

DAPRO® FX 511

Coalescing Agent

GENERAL INFORMATION

The **DAPRO FX 511** agent is a low odour coalescing agent that has been designed for dispersions, dispersion paints and plasters.

CHEMICAL & PHYSICAL PROPERTIES

Appearance	clear liquid
Density, 20 °C (ISO 2811-2)	approx. 940 kg / m ³
Viscosity, 25 °C (ASTM D 2196)	<100 mPa.s
Color (DIN-EN 1557)	max. 2 mg l / 100 ml
Solubility	insoluble in water but soluble in white spirit and many other aliphatic and aromatic solvents

These are typical properties not to be used for specification purposes.

APPLICATIONS

- **DAPRO FX 511** is added to latex and dispersion paints in order to reduce the minimum film formation temperature (MFT) and to facilitate the coalescence of the polymeric dispersion particles during drying. Polymer particles must be free to move independently during storage and application, which leads to the required storage stability, easy application and good flow and levelling. However, after being applied onto the substrate, the polymer particles must fuse into a continuous film. This starts when water evaporation from the paint causes the particles to pack closely together. Hard polymer particles remain separated and therefore do not form a continuous film.
- The product acts as a strong solvent and plasticizer for polymeric particles, such as those based on polyacrylic, polystyrene-acrylic, polyvinylacetate and other commonly used homo-,co- and terpolymeric dispersions.

- It will soften the polymer particles, enabling the formation of a continuous film. Since it is slow to evaporate, it will remain in the film for some time after the coating is applied, even under hot and low humidity atmospheric conditions.
- **DAPRO FX 511** is a low-odour liquid and, contrary to butyrate ester type coalescing agents, has a negligible influence on the smell of the coating, during both the application and the various stages of drying. The addition of **DAPRO FX 511** will not only improve the scrub resistance of normal dispersion paints but also of highly-loaded dispersion paints.

KEY PROPERTIES

FEATURE	CONSEQUENCE
• propanediol-mono-ester	- excellent efficiency in a wide range of polymer dispersions
• low odour, solvent free	- allows for use in low odour dispersion paints
• slow evaporation rate	- prevents cracking even under adverse conditions - improved weathering

INCORPORATION

The product is usually added during the let-down stage of the paint production and is incorporated under effective stirring. It may be pre-mixed with other ingredients like co-solvents, thickeners or stabilizers. The amount to be added depends on the type of polymer dispersion, the paint and application conditions.

LEVEL OF USE

Usually a dosage between 0.2 and 2 % of the product, calculated on the total weight of dispersion paint, will be sufficient. The exact amount to be added should be determined experimentally.

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HEALTH AND SAFETY

Before using this product please consult our Safety Data Sheet (SDS) for information on safe handling and storage. The SDS can be found on the company website.

SHELF LIFE

DAPRO FX 511 has a shelf life of 3 (three) years from date of manufacture.

QUALITY ASSURANCE

Since 1992 the company is a holder of the ISO 9001 / ISO 9002 certificates, which guarantees that all operations are conducted according to the stipulated standards.

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