CLAYTONE AF

Product Data

Special Features and Benefits
CLAYTONE AF is an organophilic bentonite derivative which is used as thixotropic thickener and anti-settling agent in solvent based coating systems of low to medium polarity. CLAYTONE AF is easy to disperse and self-activating. As specially activated, organophilic smectite product, CLAYTONE AF can swell in organic media and build a gel structure (card-house structure). Weak hydrogen bonding between the single smectite platelets is the reason for this thixotropic gel structure. Therefore, the complete separation of the platelets (complete dispersion of agglomerates into primary particles) is necessary for optimum efficiency.

Composition
organophilic bentonite

Typical Properties
The values indicated in this data sheet describe typical properties and do not constitute specification limits.

Form:	free flowing powder
Colour:	cream
Specific weight:	approx. 1.5 g/cm^3
Bulk density:	370-510 g/l
Sieve passing (75 µm):	min. 80 %
Moisture content:	max. 3 %

Recommended Use
CLAYTONE AF is designed as an easy-to-disperse, self-activating rheological additive for low to medium polarity solvent-based coating systems. CLAYTONE AF prevents sagging and settling in resin-based systems. CLAYTONE AF is not effective in products without binders, such as lubricating grease or pure solvents. In rust inhibitors based on salts of oxidized petrolatum CLAYTONE AF can be used.

Further applications: trade sales, wood stains, printing inks, architectural paints, do-it-yourself paints, etc.

Suitable solvents and/or resins: Mineral spirits (rule 66), naphtha, xylene, toluene, mixtures of aliphatic and aromatic solvents. CLAYTONE AF is not recommended for oxygenated solvent systems (ketones, alcohols etc.). Alkyds, processed oils, epoxy-esters, and oil modified urethanes are all suitable for Claytone AF.

Incorporation and Processing Instructions
Generally organophilic smectite products require high shearing forces for complete dispersion and separation of the mineral platelets. It is of advantage to disperse CLAYTONE AF using high shearing forces, too, however CLAYTONE AF is comparably easy to disperse. CLAYTONE AF can be effectively utilized as powder in the pigment grind or after the grinding step to correct viscosity. CLAYTONE AF does not require an activator. If used in the pigment grind CLAYTONE AF is effective in aliphatic as well as aromatic solvent systems. When incorporating CLAYTONE AF into a system containing a mixture of aromatic and aliphatic solvents, the CLAYTONE AF should be added to the solvent of lower polarity. When postadding CLAYTONE AF care must be taken to insure proper dispersion. Post addition under a high speed disperser is recommended. When added to a let-down tank with only minimal agitation it is suggested that CLAYTONE AF be allowed to mix for a minimum of 1 hour. The post-addition is possible mainly in unpolar systems. As a general rule CLAYTONE AF should be incorporated at temperatures not higher than 50 °C.

Recommended Levels

The optimum amount of CLAYTONE AF depends on the formulation and on the requirements of the system. Normally around 0.3 % to 1.0 % of CLAYTONE AF are used to get the required anti-settling, anti-sagging and thixotropy.

The above recommended levels can be used for orientation. Optimal levels are determined through a series of laboratory tests.

Storage stability

Minimum two years if stored dry in unopened, original packaging at temperatures between 0 °C and 30 °C.

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