

EMULPALS® SERIES

Cake mix emulsifiers

Plant-based, powdered, versatile, and sustainable
For craft bakers and retail mixes



Palsgaard®



We turn challenges into tastiness

Whether you are looking to create a classical, fluffy sponge or a gluten-free, sugar-free, vegan or microwavable recipe, we have solutions for your cake mix needs. With the **Emulpals®** series of activated cake emulsifiers, you can meet the specific demands of modern consumers and still create products they'll want to sink their teeth into.

Perfect for pre-mixes

Emulpals® activated cake emulsifiers are custom designed for the all-in method and ensure fast production with less hassle and lower costs. As a powdered ingredient, the series offers several benefits:

Simplicity: No pre-hydration or pre-emulsification is needed, so powdered emulsifiers reduce the number of production stages

Better-for-you: Powdered emulsifiers enable a switch from saturated or trans-fats to unsaturated liquid oils

Speed: Powdered emulsifiers act very rapidly, enabling manufacturers to accelerate output

Versatility: **Emulpals®** can be used in many different types of cakes showing excellent tolerance to difficult ingredients, production temperatures and whipping times

Quality: **Emulpals®** delivers high aeration and softness, resulting in a uniform cake crumb and a smooth cake surface

We'll test it!

Great results come from close collaboration with our customers. Our global application centres are where we'll help you develop your new recipes with a range of highly advanced equipment. We offer theoretical and practical support which takes its starting point in your specific set up and working conditions. In this way, implementing our products into your recipes becomes an easy task.



Let's get technical

Activated emulsifiers create instant results

The **Emulpals**® series consists of activated emulsifiers. They are produced in a highly sophisticated extrusion process where emulsifiers are placed on the surface of tiny starch particles. The effects on the final cake are remarkable:

- Instant functionality in the batter
 - no pre-hydration or preparatory steps needed
- Fast uptake and incorporation of air into the cake batter
- High aeration and softness, uniform cake crumb and a smooth cake surface
- Stable performance batch-to-batch
- Superior cake quality

Want a new kind of cake? Just change the dosage!

Emulpals® emulsifiers are carried on rice starch, which doesn't add any colour to the finished cake. **Emulpals**® stands out in its exceptionally stable performance over a variable dosage range, which means you can create a variety of cake types with just one emulsifier. Simply change the dosage and recipe components, and you can make fluffy and light cakes, dense and moist cakes, cakes with various crumb structures, or cakes with cocoa or high amounts of eggs and oil.

The truly lean label cake emulsifiers

The **Emulpals**® range has a truly lean label, making it easy for you to use.

All-vegetable

Non-trans

Non-GMO

Gluten-free

Contains down to one emulsifier and a natural carrier

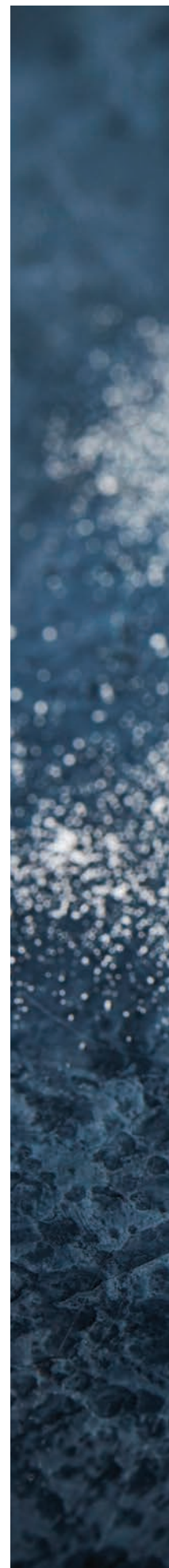
Sugar-free

Alcohol-free

Allergen-free

Kosher/Halal-certified

RSPO SG-certified





Crafted for the needs of craft bakers

Emulpals® is the optimum solution for cake mixes for craft bakers and the food service industry. **Emulpals®** guarantees a great and uniform end-result, even when your cake mixes have a long list of varying ingredients, have long storage times, or struggle with difficult storage conditions. We recognize that easy preparation, consistent performance, and trustworthy declarations are of paramount importance, and **Emulpals®** helps you achieve it all with easier handling.





