

# Engineered Polymers, LLC.

2842 Progress Road  
Madison, WI 53716

Fax: (608) 661-2817  
[www.engineeredpolymers.net](http://www.engineeredpolymers.net)

## REACTAMINE<sup>®</sup> POLYUREA EP-82

**CODE: EP-82**

### Product Description:

EP-82 is a new hydrophobic silicone polyurea. The product is characterized by its low viscosity and ability to readily blend with polyisocyanates. It may be processed to produce elastomers of varying hardness. Water absorption of this product is shown to be five to ten times lower than regular polyureas. These elastomers were subjected to a severe hydrolysis test which involves immersing them in water at 90 °C. for a period of 28 days. A similar test has been used for military applications, where specimens are conditioned for 28 days at 100 °C and 95 % relative humidity, stimulating about 10 years of service at 35 °C. and 95 % relative humidity. The EP-82 shows excellent resistance to oxidizing agents, such as those used to treat swimming pools. Thus, chlorinated water resistance of elastomers produced from EP-82 and isocyanates, are superior to those obtained from a conventional polyurea.

### Applications:

Applications such as electrical encapsulation, swimming pool filter end-caps, re-enterable encapsulants, cable splicing, and others where the polyurea is exposed to a hard, moisture laden environment, requiring hydrophobic resins that can provide pli necessary resistance to (i) water ingress, (ii) degradation of physical properties and (iii) corrosion of electrical components.

### Physical Properties:

#### Physical Properties of EP-82 at Room Temperature (RT)

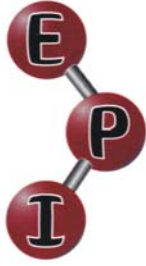
Product	Post Cure	Tensile (psi)	Elongation (%)	Tear Die C	Hardness Shore D 1 sec/ 5 sec	Taber Abrasion Wt. Loss (mg/1000 cycles)
EP-82	RT	2826	56	654	72/67	253

#### Physical Properties of EP-82 after a 12 hour post cure

Product	Post Cure	Tensile strength (psi)**	Elongation** %	Die C. Tear pli**	Hardness Shore D**
EP-82	12 Hours	2338	70	477	60



An Amber Chemical Group Company  
[www.amberchemical.com](http://www.amberchemical.com)



## Engineered Polymers, LLC.

2842 Progress Road  
Madison, WI 53716

Fax: (608) 661-2817  
[www.engineeredpolymers.net](http://www.engineeredpolymers.net)

### REACTAMINE<sup>®</sup> POLYUREA EP-82

#### Tensile Retention and Water Absorption of EP-82 vs. Polyurea

Product	% Tensile Retention 90 °C H <sub>2</sub> O 14 days	% Tensile Retention 90 °C H <sub>2</sub> O 28 days	H <sub>2</sub> O Absorption (Wt. Gain) 7 days
EP-82	98	90	0.11
Conventional Polyurea	65	51	2.10

#### Chlorinated Water Resistance of EP-82 vs. Polyurea

Product	Tensile Change (%)	Elongation Change (%)	Tear Strength Change	Hardness Change	Appearance Change
EP-82	+2.7	0	+5.6	0	Slight Discoloration
Conventional Polyurea	-12.8	+15	-4.3	-5.0	Blistering & Tacky

#### Shelf Life and Storage:

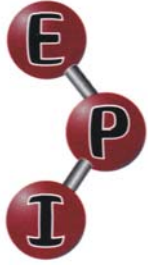
Six months in factory delivered unopened drums. Keep away from extreme heat, cold, and moisture. Maintain at a proper storage temperature of 60°F - 100°F.

#### Packaging:

- 5 gal pails
- 55 gal drums



An Amber Chemical Group Company  
[www.amberchemical.com](http://www.amberchemical.com)



## Engineered Polymers, LLC.

2842 Progress Road  
Madison, WI 53716

Fax: (608) 661-2817  
[www.engineeredpolymers.net](http://www.engineeredpolymers.net)

## *REACTAMINE*<sup>®</sup> POLYUREA EP-82

### Shipping Information:

EP-82 can ship via commercial truck lines. The "A" and "B" sides are unregulated.

### Safety and Handling:

See MSDS Sheets

### Warranty:

The technical data and any other printed information furnished by **Engineered Polymers, LLC.** is true and accurate to the best of our knowledge. **EP-82** conforms to in-house quality control procedures and should be considered free of defects. Due to the wide range of applications of this product, it is impossible to assume responsibility for any errors in regard to application, coverage, workmanship, over-spray or injuries resulting from the use of **EP-82**. **Engineered Polymers, LLC.** makes no warranty, expressed or implied, of its products and shall not be liable for indirect or consequential damage in any event.



An Amber Chemical Group Company  
[www.amberchemical.com](http://www.amberchemical.com)