

EINAR® PLANT-BASED, FOOD-GRADE POLYMER ADDITIVES

Additive solutions for PVC



PRODUCT NAME

Einar® 601

Einar® 211

Einar® 201 and Einar® 303

APPLICATION

Anti-stat for PVC

Anti-fog for PVC

Processing aids and mould release
agents for PVC

BRINGING GOOD THINGS TOGETHER

Palsgaard®

The plant-based, food-grade solutions for PVC

PVC is a versatile thermoplastic polymer with a very wide range of potential uses, each calling for a dedicated set of additives to help achieve the desired performance.

With **Einar®** you can add a more sustainable profile to your PVC products without affecting costs or quality.

KEY FEATURES

- ✓ Highly effective replacement for anti-static ethoxylated amines and conventional anti-fog chemistries such as glycerol monooleate or sorbitan esters
- ✓ Optimised formulations of customised polyglycerol esters and distilled mono-glycerides with selected fatty acid profiles, made from vegetable oils
- ✓ Internal anti-static and anti-fog additives for PVC compounds
- ✓ Efficient performers in PVC applications
- ✓ Worldwide regulatory approval for food-contact applications
- ✓ Produced in CO₂-neutral factories

KEY BENEFITS

- ✓ Highly efficient migratory anti-static and anti-fogging protection
- ✓ Very good anti-fog performance in cling film
- ✓ Mould release and lubrication
- ✓ Can be used for various PVC grades by adjusting concentration
- ✓ Consultancy available from our applications team

Einar® 601 for anti-stat applications

The use of efficient anti-stats in PVC is important in a range of different applications as both plasticized and rigid PVC will need anti-stat protection for various uses. **Einar® 601** offers excellent anti-stat protection in PVC where it has the right migratory profile to build anti-stat protection on the polymer surface. It has shown very good results in both rigid PVC as well as in combination with plasticizers.

Recommended loading levels are 0.5 - 1.0% for most applications and may be higher in certain highly plasticized formulations.

Einar® 601 product details

Physical/chemical properties:	polyglycerol ester	
	free fatty acids, max.	3%
	free glycerol and polyglycerol, max.	7%
	colour	off-white
	form at 25°C	paste
Storage conditions:	Should be stored in a cool and dry place in tightly closed packaging	
Packaging:	180 kg/396.8 lb net in steel drum	
Product form:	Einar® 601 comes in paste form	
Total shelf-life:	min. 24 months	

Einar® 211 for anti-fog applications

Einar® 211 is an excellent performer for PVC cling film and works particularly well in cling film applications where the objective is to obtain a good and reliable performance in either a cold fog or a hot fog application. **Einar® 211** is a fast acting anti-fog and will produce clear and transparent film for an extended period of time. The recommended loading level of **Einar® 211** is 0.5 - 1.0% for cold fog applications and for hot fog the recommended loading level is 0.3 - 0.6%.

Einar® 211 product details

Physical/chemical properties:	monoglycerides, min.	90%
	free fatty acids, max.	1.5%
	free glycerol max.	1%
	colour	off-white
	form at 25°C	paste
Storage conditions:	Should be stored in a cool and dry place in tightly closed packaging	
Packaging:	180 kg steel drum	
Product form:	Einar® 211 comes in paste form	
Total shelf-life:	min. 12 months	

Guidelines for use

Einar® 601 and **Einar® 211** can be easily incorporated into a PVC compound and can be mixed well with other liquid products in a plastisized PVC formulation.

Einar® processing aids and mould release agents

Einar® 201 and **Einar® 303** will offer good lubrication properties for a range of different extrusion applications and they are primarily internal lubricants. Typical loading levels are 0.3 - 1.0%.

Einar® 201 is also a very good mould release for many PVC injection moulding applications and is typically used at loading levels of 0.3 - 0.6%.

Both products contain glycerol monostearate made from vegetable oils and are available in pellets and in powder form, with 24 months of shelf-life. The products can be supplied in 20 kg paper bags with a PE inner bag or in 500 kg anti-static PE bigbags.

Guidelines for use

Einar® 201 and **Einar® 303** can be incorporated into the PVC compound or by direct addition of the neat additive to the injection moulding or extrusion process of plastic articles and packaging.

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® 601, Einar® 211, Einar® 201, and Einar® 303

- are dual use additives for use in food (E475 and 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 food-stuffs in accordance with Regulation (EC) No. 10/2011 on plastic materials and articles intended to come into contact with food
- are FDA approved and may be used as components of articles intended for contact with food according to GRAS or TOR. Specific details available upon request.
- 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® 601, Einar® 211, Einar® 201 and Einar® 303, visit polymers.palsgaard.com or contact us via polymers@palsgaard.com

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