

# Efka<sup>®</sup> FA 4600

(old: Texaphor<sup>®</sup> Special)



## general

anti-settling agent for non-aqueous coatings

- prevents sedimentation and agglomeration of pigments. Even in systems having a low viscosity, the sedimentation remains soft and easy to stir.
- performs reliably even in the presence of heavy pigments
- is liquid and easily applicable
- can be incorporated at any production stage of the paint, e.g., before and after the grind stage. For this reason, many producers like to use it as a corrective additive (trouble-shooter). See also our remarks under «Applications».
- does not impair gloss, flow, drying properties or adhesion - provided it is applied at the correct dosage level.
- is surface-active thus allowing improved pigment wetting
- is insensitive to temperature and can thus be used readily in ball mills, triple-roll mills and high-speed dispersing units.
- is economical since it is highly effective even in very small amounts (from 0.1%, based on the total formulation).
- does not influence the water resistance of finished paints
- acts as an «antistatic agent» in screen printing inks

As a modern anti-settling agent, it acts via adsorption phenomena on the pigment surface and effectively prevents pigments from settling and forming hard, difficult-to-stir sediments even in low-viscosity coatings such as, e.g., dipping paints and wash-primers. This is possible even in the presence of specific high density pigments based on lead, chrome, barium, iron and titanium. In addition, the uniform electrostatic charge imparted by Efka<sup>®</sup> FA 4600 prevents re-agglomeration thereby counteracting any premature settling of the pigments.

## chemical nature

highly concentrated solution of surface-active anionic compounds

## Properties

### physical form

colorless to yellowish/ reddish liquid \*\*

### shelf life

Subject to appropriate storage under the usual storage and temperature conditions, our products are durable for at least 2 years.

### typical properties (no supply specification)

density at 20 °C (68 °F)	~ 1.025 g/cm <sup>3</sup>
pH value (10%)	~ 6
refraction index at 20 °C	~ 1.413

## Application

Efka® FA 4600 is an easy to use liquid anti-settling agent, the particular advantage of which is that it is effective over a broad range of polarity. It can, therefore, be used in a nitrocellulose lacquer, the solvents of which are mainly polar, as well as in decorative paints which only contain white spirit, i.e., a non-polar solvent. Efka® FA 4600 is also an excellent anti-settling agent for low-viscosity printing inks, e.g., flexographic and gravure. In particular it counteracts the tendency of inorganic pigments to settle. The following table gives a summary of the possible applications:

in coatings based on concentration of Efka® FA 4600 to prevent sedimentation, agglomeration and hard caking of pigments

oils and oleo-resinous binders	0.2 - 0.6	++
short oil alkyd resins	0.2 - 0.6	++
medium oil alkyd resins	0.2 - 0.6	++
long oil alkyd resins	0.2 - 0.6	++
urethane alkyds and urethane oils	0.2 - 0.6	++
styrenated alkyds	0.1 - 0.5	++
epoxy ester	0.2 - 0.4	++
alkyd/amino resin combinations	0.1 - 0.4	++
chlorinated rubber, cyclized rubber and their combinations	0.2 - 0.7	++
nitrocellulose	0.1 - 0.5	+
polyvinyl butyral (wash primers)	0.2 - 0.5	++
polyvinyl chloride and its copolymers	0.2 - 0.5	++
polyurethane		—
acrylics, air-drying	0.1 - 0.3	++
acrylics, thermosetting	0.1 - 0.3	++

all quantities stated above are quoted as a percentage of the finished paint

++ = very suitable

+ = suitable

— = not suitable

We do not recommend the use of Efka® FA 4600 in those coatings which contain metallic pigments. In such cases Rilanit® Special or Efka® FA 4663 are more suitable. Due to the large number of variations in paints, it is necessary to carry out suitable tests with Efka® FA 4600 to determine optimum dosage levels etc

## Application

### wash primer

Efka® FA 4600 has been used extensively in wash primers. If sedimentation should occur in these systems, which have a relatively low viscosity (this is often the case when processing zinctetroxychromate and talc), it can be easily stirred back into suspension.

Primers which are made with the same pigments but without the addition of Efka® FA 4600 tend to form a hard-cake and cannot be easily re-dispersed. Upon request, we will be pleased to provide test formulations.

### recommended concentrations

As mentioned previously, Efka® FA 4600 may be added before or after the pigment grind stage. However, if added before grinding the order binder - pigment (filler) – Efka® FA 4600 should be observed, since problems can arise if it is added to the clear binder solution. If Efka® FA 4600 is incorporated later, thorough stirring is particularly important so as to ensure the pigments are wetted properly.

The physical properties of the pigments as well as the type of binders and solvents are decisive when selecting the amount of Efka® FA 4600 required, but in general this lies between 0.1 and 0.5%, calculated on the finished paint. In exceptional cases, e.g., in the presence of particularly heavy pigments such as red lead, the quantity may be increased to 1%.

\*\* = Our tests have shown that a reddish discoloration has no negative influence on the paint system. Cloudiness caused by low storage temperatures has no influence on the effectiveness of Efka® FA 4600. In general, warming to room temperature eliminates this cloudiness.

### Safety

When handling these products, 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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