

Ageing modifiers and anti-static additives for PE & PP foams



PRODUCT NAME

Einar® 601

Einar® 401

Einar® 201

APPLICATION

Anti-stat for PE foams

Anti-stat for PP foams

Ageing modifier for PE & PP foams

The plant-based, food-grade solutions for PE & PP foams

Polyolefin foams are very popular and widely used packaging materials. They are resilient, return to form after compression, and provide effective cushioning and security where needed. During the manufacturing process it is very important to make evenly sized and distributed foam cells and avoid a potential foam collapse. Therefore foam stabilisers or ageing modifiers can be added. Moreover anti-static can be necessary to lower electrostatics in case of electronic packaging.

With **Einar® 601**, **Einar® 401** and **Einar® 201** you can add a renewable component to your foams while optimising quality.

KEY FEATURES

- ✓ Highly effective replacements for ethoxylated amine anti-static additives and conventional ageing modifiers
- ✓ Optimised formulations of customised polyglycerol esters and distilled mono-glycerides with selected fatty acid profiles, made from vegetable oils
- ✓ Worldwide regulatory approval for food-contact applications

KEY BENEFITS

- ✓ Highly efficient anti-static protection
- ✓ No stress cracking of electronic components
- ✓ Ensures high foam quality
- ✓ Efficient stabilisation of blowing agents, preventing foam collapse
- ✓ No worries when used in food-contact applications
- ✓ Consultancy available from our applications team

Einar® 601 and Einar® 401 for anti-stat applications in PE & PP foams

The use of efficient anti-stats in PE & PP foams is particularly important in the packaging of sensitive electronics, where static build-up may result in electrostatic discharge that will be detrimental to circuit boards and other electronic components.

Einar® 601 and **Einar® 401** are proven performers, delivering excellent anti-stat protection to PE foam even at low humidity conditions. Recommended loading levels are 0.2 - 0.5% for most applications.

Einar® 601 and **Einar® 401** have no adverse effect on foam stability. These products are 100% amine and amide-free and will not interact with ageing modifiers such as **Einar® 201**. Due to the chemistry there are no issues with stress cracking of polycarbonate when packaging materials are in direct contact with packaged electronic components.

Einar® 201 as ageing modifier for PE & PP foams

The high, consistent quality of **Einar® 201** guarantees reliable and dependable performance when PE & PP foams are conditioned after manufacture for a controlled release of excess blowing agent.

A typical loading level of **Einar® 201** when foams are produced with physical blowing agents is 0.4 - 1.5%. Loading levels in combinations with chemical blowing agents are typically 0.2 - 0.5%.

Guidelines for use

Einar® 601, **Einar® 401** and **Einar® 201** should be incorporated into the polymer matrix via liquid injection into extruder in the foam manufacturing process. **Einar® 601** and **Einar® 401** can also be added via masterbatch.

Einar® 601 product details

Physical/chemical properties:	polyglycerol ester free fatty acids, max. 3% saponification value 160-185 mg KOH/g melting point approx 50°C 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 or 25 kg/55,1 lb HDPE cans
Product form:	Einar® 601 comes in paste form
Total shelf-life:	Min. 24 months

Einar® 401 product details

Physical/chemical properties:	monoglycerides, min. 90% free fatty acids, max. 1.5% melting point approx. 65°C colour off-white form at 25°C pellets
Storage conditions:	Should be stored in a cool and dry place in tightly closed packaging
Packaging:	20 kg multiply paper bag with an inner polyethylene bag (35 bags per pallet) or 500 kg anti-static polyethylene big-bag
Product form:	Einar® 401 comes in pellet form
Total shelf-life:	Min. 24 months

Einar® 201 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 solid
Storage conditions:	Should be stored in a cool and dry place in tightly closed packaging
Packaging:	20 kg multiply paper bag with an inner polyethylene bag (35 bags per pallet) or 500 kg anti-static polyethylene big-bag
Product form:	Einar® 201 comes in both powder and pellet form
Total shelf-life:	Min. 24 months

Plant-based, food-grade solutions for the polymer industry

Health and Safety

Einar® polymer additives are safe to use, identified as non-toxic and not expected to cause irritation to the skin, eyes or lungs. They are made from renewable, plant-based material under hygienic conditions. SDS is available on request.

Legal status and other regulatory information

Einar® 601, Einar® 401 and Einar® 201

- Food contact compliance for EU, USA, Mercosur, China
Detailed information available on request

