

Wetting and Dispersing Agent

GENERAL INFORMATION

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

PHYSICAL PROPERTIES

Appearance : clear liquid
 Active matter : 50%
 pH, 2% solution in water
 (ASTM D 1172) : 4.5 – 6.0
 Density, 20°C
 (53217/3) : approx. 1015 kg/m³
 Viscosity, 25°C
 (DIN 53015) : max. 150 mPa.s
 Color, 10% in water
 (DIN-EN 1557) : max. 100 Apha
 Solubility : soluble in water
 Ion character : anionic

APPLICATION AND PROPERTIES

Pigment slurries based on NUOSPERSE FA 620 are used for the shading of various 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 addition of protective colloid (e.g., cellulose thickening agent) or an excessive dosage of NUOSPERSE FA 620 increases the viscosity of the slurry and improves the stability.

The pigment slurries should preferably be prepared on a pearl-mill, sand-mill or ball-mill.

Slurries based on easily dispersable pigment types can be prepared on a dissolver.

Feature

- Strong adsorption on wide range of pigments
- Low molecular weight

Consequence

- improved color development
- better and faster dispersion
- reduces rub-up and color float
- highest pigment loading
- lower viscosities
- optimal cost/performance ratio

DOSAGE

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

In order to obtain a good stability it is advisable to apply a concentration that is approx. 30% in excess of the usual concentration e.g.:

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

If necessary, SERDAS 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)
to be dispersed on the pearl-mill	
100%	pigment slurry

(continued)

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The information in this publication is intended to serve as guide but is not necessarily complete and is given without warranty. We recommend all users to determine the suitability of our products for their intended uses and caution them to comply with statutory obligations and to avoid infringing rights of third parties. We encourage users to contact us to discuss problems involving our products in order to facilitate their use.

Elementis Specialties
 Pegasuspark
 De Kleetlaan 12A – Bus 3
 B-1831 Diegem • Belgium
 Tel +32 2 790 76 00
 Fax +32 2 790 76 60

Elementis Specialties
 P.O. Box 700
 Hightstown
 NJ 08520 • USA
 Tel +1 609 443 2000
 Fax +1 609 443 2422

Elementis Specialties
 No. 120 Jalan Kapar 27/89
 Section 27 • 40400 Shah Alam
 Selangor • Malaysia
 Tel +603 519 228 87
 Fax +603 519 238 87

2. Iron Oxide Yellow

25% water

10% NUOSPERSE FA 620

65% Iron Yellow 3910 (Bayer)

to be dispersed on the pearl-mill

100% pigment slurry

3. Iron Oxide Red

20% water

5% NUOSPERSE FA 620

75% Iron Oxide Red 130 M (Bayer)

to be 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)

to be dispersed on the pearl-mill

100% pigment slurry

5. Phtalocyaninblue

40% water

10% NUOSPERSE FA 620

50% Heliogenblue L 7101 F (BASF)

to be dispersed on the pearl-mill

100% pigment slurry

HANDLING AND SAFETY

More detailed information on handling and safety for each product is included in the relevant material safety data sheet, available for each product.

QUALITY ASSURANCE

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

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Fax +32 2 790 76 60

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P.O. Box 700

Hightstown

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Fax +603 519 238 87