

Blachford

Na Li Ca Al

ADDITIVES FOR GREASE GELLING APPLICATIONS

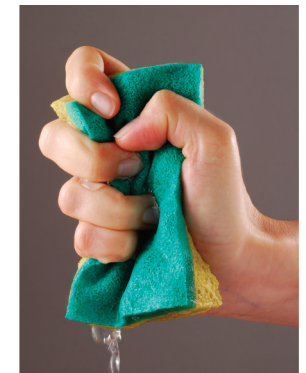
- Lithium Stearate
- Calcium Stearate
- Aluminum Stearate
- Sodium Stearate
- Lithium 12-Hydroxystearate
- Calcium 12-Hydroxystearate



90 Years Industry Experience



Superior Batch Uniformity



No Water to Remove



Reduced Processing Time

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GREASE ADDITIVES REFERENCE GUIDE



SUGGESTING STARTING Li GREASE FORMULATIONS (1800kg NLGI Grade 2):

PROCEDURE:

Add 800 kg of base oil to the manufacturing kettle followed by 180 kg (10%) of the thickener. Slightly more preformed thickener can be used in order to round out bag quantities. The grease consistency can be adjusted with the addition of base oil later in the process.

Heat the kettle charge to approximately 200°C or until all of the preformed thickener has completely melted. This may require temperatures up to 215°C to ensure complete melting.

When the thickener has completely melted, pump the remaining base oil (820 kg) into the grease vessel. Circulate the grease with continuous agitation. Rapid cooling at this point improves grease yield.

For best results, circulate the grease through a high-pressure homogenizer. This is one of the more important steps in the process. The homogenization pressure should be 4000 to 6000 psi.

Once the kettle contents are approximately 100°C, additional base oil can be added to adjust batch consistency to the appropriate NLGI Grade requirement. For a typical NLGI Grade 2 grease, between 8 and 9% thickener is required.

In general, for firmer grease add more thickener. When the batch temperature is between 80 to 100°C, additives can be incorporated. These could include antioxidants, boundary lubricants, and rust inhibitors.

PREFORMED THICKENER RECOMMENDATIONS:

Base Oil	Prefomed Thickener
Synthetic Ester Oil	8-10 % Lithium 12-Hydroxystearate
PAO (Poly Alpha Olefin)	8-10 % Lithium 12-Hydroxystearate
Aromatic Oil	10-12% of Calford® G-200
Naphthenic Oil	10-12% of Calford® G-200
Soy Oil	8-10 % Lithium 12-Hydroxystearate

For Grade 3 Grease use 12-14% pre-formed thickener
For Grade 1 Grease use 5-7% pre-formed thickener

DISCLAIMER

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