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VISCOGEL® C4

Description

VISCOGEL® C4 is a rheological additive for solvent-borne systems of low to medium polarity that gives thixotropic effect, sag control, excellent levelling and prevents pigments from long-term storage settling.
The nature of VISCOGEL® C4 is a bentonite clay, organically modified with a quaternary alkylammonium compound.

Tab: CHEMICAL AND PHYSICAL DATA

COMPOSITION	COLOUR	FORM	DENSITY	MOISTURE
Smectite clay with alkilammonium salt	Pale cream	Free flowing powder	1.7 g/cm^3	3 %

Applications

VISCOGEL® C4 is used in a wide range of manufacturing processes like oil based paints and stains (either industrial or architectural), printing inks, lubricating greases, adhesives, cosmetic and personal care products, to give the desired rheological control to the system.
VISCOGEL® C4 shows particularly good performance in solvents like aliphatic mineral spirits and aromatics.

Incorporation

VISCOGEL® C4 belongs to the conventional type of organoclays group, which requires mechanical energy, shear forces applied with a good dispersion equipment, and a chemical (polar) activator to reach the proper level of delamination of the organobentonite platelet stacks.
While heat is not essential in most cases, processing temperatures above 20°C are preferred.

Tab: Activators' dosage (based on VISCOGEL® weight)

METHANOL/H_2O (95:5)	ETHANOL/H_2O (95:5)	ACETONE/H_2O (95:5)	PROPYLENE CARBONATE/H_2O (95:5)	PROPYLENE CARBONATE
33%	50%	60%	33%	33%

It is always recommended to determine the proper level of addition by experiment.

Either defect or excess of chemical activator would result in poorer viscosity development.

COMPANY WITH MANAGEMENT SYSTEM CERTIFIED BY DNV GL
= ISO 9001 =
= ISO 14001 =

Several methods can be used to incorporate VISCOGEL® C4:

1. The “direct add” technique. VISCOGEL® C4 is added directly in powder form to the solvent/resin mix, before pigment addition and milling. Surfactants have to be added the last.
2. The “pregel” technique. VISCOGEL® C4 is pregelled as described above in a suitable solvent at a 5-10 % concentration, with a polar activator. The activated gel is then added to the binder solution and stirred. After pigment addition the mix is finally milled.

Dosage

Level of addition strongly depends on the type of system and on the degree of thickening or other properties desired. For house and industrial paints, typical levels are between 0.2 % and 0.6 % of VISCOGEL® C4. For primers and printing inks, higher levels are required (0.5-1.0 %). For strong antisagging properties, up to 3.0 % can be used.

Storage Stability And Packing

Product do not deteriorate in a significant way in a 36 months period. Storage is advisable in a dry, sheltered place in closed bags. Packing is 25 Kg net paper bags on wood pallets of 1000 - 1,400 Kg each.

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