

# Technical Data Sheet

## EPI-REZ™ Resin 3547-WY-57

### Product Description

EPI-REZ™ Resin 3547-WY-57 is a nonionic dispersion of a high molecular weight epoxy resin in water and 2-propoxyethanol (EGMPE). It was developed to be similar to EPI-REZ Resin 3540-WY-55 and to be compositionally compliant with many regulations for incidental food contact applications.

### Application Areas/Suggested Uses

- Size treatments for inorganic and organic fibers, particularly in applications for reinforcement of thermoplastic resin systems such as PBT and PET
- Textile binders
- Film adhesives
- Clear and pigmented bake coatings
- Modifier for other waterborne epoxy resins

### Benefits

- Moderate viscosity for ease of handling
- Excellent particle size stability
- Good discoloration resistance at high temperatures
- May be formulated for low VOC coatings
- Can be cured through epoxide and hydroxyl functional groups

### Sales Specifications

Property	Value	Unit	Test Method
Epoxide Equivalent Weight	1600 - 2000	g/eq	ASTMD1652
Epoxy Group Content	500 - 625	mmol/kg	ASTMD1652
Particle Size Coulter Volume Mean	0.4 - 1.5	µm	Internal
Solids Content	56 - 58	%m	ASTMD1259
Viscosity at 25°C, Brookfield	10000	cP	ASTMD1545

### Typical Properties

Property	Value	Unit	Test Method
Appearance	Opaque white liquid		Visual
Density at 25°C	9	lbs/gal	ASTMD1475
Density	1080	kg/m <sup>3</sup>	ASTMD1475
Organic Cosolvent	EGMPE		
pH	6 - 9		ASTME70
Solvent	Water		

## General Information

EPI-REZ Resin 3547-WY-57 is most commonly used as a film former for fiber sizing applications for reinforcement of thermoplastics. In this application, EPI-REZ Resin 3547-WY-57 performs similar to EPI-REZ Resin 3540-WY-55 and provides a balance of glass fiber processing properties and good discoloration resistance at temperatures at which engineering thermoplastics are typically processed.

Upon evaporation of water, EPI-REZ Resin 3547-WY-57 coalesces to form a clear, continuous, non-tacky film at temperatures slightly above ambient. In heat cure applications when used in combination with a suitable crosslinking agent, EPI-REZ Resin 3547-WY-57 will form a crosslinked, tough and chemical resistant film.

EPI-REZ Resin 3547-WY-57 can be used in cured applications such as binders and coatings by reacting the epoxide functional groups. Water dispersed or water soluble curing agents which react with epoxide groups or promote epoxy self-polymerization can be used as crosslinking agents for EPI-REZ Resin 3547-WY-57. Such curing agents include dicyandiamide, polyamides, and aliphatic amines. EPI-REZ Resin 3547-WY-57 can also be cured via the hydroxyl functionality with resole resins and similar materials.

## Safety, Storage & Handling

Please refer to the SDS for the most current Safety and Handling information.

Please refer to the Hexion Inc. web site for Shelf Life and recommended Storage information.

For ease of handling and optimum shelf life, EPI-REZ Resin 3547-WY-57 should be stored between 50°F (10°C) and 78°F (25°C), although storage for short periods of time at temperatures up to 100°F (38°C) is acceptable. Do not allow the product to freeze. To prevent skinning or surface drying, do not leave the product uncovered for extended periods of time. If the need arises to store partially filled drums, replace the plastic top sheet onto the surface of the liquid product. With extended storage or shipping, some settling may occur. In general, material should be lightly and thoroughly agitated before use to ensure uniformity.

Exposure to these materials should be minimized and avoided, if feasible, through the observance of proper precautions, use of appropriate engineering controls and proper personal protective clothing and equipment, and adherence to proper handling procedures. None of these materials should be used, stored, or transported until the handling precautions and recommendations as stated in the Safety Data Sheet (SDS) for these and all other products being used are understood by all persons who will work with them. Questions and requests for information on Hexion Inc. ("Hexion Inc") products should be directed to your Hexion sales representative, or the nearest Hexion sales office. Information and Safety Data Sheets on non-Hexion products should be obtained from the respective manufacturer.

## Packaging

Available in drum quantities.

## Contact Information

For product prices, availability, or order placement, visit the "Contact Us" section of our website. For literature and technical assistance, visit our website at: [www.Hexion.com/epoxy](http://www.Hexion.com/epoxy)