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A global specialty chemicals company

Enhanced Performance Through Applied Innovation

NUOSPERSE® FX 540

Pigment Dispersing Agent

GENERAL INFORMATION

NUOSPERSE FX 540 is a low-foaming, polymeric pigment dispersing agent that works effectively with many hydrophilic pigments and extenders used in aqueous coatings.

CHEMICAL & PHYSICAL PROPERTIES

Appearance 20 ºC	clear liquid
Active content	40 %
pH (ASTM D 1172)	7.0 - 8.5
Viscosity, 25 °C (ASTM D 2196)	max. 125 mPa.s
Color (DIN-EN 1557)	max. 5 Gardner
Solubility	soluble in water
Composition	ammonium salt of a polymeric carboxylic acid

These are typical properties not to be used for specification purposes.

APPLICATIONS

- **NUOSPERSE FX 540** is suitable for practically all types of aqueous coatings based on polymeric binders, e.g. PVAC-, PAC-, PSB-, PSAC dispersions, terpolymers and latexes, etc.
- The product shows excellent compatibility with those polymeric binders commonly used in diverse aqueous formulations e.g. paper coatings, adhesives, carpet backings and plastics etc.
- **NUOSPERSE FX 540** is applied as a dispersing agent for many hydrophilic pigments and extenders in aqueous media such as titanium dioxide, calcium carbonate, barium sulphate, iron oxide, etc. The product is strongly adsorbed onto their surfaces and reduces the viscosity of the milling paste. If strongly hydrophobic pigments are used, such as most organic types, it is recommended to use the NUOSPERSE FX 540 in combination with a wetting agent, e.g. NUOSPERSE FN 265 or NUOSPERSE FN 211. **NUOSPERSE FX 540** counteracts flocculation, floating, flooding and pigment settling. It does not cause foam formation, nor depolymerises upon storage. As a result coatings with improved performance and excellent stability are obtained.
- **NUOSPERSE FX 540** also avoids the viscosity increase which often occurs during storage in coatings formulated with less chemically stable dispersants such as polyphosphates and the common copolymeric dispersing agents.

KEY PROPERTIES

Feature	Consequence
• Narrow distribution of polymer molecular mass	- optimal effectiveness - enhanced pigment dispersion - reduced flocculation - best opacity
• No foamin	- reduced defoamer demand - no bubbles or craters
• Insensitive to hydrolysis	- provides long term stability of the paint

INCORPORATION

NUOSPERSE FX 540 can be added prior to the dispersion stage. The quantity is very dependent on the composition of the paste and should be determined experimentally. It is recommended to determine the “viscosity response curve” by measuring the viscosity of pastes with a ladder amount of the product. The level used in the final paint formulation should be 1.3 - 1.5 times the amount of **NUOSPERSE FX 540** which gives the lowest viscosity in the viscosity curve determination.

LEVELS OF USE

Usually, a concentration of between 0.1 - 0.8 % of **NUOSPERSE FX 540** calculated on the total quantity of pigment and extender will be sufficient.

HEALTH AND SAFETY

Before using this product please consult our Safety Data Sheet (SDS) for information on safe handling and storage. The SDS can be found on the company website.

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SHELF LIFE

NUOSPERSE FX 540 has a shelf life of 2 (two) years from date of manufacture.

QUALITY ASSURANCE

Quality system at the site manufacturing this product complies with and is certified to ISO 9001 quality standards.

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