

# EKÖMUL XTND 90 B

## FUNCTIONAL DISTILLED MONOGLYCERIDES



Distilled monoglycerides (DMGs) are the most commonly used emulsifiers in bakery applications, primarily due to their effective performance which depends on their efficient dispersal during the dough preparation stage. The dispersibility of DMGs in these applications hinges on a balance between particle size and the degree of unsaturation. Better dispersion during dough kneading enhances their functionality.

The degree of unsaturation leads to a lower melting point, posing challenges in high-temperature environments where the product may become sticky, akin to typical water-dispersible DMGs. This stickiness can affect powder flowability and, consequently, the dispersibility properties, thereby negatively impacting overall performance.

**Ekömul XTND 90 B** addresses these challenges by maintaining a degree of unsaturation conducive to good dispersibility properties, without introducing trans fats. This design helps overcome issues with stickiness and powder flowability.



Winner of  
Frost & Sullivan's  
2016 Best Practices Award  
Entrepreneurial Company  
of the Year

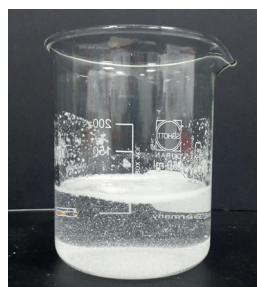


Winner of  
Frost & Sullivan's  
2018 Best Practices Award  
Food Ingredients  
Company of the Year

### Greater Dispersibility in Water



**Ekömul XTND 90 B**  
Iodine Value:  
9 - 13g I<sub>2</sub>/100g

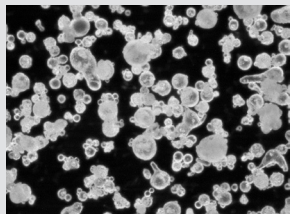
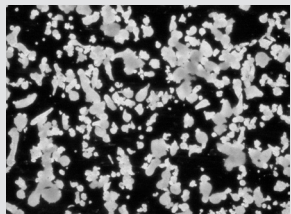
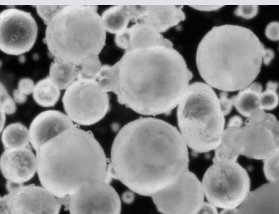


**Ekömul MG 95 HP**  
Iodine Value:  
Max 2 g I<sub>2</sub>/100g

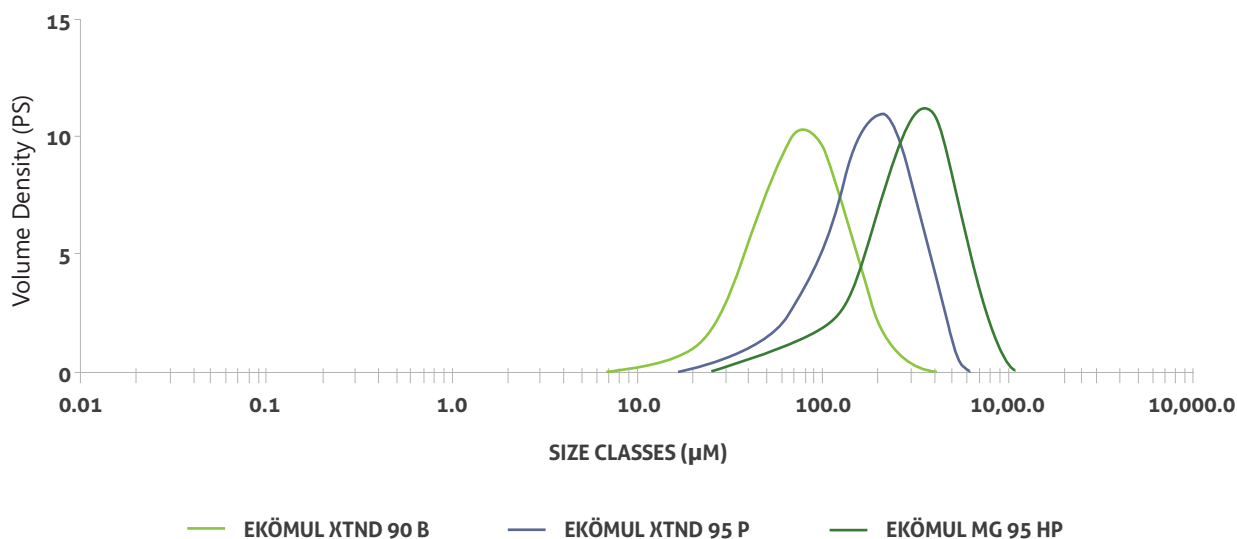
*Note: 1% emulsifier  
in distilled water at  
ambient condition*

### Chemical Specifications and Particle Size Distribution

Comparison of the chemical specifications of distilled monoglycerides commonly used in bakery applications:

Parameters	Ekömul XTND 95 P	Ekömul XTND 90 B	Ekömul MG 95 HP
Total Monoglycerides (%)	min. 95	min. 90	min. 95
Acid Value (mg KOH/g)	max. 3	max. 3	max. 3
Iodine Value (g I <sub>2</sub> /100g)	18 - 26	9 - 13	max. 2
Melting Point (°C)	approx. 60	60 - 65	approx. 65
Shelf Life (months)	18	18	24
Packaging	20kg carton	15kg carton	25kg bag
Average Particle Size (µm)	185	85	300
Particle Size <i>*The images are magnified 40 times from the actual size</i>			

Particle size distribution of the distilled monoglycerides commonly used in bakery applications :



### Improved Powder Quality

The powder hand rub test is employed to evaluate the dispersibility and flow characteristics of **Ekömul XTND 90 B**. This practical test helps determine whether the powder will mix evenly, flow smoothly, or clump, thereby

assessing the risk of blockages or inconsistent feeding — factors that can slow down production lines and increase downtime.



