Technical Information

Efka® PX 4732

(old : Efka® 7732)

BASF
The Chemical Company

general

high-molecular-weight dispersant

Efka® PX 4732 is a dispersant developed specifically for inkjet inks to provide the critical combination of strong viscosity suppression and excellent storage stability. Efka® PX 4732 is based on a proprietary process.

It is particularly effective in strong-solvent systems , i.e., polar systems based on acetates or ketones. Efka® PX 4732 also provides good performance in UV-curable inkjet systems.

Efka® PX 4732 is a solvent-free liquid product which is 100 % active. As such it is potentially suitable for use in any UV-curable ink system including UV-curable flexographic and screen inks.

It is also well suitable for UV-curable and even solvent-based resin-free pigment concentrates (RFPC) for a wide range of applications.

The product is somewhat more polar in nature than Efka® PX 4731.

chemical nature

polymer with pigment-affine groups

Properties

physical form

brown viscous liquid

shelf life

Efka® PX 4732 should be stored in a cool dry place. When kept in original unopened containers, it has a total shelf life of 4 years from the date of manufacture. Storage at temperatures below 10 °C (50 °F) may lead to partial solidification. Reliquefy by heating contents to 35 – 40 C (95 –102 °F).

typical properties (no supply specification)

active ingredients	100 %
amine value	~ 25 mg KOH/g

Application

Efka® PX 4732 is a dispersant with broad compatibility with different ink systems and pigments and is particularly recommended for:

UV-curable (free radical)	solvent-based	water-based
inkjet inks	inkjet inks (“strong solvent”)	not recommended
flexographic inks	inkjet inks (“mild solvent”)	

Efka® PX 4732 is excellent in stabilizing organic and inorganic pigments in low-viscosity systems based on acrylate-functional UV monomers and in organic solvents.

The stabilizing properties of the dispersant are so strong that even stable resin-free concentrates in organic solvents can be made at use levels that would normally demand a complementary dispersing resin.

recommended concentrations

Appropriate use levels depend on pigment selection, dispersing medium and let-down composition. A ladder study should be performed to determine the optimum use level. Efka® PX 4732 should always be incorporated before addition of pigment.

use levels for inkjet ink formulations:

The optimum level can generally be found in the range of 20 – 0 % Efka® PX 4732 calculated on pigment load.

use levels for UV-curable flexographic formulations:

The optimum level can generally be found in the range of 2.5 – 10.0 % calculated on pigment load. Such levels offer significantly reduced mill base viscosity and nearly Newtonian flow.

estimated required amount of dispersant on pigment:

The minimum required amount of active dispersant can be estimated from the specific surface area or oil absorption value of the pigment. Calculated amount can be used as a starting point for ladder studies.

inorganic pigments	10 – 20 % on oil absorption
organic pigments	15 – 45 % on BET value
carbon blacks	15 – 20 % on DBP value

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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