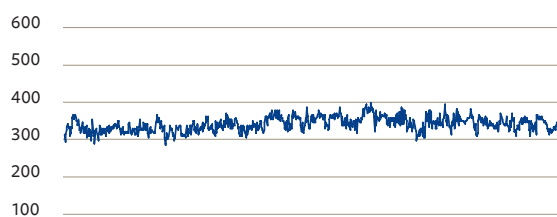
Stable performance guaranteed

Our customers love the stable performance of **Emulpals®**, which is secured by using a practical aeration and baking control test (ABC test) under very standardised conditions. Our unique method maximizes the reproducibility and validity of the tests and makes sure **Emulpals®** is tested in a realistic and extensive way. We always test it in real cakes and all our batches are tested for functional performance. That's why we can guarantee high functionality and stable performance in each delivery.

Make a healthier choice

Emulpals® is completely vegetable-based and free of allergens, trans-fats, sugar, and gluten, which means you can easily create recipes suitable for the modern, health-conscious consumer. In fact, **Emulpals®** helps you create healthier cakes, as the emulsifier stabilises high amounts of liquid oil in both aerated and non-aerated cakes – and you can switch easily from saturated to unsaturated oils. The result is of course still delicious, soft and moist cakes that consumers can enjoy with a cleaner conscience.

Batter density (g/litre)



Time frame - 2 years

The test results from 867 batches of **Emulpals® 110** show that the emulsifier has an excellent batch-to-batch stability.

Perfect
for retail mixes





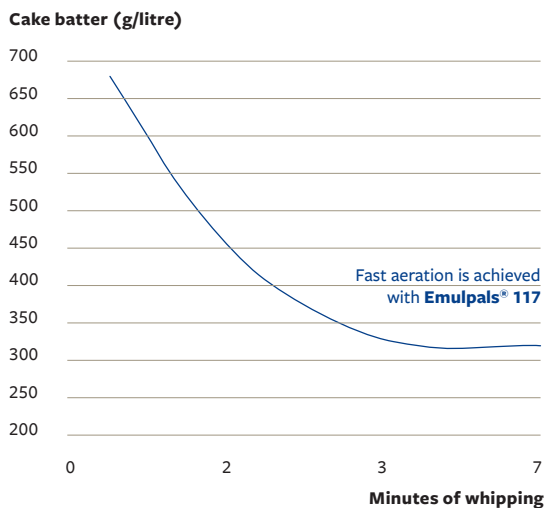
With retail cakes mixes, the end result is in the hands of the consumer. That means your cake mix needs to stand the test of tolerance and perform every time to become a household favourite. With **Emulpals®** in the mix, variations in storage conditions, raw materials, and mixing methods make less of a difference, and consumers get an end result that exceeds expectations and lets them focus on that final creative touch.

Ready for any climate

A cake batter can react very differently when prepared at 20°C or 30°C, but with **Emulpals®**, your mix will always produce the desired cake quality despite very different climatic conditions.

Speedy aeration guaranteed

An effective emulsifier for a retail mix needs to be fast reacting, allowing for maximum incorporation of air at a very short whipping time. The whipping curve below illustrates the ability of **Emulpals®** to incorporate air in the batter very quickly – after just two minutes of whipping there is excellent aeration. **Emulpals®** is highly efficient and guarantees excellent performance both when using short whipping times and when using inefficient whipping methods.



Success in the microwave

Microwave cakes are becoming increasingly popular with consumers around the world, and it is possible to create cakes with traditional ingredients that resemble oven-baked products. However, making a retail mix with the same results is much more complicated.

As microwave cakes are cooked rather than baked, creating a mix that will deliver is not easy. Often, the microwave cake will lack the consistency and crumb structure of a real cake and dry out as soon as it cools down, leaving consumers disappointed by the result.

To overcome these challenges, our application technologists have developed a series of remarkable recipes that feature genuine cake-style consistency and which will remain moist for more than 24 hours. The recipes benefit from the high tolerance, hydration, and fast dispersion of **Emulpals®**, and they serve as excellent starting points for your own, customised microwave mixes.