**Mid IV DMG**  
Stuck together, forming aggregates, indicating risk of clumping



**Ekömul XTND 90 B**  
Smeared onto palm, indicating good dispersibility and free-flowing properties

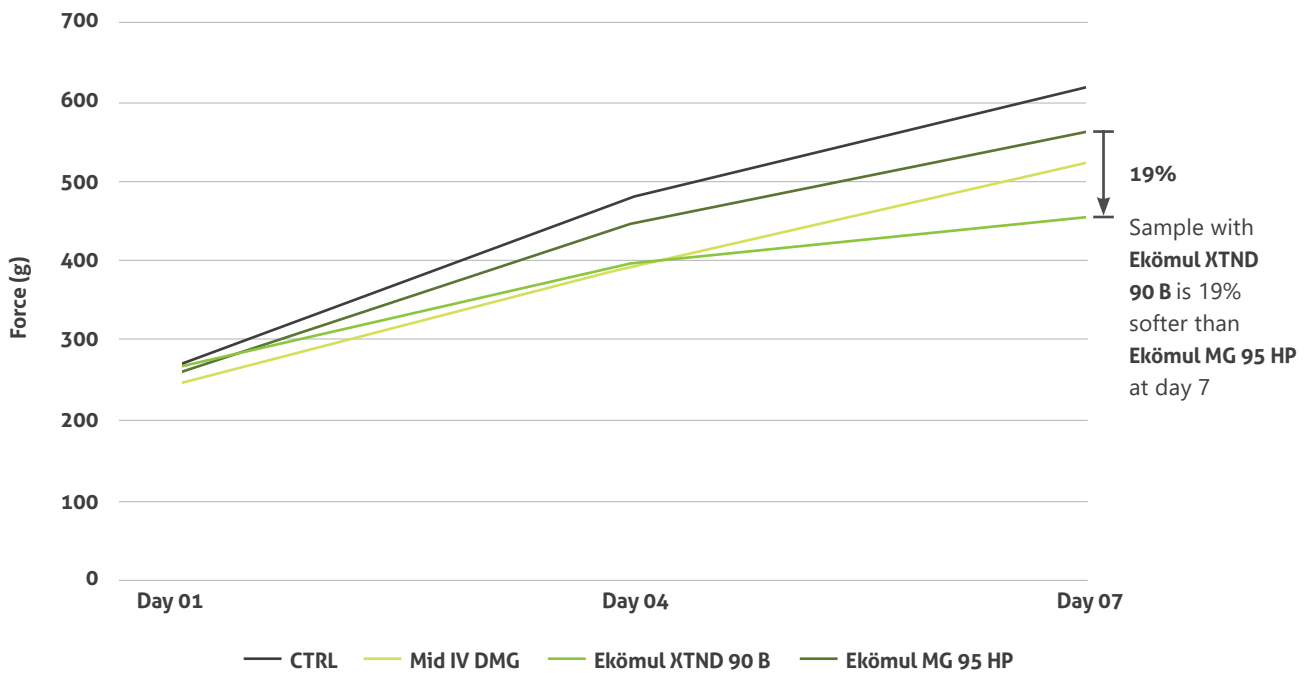


**Ekömul MG 95 HP**  
Remained intact, indicating good free-flowing properties

### Superior Crumb Softening

With its excellent dispersibility, **Ekömul XTND 90 B** showcases superior functionality, such as imparting outstanding crumb-softening qualities. By the end of the

evaluation period, **Ekömul XTND 90 B** demonstrated the best crumb-softening effect among all the samples tested



**Notes:**

- Test conducted with white sandwich bread recipe added with 0.3% DMG
- Test method: AACC Standard Method 74-09 Bread Firmness Test; using Texture Analyser TA.XT PLUS
- The higher the reading, the firmer the bread

## Summary

**Ekömul XTND 90 B** offers a superior solution for bakery applications by addressing the common challenges associated with typical water dispersible distilled monoglycerides (DMGs), such as stickiness and poor powder flowability in high-temperature environments.

- Its carefully balanced degree of unsaturation ensures excellent dispersibility without introducing trans fats, leading to enhanced performance during dough preparation.
- Comparative tests demonstrate that **Ekömul XTND 90 B** provides the best crumb-softening effect among the products tested, making it an ideal choice for improving the quality and shelf-life of bakery products

### MANUFACTURING SITE

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