RHEOLATE® FX 1010

Thickening Agent

GENERAL INFORMATION

RHEOLATE® FX 1010 is a high efficiency polyurethane thickener for use in aqueous coatings. The product is supplied as a liquid and is convenient to handle and ready for immediate use.

PHYSICAL PROPERTIES

Appearance	: clear liquid
Active matter	: 50%
Density 20ºC (DIN 53217/3)	: approx. 1070 kg/m^3
Viscosity, 23ºC (ASTM D 2196)	: 10000 – 18000 mPa.s
Color, 50% in IPA (DIN-EN 1557)	: max. 175 Apha
Solubility	: soluble in water and water/glycol mixtures
Flash point (ASTM D 93)	: > 100ºC
Composition	: hydrofobic urethane polymer in a mixture of solvents

APPLICATION AND PROPERTIES

RHEOLATE® FX 1010 is applicable in many aqueous systems such as emulsions, dispersions and emulsion paints e.g., based on polyacrylic-, polyvinyl-acetate homopolymers and most terpolymers. RHEOLATE® FX 1010 is recommended for a wide range of paint formulations, from gloss to matt paints. RHEOLATE® FX 1010 improves the rheological and levelling properties of aqueous paints by increasing the high shear viscosity and suppressing the low shear viscosity. This results in aqueous coatings with a solvent-based alkyd like rheology. Film-build, brushing characteristics and appearance are improved compared to conventionally thickened aqueous paints.

RHEOLATE® FX 1010 acts as a binding agent in the coating and is totally compatible with the standard binders used in emulsion paints. Paints made with RHEOLATE® FX 1010 have a higher degree of water resistance and increased scrub resistance than those made with cellulosic thickeners. Higher gloss levels in gloss emulsion paints are obtained by using RHEOLATE® FX 1010 as opposed to polyacrylates or cellulosic thickeners. Combining RHEOLATE® FX 1010 with a suitable pigment dispersant such as NUOSPERSE® FX 600 gives outstanding gloss performance. For other emulsion paints we recommend the combination of RHEOLATE® FX 1010 and NUOSPERSE® FX 504.

RHEOLATE® FX 1010 gives excellent resistance to bacterial degradation and improves the viscosity stability, thus allowing a possible reduction in the level of preservative used.

Feature	Consequence
• based on a poly-ether polyurethane	- provides longterm viscosity stability - improves weathering - less sensitive to hydrolysis - decreased water sensitivity
• increases mid and high shear viscosity	- more alkyd-like rheology - higher film build and opacity - Improved flow and levelling characteristics
• non-plastic flow	- reduces roller spattering

DOSAGE

RHEOLATE® FX 1010 may be added to the milling paste or during the let-down stage. Best results are obtained when using a part in the milling paste and a part during the let-down.

(continued)

The information in this publication is intended to serve as guide but is not necessarily complete and is given without warranty. We recommend all users to determine the suitability of our products for their intended uses and caution them to comply with statutory obligations and to avoid infringing rights of third parties. We encourage users to contact us to discuss problems involving our products in order to facilitate their use.

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The quantity of RHEOLATE® FX 1010 to be used is strongly dependent on the desired rheology and the composition of the paint-system. In most cases a concentration of 0.2 – 2.0% RHEOLATE® FX 1010 is sufficient. However, it is recommended to determine the optimum dosage for each case individually.
In some high PVC-formulations it may be useful to use RHEOLATE® FX 1010 in combination with cellulosic thickeners.

Dilution methods:

A. Addition to the pigment grind:
   RHEOLATE® FX 1010 as such can be incorporated together with the other liquid components of the mill-base.

B. Addition during let-down or as post-additive:
   RHEOLATE® FX 1010 should be diluted with a mixture of water/propyleneglycol or water alone.
   Suggested possible dilution of RHEOLATE® FX 1010:

RHEOLATE® FX 1010	6%	10%	25%
propyleneglycol	-	35%	37.5%
water	94%	55%	37.5%
	100%	100%	100%

To make a 1 .. 4 % solution we recommend first to make a 4 … 10 % solution and than dilute till the lower concentration.

HANDLING AND SAFETY

Detailed information on handling and safety for each product is included in the relevant material safety data sheet, available for each product.

QUALITY ASSURANCE

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

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