

# Proprietary Additive



## QUINPLEX®

### Imparting Five Characteristics to LE's Lubricants

Quinplex® is a unique polymer that LE uses in several of its lubricant formulations, predominantly its food grade greases. The name Quinplex is derived from the five principal characteristics this additive imparts to lubricants: tackiness, water resistance, cohesion, mechanical stability and corrosion resistance.

Based on research originally done in Europe, the polymer's beneficial properties – including its narrow-range molecular weight distribution – brought it to LE's attention. LE adapted the new technology for lubrication, named it Quinplex and has been using it in select LE lubricants since 1974.

#### Characteristics

- Tackiness
- Water Resistance
- Cohesion
- Mechanical Stability
- Corrosion Resistance

#### Pure

It is also pure, allowing it to be used in NSF H1 certified lubricants, which must meet incidental food contact standards.

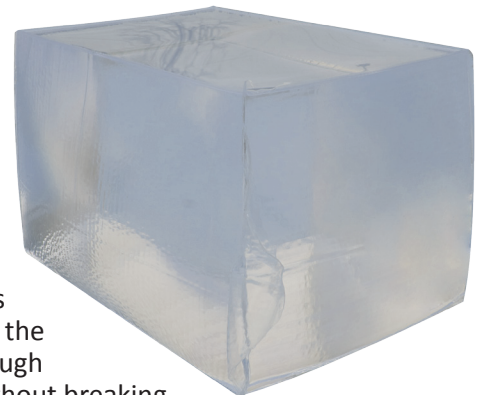
#### Proprietary

Quinplex additive technology is used exclusively in LE lubricants, helping our customers worldwide protect their equipment, and experience longer lubricant intervals, fewer part replacements and less downtime.

#### How It Works

Although it appears to be a solid, Quinplex is actually a very thick, high-molecular-weight liquid. It was chosen by LE because of its narrow-range molecular weight distribution (ensuring consistency of physical characteristics).

Quinplex is incorporated into lubricants through a series of manufacturing techniques providing the necessary adhesion to the base oil. When used in grease formulations, Quinplex enhances the coupling of the oil with the thickener. The overall mechanical stability of the grease is also enhanced, helping the grease do its work through thousands of cycles without breaking down its desired consistency.



Quinplex works synergistically and does not interfere with other chemically active components of a lubricant. It increases the viscosity index of fluid products and the base fluids in greases, reducing their change in viscosity over a wide operating temperature range. It also increases adhesive quality (tackiness), enabling lubricants to stick to metal surfaces and provide enhanced water resistance. Lubricants with Quinplex are able to withstand heavier loads than lubricants of equal viscosity without Quinplex.



The Lubrication Reliability Source™

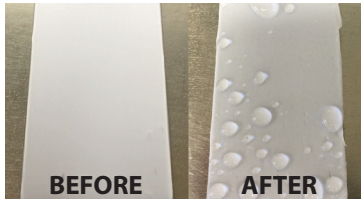
www.LElubricants.com  
800-537-7683

# 5 Characteristics



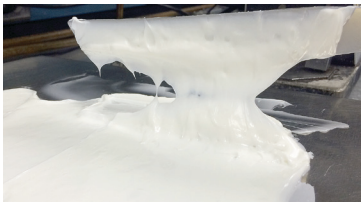
## QUINPLEX® ADDITIVE

1



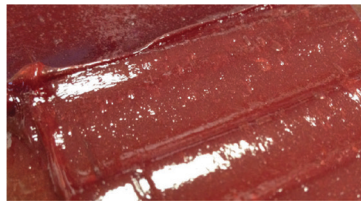
**Water Resistance** – Incorporated into LE lubricants, Quinplex helps form a water-resistant barrier and prevent water spray-off loss, which means fewer equipment failures caused by a lack of lubricant. It also means longer regreasing intervals and less lubricant usage.

2



**Tackiness** – Quinplex helps lubricants cling tenaciously to metal surfaces, ensuring that the lubricant will not sling off or pound out during use. Like water resistance, tackiness reduces equipment failures, extends relubrication intervals and reduces lubricant usage.

3



**Cohesion** – In grease formulations, Quinplex enhances the coupling of the oil with the thickener. This ensures the formulation remains stable over time and allows Quinplex to work synergistically with other additives added to the lubricant.

4



**Mechanical Stability** – When incorporated into grease, Quinplex improves the overall mechanical stability and allows the grease to do its work without performance loss, staying in range throughout its useful life.

5



**Corrosion Resistance** – Quinplex forms a powerful corrosion barrier. LE's lab tests on pure Quinplex have proven its ability to resist concentrations of strong acids and bases, as well as oxidizing agents.

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