

LAVIOSA VISCOGEL™ S4

LAVIOSA VISCOGEL™ S4 is a new high performing, highly effective rheological additive for solvent-borne systems of low to medium polarity that gives excellent thixotropic effect, sag control, good levelling and prevents pigments from long-term storage settling.

The nature of LAVIOSA VISCOGEL™ S4 is a highly purified bentonite clay, organically modified with a quaternary alkylammonium compound.

CHEMICAL AND PHYSICAL DATA:

COMPOSITION	COLOUR	FORM	BULK DENSITY	MOISTURE
Smectite clay with quaternary ammonium salt	Whitish	Free flowing powder	0.4 – 0.6 g/cm ³	3 %

APPLICATIONS

LAVIOSA VISCOGEL™ S4 is used in a wide range of manufacturing processes, for 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. LAVIOSA VISCOGEL™ S4 shows particularly good performance in solvents like aliphatic mineral spirits and aromatics.

INCORPORATION

LAVIOSA VISCOGEL™ S4 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 LAVIOSA VISCOGEL™ weight)

METHANOL/H ₂ O (95:5)	ETHANOL/H ₂ O (95:5)	ACETONE/H ₂ O (95:5)	PROPYLENE CARBONATE/H ₂ O (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.

Several methods can be used to incorporate LAVIOSA VISCOGEL™ S4:

1. The "direct add" technique. LAVIOSA VISCOGEL™ S4 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. LAVIOSA VISCOGEL™ S4 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 architectural and industrial paints, typical levels are between 0.1 % and 0.5 % of LAVIOSA



VISCOGEL™ S4. For primers and printing inks, higher levels are required (0.4-0.8 %). 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 1,000 - 1,400 Kg each.

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