

## LAVIOSA VISCOGEL™ GM

### Rheological Additive for Greases and Lubricants

#### General Information

**LAVIOSA VISCOGEL™ GM** rheological additive is a new high performing, highly effective rheological additive specifically tailored for greases and lubricants.

**LAVIOSA VISCOGEL™ GM** grease gellants are based on very highly purified bentonite clay reacted with a quaternary ammonium salts through a cation exchange reaction and show high performance efficiency as thickening for medium-to high-viscosity-index mineral oils, synthetic oils and other organic fluids.

#### Physical Properties

<b>Composition</b>	organically modified bentonite clay
<b>Physical form</b>	white fine powder
<b>Moisture</b>	3 % maximum

#### Applications

**LAVIOSA VISCOGEL™ GM** is suitable for lubricating greases based on medium-to high- paraffinic oils, synthetic oils and other organic fluids offering rapid yield development, high gel strengths, and increased efficiency. **LAVIOSA VISCOGEL™ GM** is especially recommended to thicken high

temperature greases because of their thermal stability.

#### Properties

**LAVIOSA VISCOGEL™ GM** is a pregel type organoclay and require high shear forces during production in order to properly delaminate the organoclay platelets and thicken the base stock. A polar activator is recommended.

To perform effectively, the preparation of an organoclay grease require quite specific processing steps: the organoclay platelets stack agglomerate in base oil will be subjected to wetting and de-agglomeration, polar activation and high shear delamination to develop optimum gel strength. The shear forces required for proper dispersion must be produced by the equipment such as colloid mills or homogenizers. The high shear provided establishes the organoclay matrix which results in the desired grease consistency.

#### Table Activators' dosage (based on LAVIOSA VISCOGEL™ weight)

	%
<b>Acetone</b>	33
<b>Methanol/H<sub>2</sub>O (95:5)</b>	17
<b>Propylene Carbonate</b>	17
<b>Ethanol/H<sub>2</sub>O</b>	17

## Incorporation

**LAVIOSA VISCOGEL™ GM** 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. 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.

## Level of Use

The level of use depends on the rheological properties needed, and the base oil being used. A concentration loading study is recommended to optimize the level of addition.

## Storage stability and packing

Storage is advisable in a dry, sheltered place in closed bags. **LAVIOSA VISCOGEL™ GM** rheological additive is available in 25 kg net paper bags. **LAVIOSA VISCOGEL™ GM** has a shelf life of 3 (three) years from date of manufacture.

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