

Rheological Additive for Lubricating Grease Manufacture

GENERAL INFORMATION

BARAGEL 3000 rheological additive is a self-activating organoclay grease gellant for thickening medium- to high-viscosity-index mineral oils, synthetic oils and other organic fluids.

PHYSICAL PROPERTIES

Composition	organically modified bentonite clay
Color / Form	light cream, finely divided powder
Density	1.7 g/cm ³
Bulk density	0.4 g/cm ³
Moisture	2.5 % maximum

APPLICATIONS

BARAGEL 3000 rheological additive offers increased efficiency and is an interesting economic alternative to conventional clay gellants that require higher shear and chemical activation for optimal dispersion and performance.

BARAGEL 3000 is easy to disperse and suitable for lubricating greases based on medium- to high-VI paraffinic oils, synthetic oils and other organic fluids. Many of these greases are used in mining, farming, metal refining and military applications.

KEY PROPERTIES

BARAGEL 3000 rheological additive

- requires no external chemical activation and therefore eliminates:
- expensive chemical activators
- low flash point, flammable materials possible over- or under-activation
- one processing step
- is easy to disperse and offers:
- high plant throughput, open mill settings good batch-to-batch uniformity

- low equipment maintenance cost
- low shear sensitivity
- is highly efficient, allowing low use levels
- provides excellent mechanical stability

INCORPORATION

Self-activating BARAGEL 3000 requires no external chemical activator. It is recommended that a small amount of water be added to aid the gelation process.

The following is a typical simple mix method of incorporating BARAGEL 3000 to make an NLGI grade 2 grease:

1. Add base oil
start mixing
2. Add 6% BARAGEL 3000 by weight of total grease
mix 5 minutes
3. Add 0.1% water based on total grease weight
mix 30 minutes
4. Add additives (if any)
mix
5. Mill
6. Package

It should be noted that the viscosity of the base oil/BARAGEL 3000/water mixture is typically thinner than the viscosity of the base oil/conventional gellant/chemical activator mixture. This provides the benefit of being easier to pump to the mill or storage tank. Upon milling, full grease hardness will be obtained.

Other methods of incorporation that can be used with BARAGEL 3000 are the simple heated mix, cold concentrate and the heated concentrate methods.

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LEVELS OF USE

Compared with conventional organoclay gellants, typically 10%-15% less BARAGEL 3000 is needed to develop a given grease consistency.

Start by substituting BARAGEL 3000 at 10% lower loadings than the organoclay being replaced. Additional base oil can be added to bring the final organoclay concentration down to 85% to 90% of the normal usage level.

A concentration loading study is recommended to optimize the level of addition.

REGULATORY

For the most current regulatory status, please refer to the MSDS for BARAGEL 3000. It may be viewed and downloaded from our website at:

www.elementisspecialties.com

HANDLING AND SAFETY

More detailed information on handling and safety for each product is included in the relevant material safety data sheet, available for each product.

STORAGE RECOMMENDATIONS

Store in a cool, dry location.

PACKAGING

BARAGEL 3000 rheological additive is available in multi-ply paper bags. Please contact your local Elementis Specialties representative for the packaging available in your region.

SHELF LIFE

BARAGEL 3000 has a shelf life of 4 (four) years from date of manufacture.

PRODUCT NUMBER

10810

QUALITY ASSURANCE

Since 1992 the company is a holder of the ISO 9001 / ISO 9002 certificates, which guarantees that all operations are conducted according to the stipulated standards.

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