

Dispex® Ultra PX 4585

(old : Efka® 4585)



general

high-molecular-weight dispersing agent

Dispex® Ultra PX 4585 is a water-based dispersant of the acrylic block copolymer family of products made by Controlled Free Radical Polymerization (CFRP). This technology allows formulating polymeric dispersants with defined polymer architecture and a low poly-dispersity index. Dispex® Ultra PX 4585 is especially suited for the dispersion of pigments in water-based coatings.

Dispex® Ultra PX 4585 offers high efficiency in stabilizing pigments and demonstrates wide compatibility with many water-based resin systems. This makes Dispex® Ultra PX 4585 ideally suited for the use of the concept of resin-free pigment concentrates (RFPC).

chemical nature

acrylic block copolymer

Properties

physical form

clear, slightly yellowish liquid

shelf life

Dispex® Ultra PX 4585 may partially solidify when stored below 10 °C (50 °F). Heat to 35–40 °C (95–104 °F) to reliquify. 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	water
VOC	VOC-free
active ingredients	~ 50 %
amine value	~ 20 mg KOH/g
color	≤ 9

Application

Dispex® Ultra PX 4585 is very broad in its compatibility with different water-based resins and pigments.

decorative coatings	industrial coatings	automotive coatings
water-based acrylics	water-based acrylics	OEM: urethane-modified polyester/melamine
water-based alkyds	water-based 2-pack PUR	OEM: thermosetting acrylic dispersion refinish: 2-pack PUR

Dispex® Ultra PX 4585 can be used

- for organic and inorganic pigments
- in resin-free pigment concentrates (RFPC)
- in resin -minimal pigment concentrates (RMPC)
- for water-based architectural in-plant tinters
- in broad pH ranges during the grinding and let-down phases

guideline formulations for VOC/APE-free pigment concentrates

	Cromophtal® Violet GA	Irgalite® Blue PG	Irgazin® DPP Orange RA
Colour Index (Pigment...)	Violet 23	Blue 15:3	Orange 73
Efka® 4585	22.00	16.00	7.55
polyethylene glycol (300 g/mol)	10.50	10.50	10.50
de-ionized water	37.00	28.00	45.45
pigment	30.00	45.00	36.00
Efka® 2550	0.30	0.30	0.30
biocide	0.20	0.20	0.20
	100.00	100.00	100.00

	Irgazin® DPP Rubine TR	Colour Black FW 200 (formerly Evonik Degussa)	Bayferrox® ¹ 130 M Lanxess
Colour Index (Pigment...)	Red 264	Black 7	Red 101
Efka® 4585	20.00	13.50	5.50
de-ionized water	40.80	71.00	23.00
pigment	38.50	15.00	70.00
Efka® 2550	0.50	0.30	0.30
biocide	0.20	0.20	0.20
anti-settling agent	–	–	1.00
	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

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recommended concentrations

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

inorganic pigments	20–30 % on oil absorption value
organic pigments (green, blue, violet)	15–30 % on BET value
organic pigments (yellow, orange, red)	25–45 % on BET value
carbon blacks (LCF)	15–20 % on DBP value
carbon blacks (HCC)	50–80 % on DBP value

Dispex® Ultra PX 4585 should be incorporated into 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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