

NUOSPERSE® FX 504

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.

CHEMICAL & PHYSICAL PROPERTIES

Appearance 20 °C	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. 30 mPa.s
Colour (DIN-EN 1557)	max. 3 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 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.

KEY PROPERTIES

Feature	Consequence
<ul style="list-style-type: none"> • Narrow distribution of polymer molecular mass 	<ul style="list-style-type: none"> - optimal effectiveness enhanced pigment dispersion - reduced flocculation - best opacity
<ul style="list-style-type: none"> • No foaming 	<ul style="list-style-type: none"> - reduced defoamer demand - no bubbles or craters
<ul style="list-style-type: none"> • Insensitive to hydrolysis 	<ul style="list-style-type: none"> - 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** which gives the lowest viscosity on the curve should be used.

continued...

NUOSPERSE® FX 504

LEVELS OF USE

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

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.

SHELF LIFE

NUOSPERSE FX 504 has a shelf life of 2 (two) years from date of manufacture.as a shelf life of 4 (four) 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.

NOTE: The information herein is currently believed to be accurate. We do not guarantee its accuracy. Purchasers shall not rely on statements herein when purchasing any products. Purchasers should make their own investigations to determine if such products are suitable for a particular use. The products discussed are sold without warranty, express or implied, including a warranty of merchantability and fitness for use. Purchasers will be subject to a separate agreement which will not incorporate this document.

© Copyright 2018, Elementis Specialties, Inc. All rights reserved. Copying and/or downloading of this document or information therein for republication is not allowed unless prior written agreement is obtained from Elementis Specialties, Inc.

© Trademark of Elementis Specialties, Inc.

V01 Jul 2018

North America

Elementis Specialties, Inc.
469 Old Trenton Road
East Windsor
NJ 08512, USA
Tel.: +1 609 443 2500
Fax: +1 609 443 2422

Europe

Elementis UK Ltd.
c/o Elementis GmbH
Stolberger Strasse 370
50933 Cologne, Germany
Tel.: +49 221 2923 2066
Fax: +49 221 2923 2011

Asia

Deuchem (Shanghai) Chemical Co., Ltd.
99, Lianyang Road
Songjiang Industrial Zone
Shanghai, China 201613
Tel.: +86 21 5774 0348
Fax: +86 21 5774 3563