



Palsgaard® AMP 4448

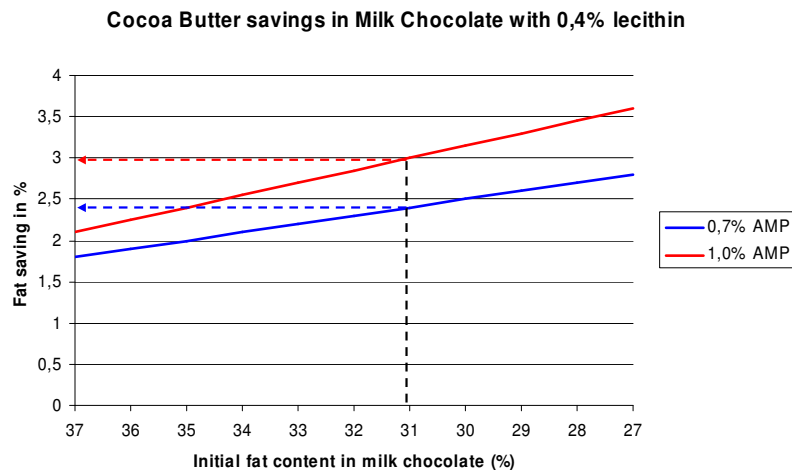
Product Profile

Product Type: Palsgaard® AMP 4448 is an Ammonium Phosphatide (AMP) which is specially developed for chocolate and compound applications.

Application Areas: Palsgaard® AMP 4448 is specially designed to reduce the Casson plastic viscosity and yield value in chocolate- and compound products, and is the most efficient product in the market.

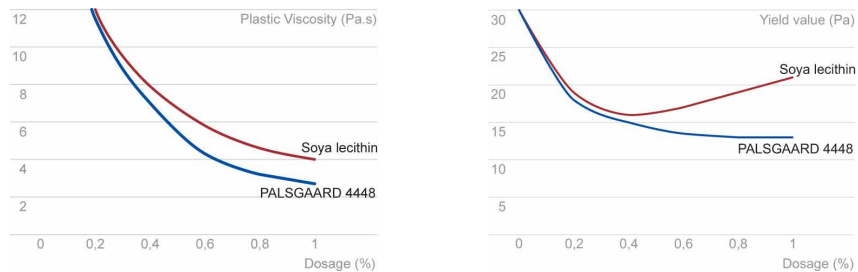
Functional Properties: Palsgaard® AMP 4448 is specially designed to make an accurate reduction of the Casson plastic viscosity and yield value in such a way that an efficient replacement of fat is achieved.
The functional components of Palsgaard® AMP 4448 are concentrated which result in a viscosity reduction stronger than known from standard lecithin.
In addition to this Palsgaard® AMP 4448 shows no increase in yield value at higher dosages which opens up for additional fat reductions.

The graph below shows the potential cocoa butter savings in a milk chocolate when changing from lecithin to Palsgaard® AMP 4448.



As seen in the examples shown: In a milk chocolate with an addition of 0,4% lecithin and a total fat content of 31% there is a potential saving of almost 2.5% cocoa butter when changing to 0,7% Palsgaard® AMP 4448. A cocoa butter saving that will be increased to 3 % if adding 1 % Palsgaard® AMP 4448. Both examples will provide considerable cost savings without changing the rheological properties of the chocolate

Figures below show the effect of Palsgaard® AMP 4448 on plastic viscosity and yield value compared to a standard soya lecithin.



As seen from the graphs the use of Palsgaard® AMP 4448 makes it possible to use high dosage with a remarkable good result.

The functionality of Palsgaard® AMP 4448 is carefully controlled on batch level which always ensures a uniform and high functionality which is documented on the certificate of analysis.

Palsgaard® AMP 4448 is based on non-hydrogenated rape seed oil, is non-allergenic and non-GMO. The physical form is liquid which makes it easy to handle and dose at ambient temperature. As Palsgaard® AMP 4448 is liquid and consists of different fractions, it should be well stirred before use.

The unique production process of Palsgaard® AMP 4448 has been designed in such a way, that the product adds no taste to the finished product. This is crucial when making the fine tasting chocolate products loved by the consumers.

The main benefits from Palsgaard® AMP 4448 are as follows:

- Uniform
- Documented functionality – VRP-Index - see below
- Cost reduction
- Smooth production
- Fat reduction - cost reduction – low fat
- Liquid and easy to dose – no heating necessary
- Synergy with lecithin
- Synergy with PGPR
- No allergens
- Non GMO

The Palsgaard QA model Measuring VRP Index

Palsgaard® AMP 4448 (E 442) is described by a number of chemical values which is shown in the data sheet. These values ensure that the product is ammonium phosphatide according to the legislation. In addition to this, Palsgaard A/S is measuring the actual functionality of the product in chocolate, which is our guarantee that the physical functionality of the delivered batches is normal, satisfactory and with a unique batch-to-batch stability.

Method overview - Viscosity Reducing Power Index (VRP Index).

Equipment: Haake RotoVisco 1 – spindle Z38, Speed: 0.54 [1/s]

Test milk chocolate based on sugar, cocoa mass, cocoa butter and milk solids and is manufactured and stored in small test portions and kept for analysis..

A Palsgaard[®] AMP 4448 batch is carefully selected and used as a standard when analysing the various batches of Palsgaard[®] AMP 4448. As the functionality of Palsgaard[®] AMP 4448 is very stable and will not change over time the same standard is typically used for 1 year at a time.

The standard AMP is measured and the result is defined as index 100. The various batch samples are then measured and compared to the standard as shown below:

Calculation:

$$\frac{\text{Viscosity test batch}}{\text{Viscosity Standard}} \times 100 = \text{Viscosity Index}$$

Viscosity Index values lower than 100 means higher functionality.

As standard Palsgaard A/S will provide the Viscosity Index on the COA as the most important parameter showing a high and consistent quality and functionality of our product.

For more detailed description on how to measure the Viscosity Index please contact Palsgaard A/S – Bakery and Confectionery Group.

Dosage:

Typical 0.4 - 1%

Depends on the requested functionality and the legislation

Additional inf.

To get your own cost-in-use calculation with Palsgaard[®] AMP 4448 or additional technical information, please visit www.palsgaard.com to locate our local Palsgaard office.