

# Lankem introduces novel bio-based products for the industrial and coatings market

Our company strength is our chemistry and market knowledge of surfactants, especially for applications that fall within the industrial markets. The coatings industry is an important market for Lankem and falls within two main areas; coating additives, which include dispersing agents, defoamers and humectants and emulsifiers for emulsion polymerisation. With many years of research and development, we have products that perform to the absolute highest standards.

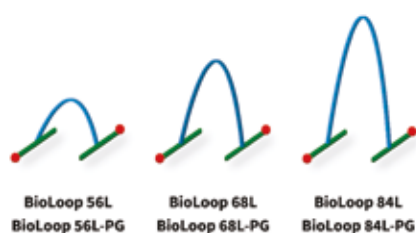
Our company philosophy is to continue to develop advanced products to help the formulator bridge the demands of modern requirements. Our latest BioLoop technology is both new and novel, helping to offer the formulator excellent sustainability profiling.

For many years we have been exploring the concept of engineering new surfactants using novel bio-based technologies. Sustainable products from renewable sources have been around for many years, but the majority have limited functionality in terms of performance compared to synthetic counterparts. Our remit was to develop a range of bio-based products that offer comparable performance against synthetic products across many applications.

## The next generation of green surfactants

The new range of bio-based surfactants contain components that are from renewable sources. Unlike many bio-based surfactants, these products offer excellent surfactant properties and are ideal for green alternatives to conventional, synthetic nonionics, such as alcohol ethoxylates. The BioLoop has two soybean-hydrophobic sections that link together by a hydrophilic loop of polyethylene glycol derived from molasses. Unlike palm-based surfactants, the BioLoops contain soybean oil, a great sustainable source.

### Simplified structure of the BioLoop surfactants



Increase in hydrophilic nature

### Key Features

- Based on BioLoop technology
- Bio-based
- 100% renewable
- Ultra-mild
- No skin or eye irritancy
- Low ecotoxicity
- Biodegradable
- Good detergency
- A green alternative to alcohol ethoxylates

### PG (Pure Grade) v Normal Grade

The normal grade of BioLoop surfactants, are aimed at standard industrial-based processes in which clarity in an aqueous medium isn't necessary. The PG versions that denotes our purified grades, are aimed at industries in which clarity in aqueous mediums is essential.

### Typical Applications

#### Normal Grades

Oils and Lubricants  
Emulsion Polymers  
Agrochemical Additives  
Textiles Auxiliaries  
Hand and Floor Wipes

#### PG Versions

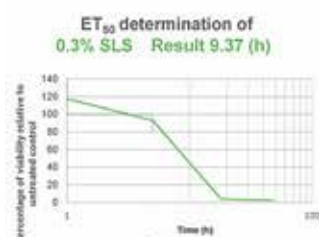
Personal Care  
Cosmetics  
Household Products

### Mildness Studies

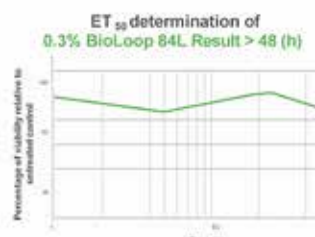
#### The ET50 Test Method

The in vitro test was successfully adapted from the widely used ET50 method using human reconstructed skin models. Formulations are applied to the skin model surface for defined time points, followed by the determination of any damage to the skin cells, using an indicator of intracellular metabolism. Test results express the ET50 value - the time taken for viability to drop to 50% of the untreated control. The results indicate that the BioLoops, in this instance BioLoop 84L, gave a result that showed extreme mildness.

#### A Conventional Surfactant - Sodium Lauryl Sulphate



#### A BioLoop Surfactant



[sales.enquiry@lankem.com](mailto:sales.enquiry@lankem.com)  
[www.lankem.com](http://www.lankem.com)