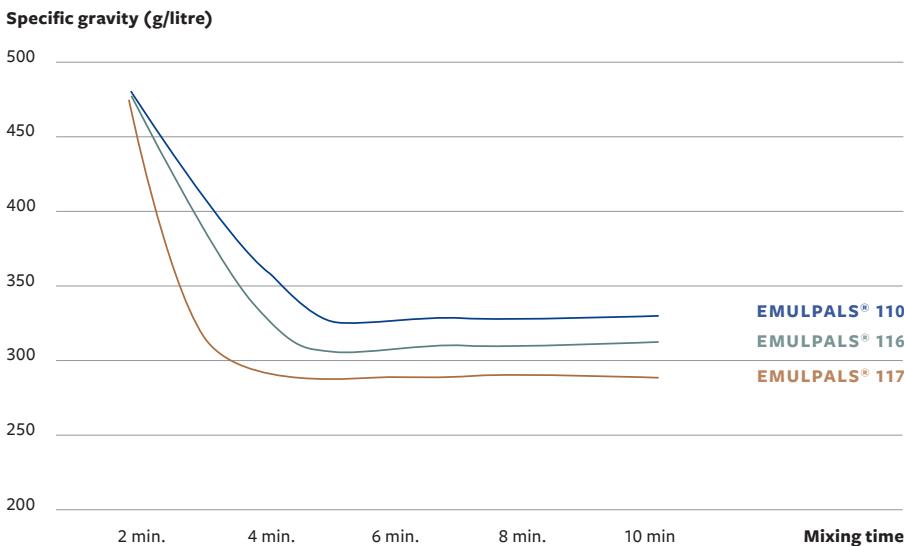
Our best-sellers

The broad **Emulpals®** series has a proven track record and has made Palsgaard a global market-leader in powdered, whipping-active cake emulsifiers. Our three best-sellers below each have their own benefits, and your unique challenges determine which one is the perfect match for you.

All three variants are suitable for a variety of cakes, including gluten-free, sugar-free, vegan, egg-less, dairy-free, non-PHO, low-fat or zero trans-fats recipes.

EMULPALS® 110	EMULPALS® 116	EMULPALS® 117
<p>HIGH TOLERANCE</p> <ul style="list-style-type: none"> • Medium fast acting emulsifier with an excellent tolerance towards long whipping times • Ensures a baked product with a fine and regular crumb structure and a high volume • Highly tolerant towards high and elevated storage temperatures 	<p>HIGH EFFICIENCY</p> <ul style="list-style-type: none"> • High speed emulsifier – shows excellent results after just 4 minutes of whipping • Highly efficient emulsifier – also at very low dosages • High aeration and softness • Uniform cake crumb and a smooth cake surface • Soy-free 	<p>HIGH SPEED</p> <ul style="list-style-type: none"> • High speed emulsifier – shows excellent results after just 2 minutes of whipping • Excellent tolerance to difficult ingredients, temperatures and whipping times • Highly suitable for premixes for microwave cakes

Whipping profiles



Innovation starts with experts


Take advantage of our unique insights into consumer trends and specific local requirements, and choose Palsgaard for your next innovative project. Our experienced food technologists are experts at solving challenges within shelf-life requirements, batter temperature, climate and altitude challenges, equipment limitations, or ingredient availability – and they are happy to share their know-how. With application centres in Denmark, Brazil, Mexico, Singapore, China, India and Türkiye, help is never far away.

Choose ingredients that do good

Palsgaard is committed to acting responsibly for the good of our planet, consumers, the local communities we are a part of, and our employees. Consumers are also increasingly conscious of environmental challenges and other CSR-related topics, and all products in the **Emulpals® series** live up to our high standards for sustainability.

- Full product range available as RSPO SG-certified or made from non-palm sources
- Produced with a deep focus on energy consumption and CO₂-emissions
- Handled by a responsible supply chain that lives up to all international standards

To learn more about our efforts within CSR, please visit www.palsgaard.com/CSR



Bringing good things together for over a century

The modern food emulsifier was invented by the founder of Palsgaard, Einar Viggo Schou, in 1917. Since then, we have never stopped developing and improving our products, and it is part of our DNA to keep developing yours. Bringing together your unique challenges and our drive for perfection is the recipe for a successful collaboration, and for great products that consumers love.

We also bring together the know-how of a century with a deep sense of responsibility for future generations. That's why we have a deep focus on responsible resource consumption and why we go to great lengths to live up to the relevant UN Sustainable Development Goals.

Learn more about our heritage and values at

palsgaard.com

Palsgaard[®]
♥ Heart working people