

TECHNICAL BULLETIN



Specialty and Custom Chemicals Since 1968

E-SPERSE® 704

E-SPERSE® 703

These products are covered by one or more of the following US patents:
US 6736892, US 8067513, US 9023943 or foreign equivalents.



EPOXY DISPERSANTS

PERFORMANCE BENEFITS

E-Sperse® 704 is an excellent choice to create long term stable epoxy dispersions without added glycols or solvents creating a VOC and APE free system. It also allows for low viscosity high solids systems. These attributes are possible due to the similarity of the surfactant hydrophobes and the epoxy chemical structure providing for stable anchoring of the surfactant to the dispersed epoxy surface. Since no reactive epoxy groups are added, recalculation of the EEW is not needed.

E-Sperse® 703 can be added to produce epoxy dispersions that are also freeze thaw stable. With this modification the epoxy dispersion maintains its low viscosity including its long term shelf and heat age stability.

APPLICATION DATA

A 75% by weight epoxy dispersion is produced by adding liquid epoxy, water and between 1 and 5% E-Sperse® 704 into to a suitable container. Similar levels of E-Sperse 703 may also be employed. This mixture is subjected to high shear for about 3 minutes to produce the dispersion. Heating of the epoxy mixture is required to disperse epoxies that are solid at room temperature.

TYPICAL PROPERTIES

E-Sperse® 704

Activity: Solids at 30% for E-Sperse 704
pH: 10% Average 5.8
Appearance: Liquid

E-Sperse® 703

Moisture: 1% Max
pH: 7-8
Appearance: Liquid

TECHNICAL CONTACT

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The information contained herein is believed to be correct; however, it should not be construed as a guarantee or as a statement of suitability for use in any application. This information should not be considered as a recommendation to violate any patent.



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EPOXY HARDENER APPLICATIONS

PERFORMANCE BENEFITS

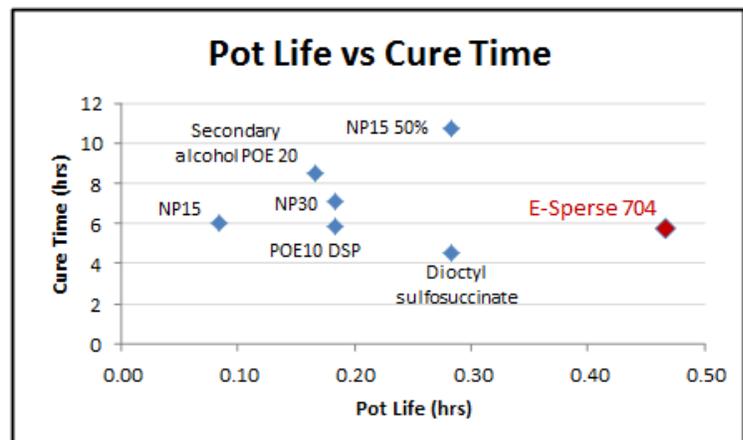
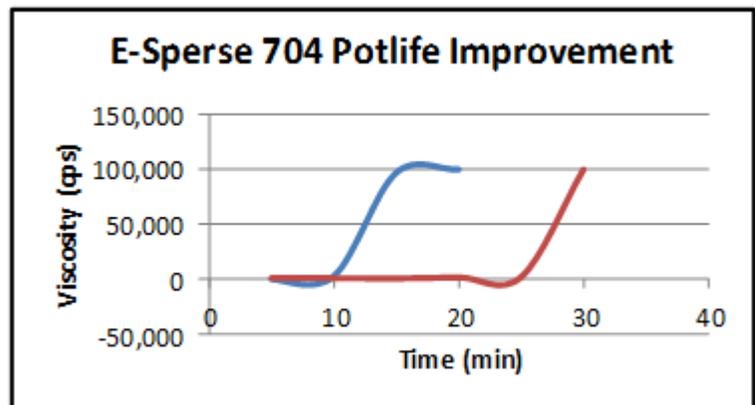
E-Sperse® 703 and 704 are excellent choices to modify the pot life of 2K epoxy dispersion systems. The addition of E-Sperse® 704 to amine hardeners improves the stability of the mixed epoxy and hardener allowing for better uniformity of the coating. It also increases the pot life of the system while only slightly affecting cure time. This allows the applicator increased working time and less wasted material while not sacrificing productivity due to slow curing.

APPLICATION DATA

Simply blend E-Sperse® 704 into your existing hardener package. Typical suggested starting point levels are between 10% and 50% of the hardener on solids. An increase of 100% in pot life was obtained when E-Sperse® 704 was added to an aliphatic amine hardener and an epoxy dispersion (produced with 5% E-Sperse® 704). It is suggested that the formulator optimize the addition for the appropriate end use needs.

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