



SZG-PDS-NA-Scripset 540-R2

Scripset™ 540 surface sizing agent

Product Description

Scripset™ 540 surface sizing agent is a copolymer of styrene and maleic anhydride (>1:1 mole ratio) with approximately a 180,000 weight average molecular weight. The maleic groups have been esterified with a low molecular weight alcohol to impart additional functional properties. It is a fine, off-white, free flowing powder with a faint, aromatic odor.

Scripset 540 is readily soluble in alkaline aqueous systems and is typically made utilizing ammonium hydroxide, sodium hydroxide, potassium hydroxide, but soda ash, sodium borate, and amines can also be used. Scripset 540 is also soluble in a variety of organic solvents including alcohols, ketones, ethyl acetate and co-solvents (xylene/butanol). Solutions made from this powder demonstrate excellent stability under the proper storage conditions.

Product Application

Scripset 540 is typically used in surface treatment applications of paper for sizing, porosity reduction and surface strength enhancement.

Typical uses outside of the paper industry include applications as a pigment dispersant, emulsifier, binder, and viscosity modifier.

To make 100 lbs. of solution, 86.87 lbs. of ambient temperature water (free of multivalent metal ions) is charged to a stirred reactor and then 10.32 lbs. of Scripset 540 are added over one to two minutes at about 25 °C. A longer addition time can be used if needed. After a reasonably lump-free slurry is achieved, 2.81 lbs. of ammonium hydroxide (28-30% NH₃), or the equivalent molar ratio of an alternate base, are added as rapidly as possible. An exotherm to about 42 °C may occur. The batch is then heated to 82 °C and held for 45 minutes. The batch pH is checked and adjusted if needed. Do not overshoot batch pH - it is only to be adjusted up. Do not adjust the pH down. The batch should be filtered through a 75 micron screen.

Cross contamination with the sodium salts and ammonium salts of Scripset resins must be avoided. Mixing the sodium and ammonium products can cause gel formation. Cross contamination within Scripset resin types may also cause gel formation.

Scripset 540 is to be used in accordance with control procedures Solenis establishes for a specific application.

Benefits

- Powder
- Excellent stability under proper storage conditions
- Readily soluble in both alkaline aqueous systems and in certain organic solvents
- Excellent film former
- High molecular weight
- Dried films provide excellent water resistance

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.