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A global specialty chemicals company

Enhanced Performance Through Applied Innovation

NUOSPERSE® FA 620

Wetting and Dispersing Agent

GENERAL INFORMATION

NUOSPERSE FA 620 is a wetting and dispersing agent for the manufacture of highly concentrated, low viscosity aqueous pigment dispersions

CHEMICAL & PHYSICAL PROPERTIES

Appearance 20 ºC	clear liquid
Active content	50 %
pH, 2% solution in water (ASTM D 1172)	4.5 - 6.0
Density, 20 °C (ISO 2811-2)	approx. 1015 kg/m^3
Viscosity, 25°C (ASTM D 2196)	max. 150 mPa.s
Colour, 10 % in water (DIN-EN 1557)	max. 35 Apha
Solubility	soluble in water
Ionic character	anionic

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

APPLICATIONS

- Pigment slurries based on **NUOSPERSE FA 620** are used for the shading of aqueous coatings, such as flat and gloss dispersion paints, paper coatings, waterborne industrial paints, etc. Normally up to 10 % of the pigment slurry may be added to the coating.
- **NUOSPERSE FA 620** may be used as a grinding vehicle and combined with polar solvents such as water and ethylene glycol. The product may be combined with polymeric dispersing agents such as NUOSPERSE FX 504 which is strongly recommended for slurries based on hydrophilic pigments and extenders such as most iron oxides and calcium carbonate.
- The stability of the slurry depends on the viscosity. An excess dosage of **NUOSPERSE FA 620** increases the viscosity of the slurry and can improve the stability.
- The pigment slurries should preferably be prepared on a pearl-mill, sand-mill or ball-mill.
- Slurries based on easily dispersible pigment types can be prepared on a dissolver.

KEY PROPERTIES

FEATURE	CONSEQUENCE
• Strong adsorption on a wide range of pigments	- improved colour development - better and faster dispersion - reduced rub-up and colour float
• Low molecular weight	- highest pigment loading - lower viscosities - optimal cost / performance ratio

INCORPORATION

The quantity of **NUOSPERSE FA 620** to be added should be determined by means of laboratory trials. It is advised to determine the viscosity of the slurry at various concentrations of the product. Only the optimum dosage will result in the lowest viscosity being obtained.

LEVELS OF USE

In order to ensure good stability it is advisable to use a concentration that is ca. 30 % in excess of that giving the minimum viscosity e.g.:

- minimum viscosity obtained with 6 % **NUOSPERSE FA 620** then –
- recommended dosage: 8 % **NUOSPERSE FA 620**

If necessary, DAPRO DF 7015 can be added as an anti-foaming agent, in a concentration of 0.2 - 0.4 % calculated on the total dispersion.

EXAMPLES

1. Organic Yellow

42 %	water
8 %	**NUOSPERSE FA 620**
50 %	Hansa Yellow 4GX (Clariant)
	- dispersed on the pearl-mill
100 %	pigment slurry

2. Iron Oxide Yellow

25 %	water
10 %	**NUOSPERSE FA 620**
65 %	Iron Yellow 3910 (Bayer)
	- dispersed on the pearl-mill
100%	pigment slurry

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3. Iron Oxide Red

20 %	water
5 %	**NUOSPERSE FA 620**
75 %	Iron Oxide Red 130 M (Bayer)
	- dispersed on the pearl-mill
100 %	pigment slurry

4. Organic Red

37,5 %	water
7,5 %	**NUOSPERSE FA 620**
55 %	Irgazin DPP red BO (Ciba Geigy)
	- dispersed on the pearl-mill
100 %	pigment slurry

5. Phtalocyaninblue

40 %	water
10 %	**NUOSPERSE FA 620**
50 %	Heliogenblue L 7101 F (BASF)
	- dispersed on the pearl-mill
100 %	pigment slurry

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 FA 620 has a shelf life of 3 (three) 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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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