



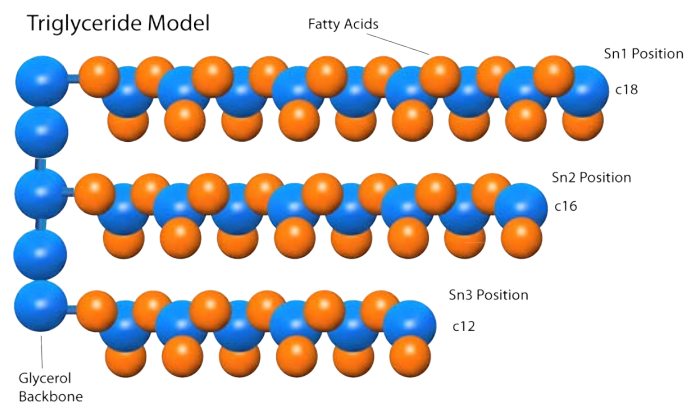
UltraBlends

Enzymatic Solutions

Utilizing a unique enzymatic process, Bunge Oils brings you a new line of shortenings and oils. These products eliminate trans fat and optimize saturated fats, while delivering superior functionality, great taste and the quality you and your customers demand.

What is Enzymatic Interesterification?

Shortenings, margarines and oils are comprised of building blocks known as triglycerides. Triglycerides are either liquid or solid at room temperature. Enzymatic Interesterification, the unique process by which Bunge produces UltraBlends Enzymatic Solutions, is a proprietary process of rearranging the fatty acids to provide structure and functionality at room temperature.



In Bunge's proprietary process, the oil blend flows through a fixed bed system to achieve optimal interesterification. This interesterification "cartridge" consists of an oil purification bed and an enzyme bed. The oil purification bed removes impurities from the oil blend so that the enzyme activity can be maintained at its highest performance. The enzyme bed allows for the enzymatic interesterification of the oil blend as the blend passes through the bed.

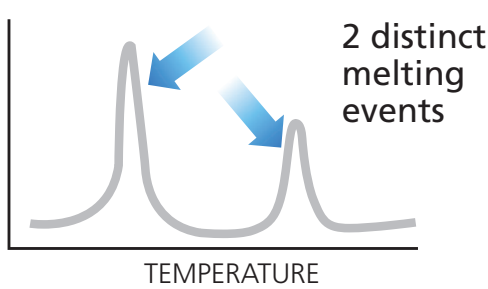
The product exiting the system has achieved the optimal interesterification specified by the Bunge product designer. By utilizing these fixed bed or "cartridge" systems, Bunge is able to maximize enzyme performance and product consistency. When the performance of a "cartridge" begins to decrease, a replacement is brought on-line to maintain highest levels of consistency in finished products.

Recommended for the following applications:

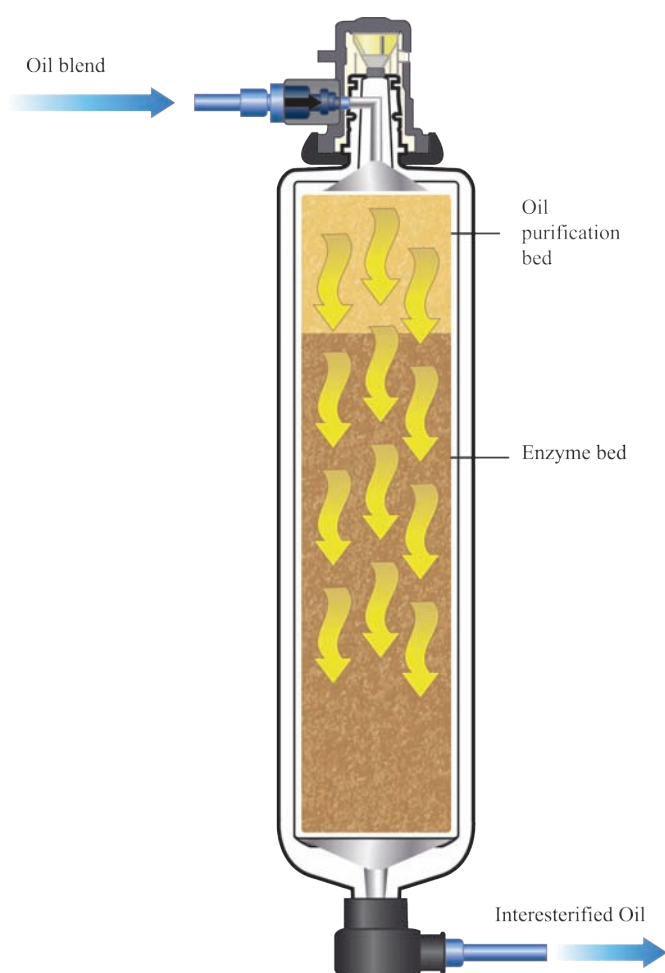
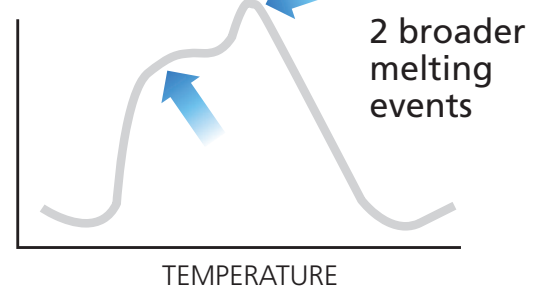
Cookies, Crackers, Biscuits, Dairy Fat Replacers, Pie Crust, Popcorn and Flat Bread/Tortillas



