

EINAR® PLANT-BASED, FOOD-GRADE POLYMER ADDITIVES

Coating additives for expandable polystyrene (EPS)



PRODUCT NAME

Einar® 501

Einar® 511

Einar® 543 and Einar® 544

APPLICATION

Anti-stat coating for EPS

Cooling time enhancer for EPS

EPS full blends of GMS/GTS/Zinc Stearate

BRINGING GOOD THINGS TOGETHER

Palsgaard®

The plant-based, food-grade coating additives for EPS

Palsgaard's **Einar**® series includes everything you'll need to create successful EPS products: Plant-based and food-grade anti-static additives and cooling time enhancers and blends of these.

We also offer all-in-one solutions complete with anti-static protection, cooling time enhancement and zinc stearate, offering a convenient way to apply EPS coatings.

Our services include full technical support based on many years in the industry of fine-sprayed glyceride esters.

KEY FEATURES

- ✓ Highly effective plant-based anti-static additives and cooling time enhancers for the EPS process
- ✓ High-quality fine-particle-sized glyceride esters of fatty acid esters from vegetable oils
- ✓ Custom-designed for EPS applications
- ✓ Worldwide regulatory approval for food-contact applications

KEY BENEFITS

- ✓ Excellent anti-static protection via coating
- ✓ Ready-to-use coating blends
- ✓ Fine powders with high coating efficiency
- ✓ Can be used for various EPS bead sizes by adjusting concentration
- ✓ Suitable for both EPS and XPS beads
- ✓ Consultancy and technical support available from our applications team

Einar® 501 for EPS
anti-stat coating

Einar® 501 is an efficient vegetable-based GMS anti-stat that will help improve flow properties of EPS beads during storage, transportation and through the pre-expansion step as well as during screening and moulding by reduction of agglomerates and attraction to processing equipment.

Einar® 501 is a fine powder with excellent coating properties and the recommended use level is 0.1 - 0.6% depending on EPS bead size. Smaller beads require higher concentrations due to a higher specific surface area.

Einar® 501
product details

Physical/chemical properties:	monoglyceride, min.	90%
	free fatty acids, max.	1.5%
	free glycerol, max.	1%
	melting point, approx.	68°C
	particle size average	50 µm
	colour	off-white
	form at 25°C	fine powder
Storage conditions:	Should be stored in a cool and dry place in tightly closed packaging	
Packaging:	15kg / 33.1 lb net in carton with inner polyethylene bag	
Product form:	Einar® 501 comes in fine powder form	
Total shelf-life:	min. 24 months	

Einar® 511 for EPS
cooling time enhancement

Einar® 511 is a plant-based GTS cooling time enhancer which will help reduce cycle times by facilitating a faster exchange of foaming agent and air in the moulding process.

Einar® 511 is a very fine powder and has high coating efficiency and should be used at loading levels of 0.1 - 0.4% to obtain the best performance on cooling time.

Einar® 511
product details

Physical/chemical properties:	triglycerides	
	free fatty acids, max.	1%
	free glycerol, max.	1%
	melting point, approx.	60°C
	particle size average	50 µm
	colour	off-white
	form at 25°C	fine powder
Storage conditions:	Should be stored in a cool and dry place in tightly closed packaging	
Packaging:	15kg / 33.1 lb net in carton with inner polyethylene bag	
Product form:	Einar® 511 comes in fine powder form	
Total shelf-life:	min. 24 months	

Guidelines for use

The fine powder of Einar® 501 and Einar® 511 is applied to the surface of the beads, leaving a thin functional coating.

**Einar® 543 and Einar® 544:
full blends of GMS/GTS/Zinc Stearate**

Einar® 543 and **Einar® 544** are the perfect solutions for EPS producers looking to optimise their production processes and add a more sustainable profile to their products in one go. These all-in-one solutions complete with zinc stearate eliminate the need to handle several different individual products.

The complete coating formulations are ready-to-use pre-blended formulations offering easy dosing and accuracy, better and faster handling and options for additive inventory optimization.

Einar® 543 and **Einar® 544** are blends with GMS, GTS and varying zinc stearate content. It is often a matter of the producers specific processing and handling whether more lubrication in the form of a higher zinc stearate content is needed.

**Einar® 543
product details**

Physical/chemical properties:	mix of GMS/GTS/zn. st. monoglycerides 40 - 44% acid value, max. 3mg KOH/g zinc stearate, approx. 15% melting point, approx. 68°C particle size average 40 µm colour off-white form at 25 °C fine powder	
Storage conditions:	Should be stored in a cool and dry place in tightly closed packaging	
Packaging:	15kg / 33.1 lb net in carton with inner polyethylene bag	
Product form:	Einar® 543 comes in fine powder form	
Total shelf-life:	min. 24 months	

**Einar® 544
product details**

Physical/chemical properties:	mix of GMS/GTS/zn. st. monoglycerides 36 - 40% acid value, max. 3mg KOH/g zinc stearate, approx. 25% melting point, approx. 68°C particle size average 30 µm colour off-white form at 25 °C fine powder	
Storage conditions:	Should be stored in a cool and dry place in tightly closed packaging	
Packaging:	15kg / 33.1 lb net in carton with inner polyethylene bag	
Product form:	Einar® 544 comes in fine powder form	
Total shelf-life:	min. 24 months	

Guidelines for use

The fine powder of **Einar® 543** and **Einar® 544** is applied to the surface of the beads, leaving a thin functional coating.



Sustainable solutions for the polymers industry

Health and Safety

Einar® is identified as non-toxic and is not expected to cause irritation to the skin, eyes or lungs. Detailed MSDS is available on request.

Legal status and other regulatory information

Einar® 501 and Einar® 511

- are dual use additives for use in food (E471) and polymers
- comply with the purity requirements of FAO/WHO regarding food additives (JECFA)
- are manufactured in accordance with Danish- and EU regulations and under hygienic conditions
- may be used in plastic materials and articles intended to come into contact with foodstuffs in accordance with Regulation (EC) No. 10/2011 on plastic materials and articles intended to come into contact with food
- Roundtable of Sustainable Palm Oil (RSPO) certificate available on request with order
- Kosher & Halal certificates and REACH registration available on request

To find out more or to order samples of Einar® 501, Einar® 511, Einar® 543, and Einar® 544, visit polymers.palsgaard.com or contact us via polymers@palsgaard.com

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Updated February_2024