Technical Information

Efka® PX 4340

(old : Efka® 4340)

BASF
The Chemical Company

general

high-molecular-weight dispersing agent

Efka® PX 4340 is made by the Controlled Free Radical Polymerization (CFRP) technology, which allows producing polymeric dispersants with defined polymer architecture and a low poly-dispersity index. Efka® PX 4340 is suitable for stabilizing pigments in solvent-based high-performance coatings such as automotive OEM and refinish coatings. It has an excellent affinity for organic pigments, especially where high transparency is required.

- improves color development and transparency with organic pigments
- highly suitable for optimum dispersion of transparent iron oxides
- viscosity reduction at high pigment concentration at the grinding stage
- gives excellent gloss to the final coating

chemical nature

acrylic block copolymer

Properties

physical form

clear yellow to brownish liquid

shelf life

Efka® PX 4340 should be stored in a dry and cool place. When kept in original unopened containers, it can be stored for up to 4 years from the date of manufacture.

typical properties (no supply specification)

solvent	1-methoxy-2-propyl acetate
density at 20 °C (68 °F)	~ 1.00 g/cm^3
active ingredients	~ 55 %
amine value	~ 4 mg KOH/g
color	≤ 8

Application

Efka® PX 4340, due to the very wide compatibility in most current systems used in solvent-based coatings, is especially suitable for the production of Resin Minimal Pigment Concentrates (RMPC) in combination with a multi compatible dispersing resin.

decorative coatings	industrial coatings	automotive coatings
not suitable	solvent-based 2-pack PUR	OEM: acrylic/melamine
	solvent-based 2-pack acrylics	OEM: polyester/melamine
	solvent-based NC	refinish: 2-pack PUR

guideline formulations for resin-minimal pigment concentrates (RMPC)

	Irgazin® DPP Cosmoray™ Orange	Irgazin® DPP Rubine TRI	Paliogen® Blue L 6470
Colour Index (Pigment…)	–	Red 264	Blue 60
Efka® 4340	8.10	2.10	6.90
Synthoester 186 HS (Synthopol Chemie)	30.00	40.00	–
Setal 173 VS-60 (Nuplex Resins)	–	–	37.40
pigment	20.00	15.00	24.00
1-methoxy-2-propyl acetate	41.90	42.90	–
xylene	–	–	15.85
butyl glycol acetate	–	–	15.85
	100.00	100.00	100.00

The addition levels are recommended for starting formulations. For optimum results a ladder study should be performed in the customer specific binder formulation

recommended concentrations

Calculation method to estimate the minimum required amount of active ingredients on pigment (solid dispersant on …):

inorganic pigments	10–15 % on oil absorption value
organic pigments (green, blue, violet)	15–30 % on BET value
organic pigments (yellow, orange, red)	15–45 % on BET value
carbon blacks (LCF)	15–20 % on DBP value
carbon blacks (HCC)	40–50 % on DBP value

Efka® PX 4340 should be incorporated in the mill base before adding the pigments.

Safety
When handling this product please comply with the advice and information given in the safety data sheet and observe protective and workplace hygiene measures adequate for handling chemicals.

Note
The data contained in this publication are based on our current knowledge and experience. In view of the many factors that may affect processing and application of our product, these data do not relieve processors from carrying out their own investigations and tests; neither do these data imply any guarantee of certain properties, nor the suitability of the product for a specific purpose. Any descriptions, drawings, photographs, data, proportions, weights, etc. given herein may change without prior information and do not constitute the agreed contractual quality of the product. The agreed contractual quality of the product results exclusively from the statements made in the product specification. It is the responsibility of the recipient of our product to ensure that any proprietary rights and existing laws and legislation are observed.

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