Physical Blending



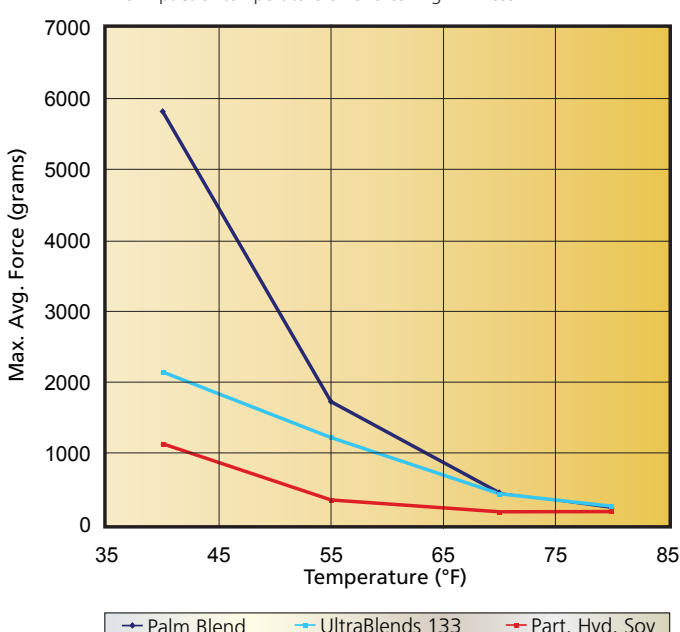
Interesterification



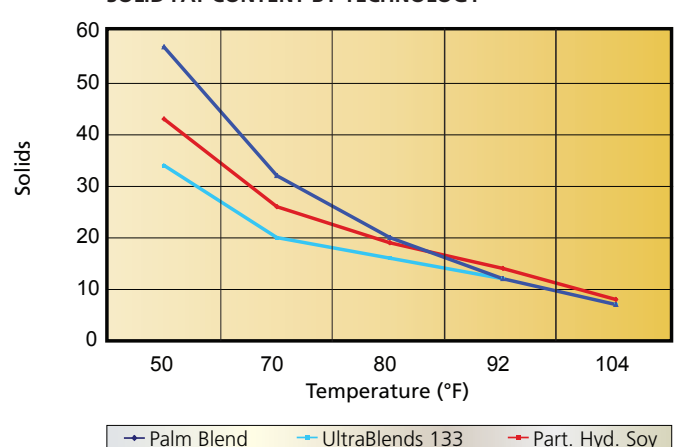
Features and Benefits

- Ability to eliminate trans fat and optimize saturated fat** content while delivering a wider plasticity range
- Less processing and no harmful by-products** create a more sustainable, green process
- Made with domestically sourced soybean oil** offering the opportunity to hedge oil with better risk management
- Elimination of trans fat, lowered saturated fat, wide plasticity range and suitable year-round** use make UltraBlends a great alternative to traditional hydrogenated shortenings and palm based products
- A more consistent SFC Curve** creates less variability in firmness of the dough, especially beneficial for machining processes

PLASTICITY RANGE
The impact of temperature on shortening firmness



SOLID FAT CONTENT BY TECHNOLOGY



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