTIES**

##### **SOLIDS:**

Weight: 100%  
Volume: 100%

##### **VISCOSITY:**

Poly Component: 600-800 cps @ 77°F.  
Iso Component 2000-2500 cps @ 77°F.

##### **DENSITY:**

Poly Component: 9.0-9.2 lbs./gal. (S.G. 1.08-1.10)  
Iso Component: 11.4-11.6 lbs./gal. (S.G. 1.37-1.39)

##### **V.O.C.:**

Aluminum color-32 grams/liter.

##### **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 at 50-90°F.

#### **APPLICATION**

##### **MIX RATIO:**

1:1 by volume.

##### **REACTIVITY:**

Tack free time is 10-30 seconds when sprayed with hot plural component airless spray equipment.

##### **CURE TIME:**

Applied coating will set in 2-10 minutes at 70°F, depending on film thickness and substrate temperature. Product can be placed into service after four hours of cure time at 70°F minimum.

##### **EQUIPMENT:**

Plural component spray equipment capable of marinating temperature of 130-140° and 1500 psi minimum pressure. Contact Environmentally Safe Polymers, Inc. for specific instructions and spray equipment needed.

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