



STL-PDS-NA-Polycup 4500-R2

Polycup™ 4500 polymeric resin

Product Description

Polycup™ 4500 polymeric resin is a water-soluble, highly efficient, cationic, epoxide resin designed for a variety of crosslinking applications. Its unique chemistry results in high crosslinking strength in systems with less than optimum conditions. Polycup 4500 is reactive with amine, carboxyl, hydroxyl, and thiol functionality. Prior to use it must be activated with an alkali source.

Polycup resins may be used as a crosslinker in adhesives, inks, top-coatings, and other barrier finishes. These resins promote water resistance in polymer systems that are typically water soluble/sensitive. They also impart toughness to formulations and improve adhesion to low surface energy substrates.

Product Application

Product Activation:

Before addition to the desired system, Polycup 4500 must be activated with sodium hydroxide. This converts from its stabilized form into an active state for maximum wet strength and crosslinking development.

For a 3% Resin Solution:

1. 3.36 gallon water per dry pound Polycup 4500.
2. 0.14 dry pound sodium hydroxide per dry pound Polycup 4500.

Procedure:

1. Add required water to tank.
2. Add Polycup 4500 to the tank and mix for several minutes.
3. Add sodium hydroxide while mixing.
4. After 15 minutes, titrate a 100-ml aliquot of activated Polycup 4500 with a 0.5N sulfuric acid to a methyl orange or methyl purple end point. Results should be between 1 and 3 mL. Low titration will yield incomplete activation and high values can result in reduced shelf life.

Example: Approximately 3% solution:

- Water: 370 gallons
- Polycup 4500: 75 gallons
- 50% NaOH: 2.5 gallons
- The shelf life of 3% activated resin is approximately 12 hrs. Efficiency may be impaired beyond this time limit.

Polycup 4500 is to be used in accordance with control procedures Solenis establishes for a specific application

Benefits

- Water-based formulation
- No formaldehyde intentionally added
- Extremely high efficiency
- Extended shelf life prior to activation

Packaging

This product is available in a variety of packaging sizes. Your Solenis representative will recommend the appropriate packaging for the application.

Important Information

Typical Properties: Refer to the Safety Data Sheet (SDS).

Regulatory Information: Refer to the SDS or contact your sales representative for any additional regulatory and environmental information.

Safety: Solenis maintains an SDS for all of its products. Use the health and safety information contained in the SDS to develop appropriate product handling procedures to protect your employees and customers.

Our SDS should be read and understood by all of your supervisory personnel and employees before using Solenis products in your facilities.