



## Palsgaard® AMP 4455

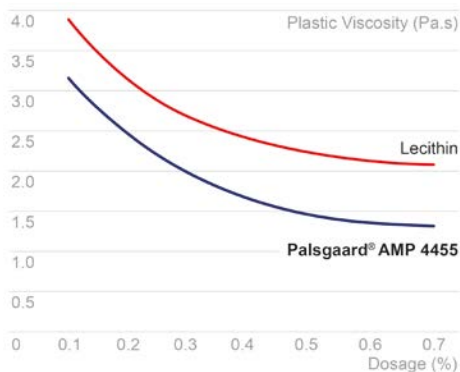
## Product Profile

**Product Type:** Palsgaard® AMP 4455 is an Ammonium Phosphatide (AMP) which is specially developed for chocolate and compound applications.

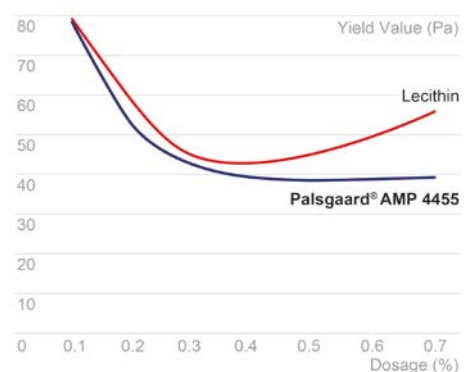
**Application Areas:** Palsgaard® AMP 4455 is specially designed to reduce the Casson plastic viscosity and yield value in chocolate- and compound products, and represents a new generation of very efficient Ammonium Phosphatides.

**Functional Properties:** Palsgaard® AMP 4455 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 and/or lecithin is achieved. The functional components of Palsgaard® AMP 4455 are highly concentrated resulting in a viscosity reduction by far stronger than the one known from standard lecithin. In fact Palsgaard® AMP 4455 can replace lecithin in dosages down to 40% of the lecithin dosage. In addition to this Palsgaard® AMP 4455 shows no increase in yield value at higher dosages which opens up for additional fat reductions.

Figures below show the effect of Palsgaard® AMP 4455 on plastic viscosity and yield value compared to a standard soya lecithin.



Palsgaard® AMP 4455 is just as easy to use as lecithin, but outperforms it in reducing the chocolate's plastic viscosity – using as little as 40 percent of the normally applied dosage



Using Palsgaard® AMP 4455 means no undesired increase in yield value (thickening effect) at higher dosage levels which enables efficient manufacturing of very low fat chocolates.

As seen from the graphs the use of Palsgaard® AMP 4455 makes it possible to use high dosage with a remarkable good result.

The functionality of Palsgaard® AMP 4455 is carefully controlled on batch level which always ensures a uniform and high functionality which is documented on the certificate of analysis.

Identification: 00445501-ALL-E-PP

Palsgaard A/S – Palsgaardvej 10 – DK-7130 Juelsminde – Denmark – Phone: +45 76 82 76 82 – E-mail: [Direct@palsgaard.dk](mailto:Direct@palsgaard.dk) – Fax: +45 76 82 76 83

The product is tested and recommended for use in mentioned application only. The information given is, to the best of our knowledge, reliable. However, no guarantees are given, not even in case of negligence on the part of Palsgaard A/S, and users of our products, are recommended and advised to conduct their own trials to determine whether our products are suitable for the user's specific purposes. In case of delivery of defective products the user is only entitled to order a new delivery. Palsgaard A/S assumes no guarantee against patent infringement, liabilities or risks involved from the use of this product or information given.

Palsgaard® AMP 4455 is based on fully refined and non-hydrogenated sunflower oil, and therefore non-allergenic and non-GMO. The physical form is liquid which makes it easy to handle and dose at ambient or slightly elevated temperatures.

The unique production process of Palsgaard® AMP 4455 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 4455 are as follows:

- Uniform
- Documented functionality – VRP-Index - see below
- Cost reduction
- Smooth production
- Fat reduction - cost reduction – low fat
- Outperforms lecithin
- Works well with PGPR
- No allergens
- Non GMO

#### **The Palsgaard QA model** Measuring VRP Index

Palsgaard® AMP 4455 (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 4455 batch is carefully selected and used as a standard when analysing the various batches of Palsgaard® AMP 4455. As the functionality of Palsgaard® AMP 4455 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.

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.

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**Dosage:** Typical 0.2 - 1%  
Depends on the requested functionality and the legislation

**Additional inf.** To get your own cost-in-use calculation with Palsgaard<sup>®</sup> AMP 4455 or additional technical information, please visit [www.palsgaard.com](http://www.palsgaard.com) to locate our local Palsgaard office.