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THIXATROL[®] GST

Rheological additive

for non-polar to medium polarity solvent-borne systems

THIXATROL GST rheological additive is an organic derivative of castor oil. It is an easier dispersing version of THIXATROL ST. Designed for non-polar to medium polarity solvent-borne systems, THIXATROL GST imparts flow, leveling, sag and pigment suspension control.

Applications

Alkyd systems - air dry
Alkyd systems - force dry
Anti-fouling paints
Architectural paints - alkyds
Bituminous paints
Butyl caulks
Chlorinated rubber paints
Epoxy systems (solvent containing)
High build coatings
Polysulfide sealants
Silicone alkyd coatings
Special effects (e.g. Hammer finishes)

Attributes

THIXATROL GST rheological additive

- easy to disperse
- increases viscosity and provides thixotropy
- promotes pigment suspension
- provides sag control without sacrificing flow and leveling
- controls penetration into porous substrates
- is non-reactive with paint pigments and vehicles
- does not affect water resistance of organic coatings
- does not detract from paint durability
- is non-yellowing
- provides excellent package stability and reproducibility

Chemical and Physical Data

Composition	organic derivative of castor oil
Color	white
Form	finely divided powder
Density (gm/cm ³)	1.46
(lb./U.S. gal.)	12.2
Bulking value	
(U.S. gal/lb.)	0.0820

Incorporation

Shear, controlled temperature and controlled processing time are required for proper activation of THIXATROL GST rheological additive.

High-shear dispersers sand mills, and other heat and shear producing equipment are suitable for THIXATROL GST. (If low temperature water-cooled equipment such as ball mills or roller mills are used, THIXCIN R rheological additive is the better choice).

Processing temperatures are very important, and depend upon the solvency of the total system, particularly the solvency of the mill base itself. The recommended processing temperatures for either aliphatic or aromatic solvent based systems containing THIXATROL GST are as follows:

Aliphatic:	145°F - 165°F (63°C - 74°C)
Aromatic:	100°F - 130°F (38°C - 54°C)

A processing temperature ladder series should be tried when THIXATROL GST is evaluated in any new system in order to establish the best processing temperature conditions for the system and processing equipment in use.

Note: The statements made herein are based on our research and the research of others, and are believed to be accurate. No guarantee of their accuracy is made, however, and the products discussed are sold without warranty, expressed or implied, including warranty of merchantability and fitness for use of this material, and upon condition that purchasers shall make their own tests to determine the suitability of such products for their particular purposes. The user assumes all risk of use or handling, whether or not in accordance with any statements of the supplier. Supplier's liability, if any, for any action arising out of the material being supplied shall be limited to replacement of material. Statements concerning the possible use of these products are not intended as recommendations to use these products in infringement of any patent.

Incorporating and activating THIXATROL GST is illustrated by the typical order of addition and processing conditions found in a high-speed disperser:

1. Vehicle/solvent (mix)
2. THIXATROL GST (mix 5-10 minutes)
3. Surfactant (if any)
4. Pigments (disperse and stay within appropriate processing temperature range for 15-30 minutes)
5. Let down and cool (with agitation) to below minimum recommended processing temperature.

For sand mills, due to their short residence times (usually less than 1 minute), most of the required dwell time has to take place during the sand mill pre-mix stage (essentially steps 1 to 4 above). Be careful not to exceed the recommended processing temperatures before or during sand mill.

Levels of Use

Based on total system weight

0.3% to 1.2% (2.3 to 14.0 lb/U.S. gal.)

Health and Safety Data

Before using this product, please consult our Health and Safety Data Sheet for information on safe handling.