NUOSPERSE® FX 504

ELEMENTIS SPECIALTIES

Pigment Dispersing Agent

GENERAL INFORMATION

NUOSPERSE® FX 504 is a low-foaming, polymeric pigment dispersing agent that works effectively for many hydrophilic pigments and extenders that are used in aqueous coatings.

PHYSICAL PROPERTIES

Appearance 20 ºC	Clear liquid
Active content	30%
pH (ASTM D 1172)	7.0-8.5
Density, 20 °C (ISO 2811-2)	1130 kg/m^3
Viscosity, 25 °C (ASTM D 2196)	max. 40 mPa.s
Colour (DIN-EN 1557)	max. 3 Gardner
Solubility	Soluble in water
Composition	Ammonium salt of a polymeric carboxylic acid

APPLICATION AND PROPERTIES

NUOSPERSE® FX 504 is suitable for practically all types of aqueous coatings based on polymeric binders, e.g. PVAC-, PAC-, PSB-, PSAC dispersions, terpolymers and latexes.

NUOSPERSE® FX 504 shows excellent compatibility with those polymeric binders commonly used in diverse aqueous formulations, e.g. paper coatings, adhesives, carpet backings or plastics.

NUOSPERSE® FX 504 is used as the dispersing agent for many hydrophilic pigments and extenders in aqueous media such as titanium dioxide, calcium carbonate, barium sulphate, iron oxides, etc. The product is strongly adsorbed onto these 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 NUOSPERSE® FX 504 in combination with a wetting agent, e.g. NUOSPERSE® FN 265 or NUOSPERSE® FN 211.

NUOSPERSE® FX 504 counteracts flocculation, floating, flooding and pigment settling. It does not cause foam formation and does not depolymerise on storage. As a result, coatings with improved performance and excellent stability are obtained.

NUOSPERSE® FX 504 also avoids the viscosity increase which usually occurs during storage in coatings formulated with less chemically stable dispersants such as most polyphosphates and the common types of copolymeric dispersing agents.

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

INCORPORATION

NUOSPERSE® FX 504 should 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 a series of pastes as a function of the amount of the product added. In the final paint formulation 1.3 to 1.5 times the amount of NUOSPERSE® FX 504

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which gives the lowest viscosity on the curve should be used.
In general, a concentration of between 0.1 - 1.0 % of NUOSPERSE® FX 504 - calculated on the total quantity of pigment and extender will be sufficient.

HEALTH AND SAFETY DATA

Before using this product please consult our Material Safety Data Sheet (MSDS) for information on safe handling and storage. MSDS can be found on the company website at www.elementis-specialties.com.

SHELF LIFE

NUOSPERSE® FX 504 has a shelf life of 2 (two) years from date of manufacture.

QUALITY ASSURANCE

Since 1992 the company is a holder of the ISO 9001 / ISO 9002 certificates, which guarantees that all operations are conducted according to the stipulated standards.

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