TIXOGEL EZ 100

Gellant

Product Data

Special Features and Benefits
TIXOGEL EZ 100 is an organophilic smectite derivative which is used as thixotropic thickener and anti-settling agent in solvent based coating systems of low to medium polarity.

TIXOGEL EZ 100 is designed as an easy-to-disperse, self-activating rheological additive for low to medium polarity solvent-based coating systems. TIXOGEL EZ 100 prevents sagging and settling in resin-based systems. TIXOGEL EZ 100 is not effective in products without binders, such as lubricating grease or pure solvents. In rust inhibitors based on salts of oxidized petrolatum TIXOGEL EZ 100 can be used.

As specially activated, organophilic smectite product, TIXOGEL EZ 100 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.

Recommended Use
· trade sales, wood stains
· printing inks
· architectural paints
· do-it-yourself paints
· lubricants

Suitable solvents and/or resins: Mineral spirits (rule 66), naphtha, xylene, toluene, mixtures of aliphatic and aromatic solvents. TIXOGEL EZ 100 is not recommended for oxygenated solvent systems (ketones, alcohols etc.). Alkyds, processed oils, epoxy-esters, and oil modified urethanes are all suitable for TIXOGEL EZ 100.

Composition
organophilic smectite

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

Form:	cream-coloured free flowing powder
Specific weight:	approx. 1.5 g/cm^3
Loose bulk density:	340-490 g/l
Primary particle size at complete dispersion:	1-5 µm
Moisture content:	max. 3 %
Temperature resistance:	200-250 °C

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 TIXOGEL EZ 100 using high shearing forces, too, however Tixogel EZ 100 is comparably easy to disperse. TIXOGEL EZ 100 can be effectively utilized as powder in the pigment grind or after the grinding step to correct viscosity. TIXOGEL EZ 100 does not require an activator.

If used in the pigment grind TIXOGEL EZ 100 is effective in aliphatic as well as aromatic solvent systems. When incorporating TIXOGEL EZ 100 into a system containing a mixture of aromatic and aliphatic solvents, the TIXOGEL EZ 100 should be added to the solvent of lower polarity. When post-adding TIXOGEL EZ 100 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 TIXOGEL EZ 100 be allowed to mix for a minimum of 1 hour. The post-addition is possible mainly in unpolar systems. As a general rule TIXOGEL EZ 100 should be incorporated at temperatures not higher than 50 °C.

Recommended Levels

The optimum amount of TIXOGEL EZ 100 depends on the formulation and on the requirements of the system. Normally around 0.3 % to 1.0 % of TIXOGEL EZ 100 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 and Transportation

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

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