

EINAR® PLANT-BASED, FOOD-GRADE POLYMER ADDITIVES

Anti-static additive for polyethylene film



PRODUCT NAME

Einar® 601

APPLICATION

Anti-stat for LDPE, LLDPE,
and HDPE films

Palsgaard®

The plant-based, food-grade anti-static solution for all PE film grades

Einar® 601 is a plant-based, food-grade anti-static additive custom-designed for use in LDPE, LLDPE and HDPE.

This long-lasting additive is perfect for demanding applications as it is able to match or exceed the performance of standard migratory additives while being safe enough to eat.

KEY FEATURES

- ✓ Highly effective replacement for anti-static ethoxylated amines and amides
- ✓ A custom-designed polyglycerol ester made from fatty acids, all of vegetable origin
- ✓ An internal anti-static additive for additive masterbatches based on polyethylene
- ✓ Worldwide regulatory approval for food-contact applications
- ✓ Available in paste form

KEY BENEFITS

- ✓ Prevents dust attraction to plastic articles
- ✓ Prevents electrical discharge during filling and loading of plastic packaging
- ✓ Can be used for all polyethylene grades by adjusting the dosage level
- ✓ No worries when used in food-grade applications
- ✓ No adverse effects on mechanical, optical, and barrier properties
- ✓ Enables clean and dust-free polyethylene packaging in production and final application
- ✓ Consultancy and technical evaluations available from our applications team

Einar® 601 for PE anti-stat film applications

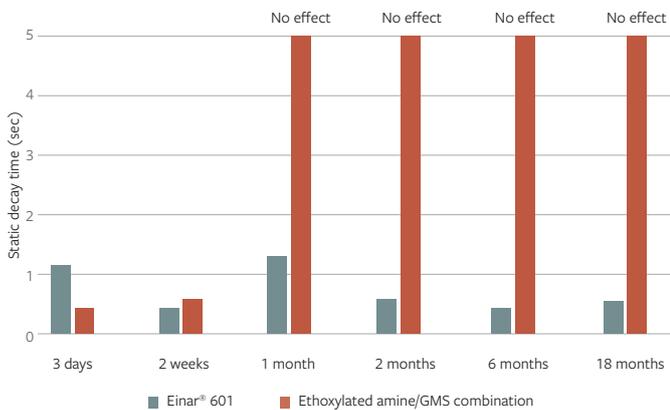
Einar® 601 offers excellent performance in a very broad range of PE applications. In most LDPE and LLDPE films it will provide a good and sufficient performance at low loading levels. In LDPE and LLDPE films the recommended loading level is 0.1 - 0.4%. In HDPE, a highly crystalline material where anti-stat migration is low, anti-stat concentrations need to be higher and the recommended loading level is 0.3 - 0.6%.

In coextruded or laminated packaging films, the anti-stat is often added to a very thin section of the entire film and therefore, the anti-stat must be a very reliable and efficient performer. **Einar® 601** will deliver the performance you need and has proven to deliver excellent performance when used in the thinner film sections of a sealing layer such as metallocene LLDPE.



ANTI-STAT PERFORMANCE IN HDPE BLOWN FILM

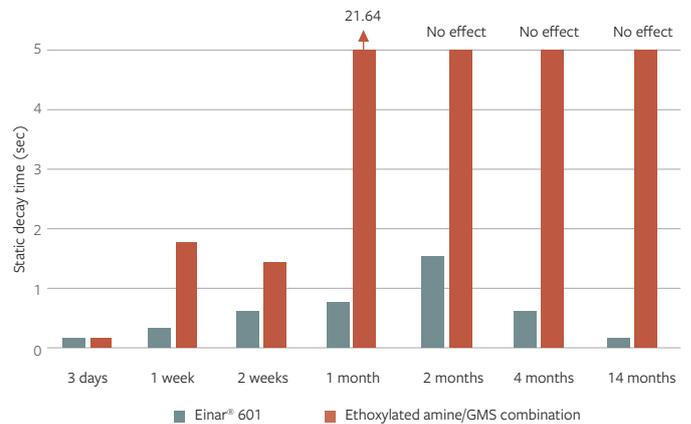
Additive concentration is 0.6%, measured at 50% RH.



Einar® 601 is an excellent performer in HDPE film with both immediate and long-term performance

ANTI-STAT PERFORMANCE IN LDPE BLOWN FILM

Additive concentration is 0.1%, measured at 50% RH.



Einar® 601 is also an excellent performer in LDPE film with both immediate and long-term performance

Enhanced performance in low humidity

Einar® 601 is a high-performing anti-stat agent also in low humidity conditions. It provides consistent static control, reducing the risks of electrostatic discharge damage to sensitive electronic components.

Reduced oiliness of packaging films

Conventional amide-based anti-static additives may leave an oily residue on the packaging film, making it difficult to handle and potentially contaminating the electronic components.

Einar® 601, on the other hand, produces less oiliness even at the same typical dosage, improving manufacturing efficiency and product quality by keeping the film clean and easy to handle. By making the switch to **Einar® 601**, manufacturers can achieve improved performance, prevent stress-cracking in polycarbonate, and minimise oiliness in their electronics packaging, particularly in low-humidity conditions.

Einar® 601 product details

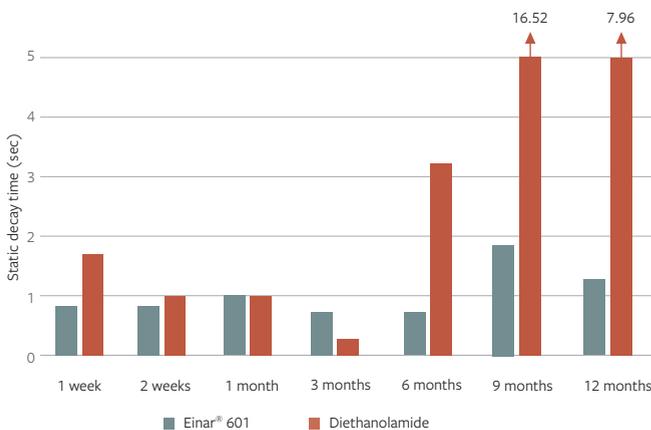
Physical/chemical properties:	polyglycerol ester free fatty acids, max. 3% saponification value 160-185 mg KOH/g colour off-white form at 25°C paste melting point approx. 50°C
Storage conditions:	Should be stored in a cool and dry place in tightly closed packaging
Packaging:	180 kg/396.8 lb net in steel drum
Product form:	Einar® 601 comes in paste form
Total shelf-life:	Min. 24 months

Guidelines for use

Einar® 601 should be incorporated into the polymer matrix via a masterbatch. The physical form of the additive requires that liquid dosing is used in order to meter the additive adequately.

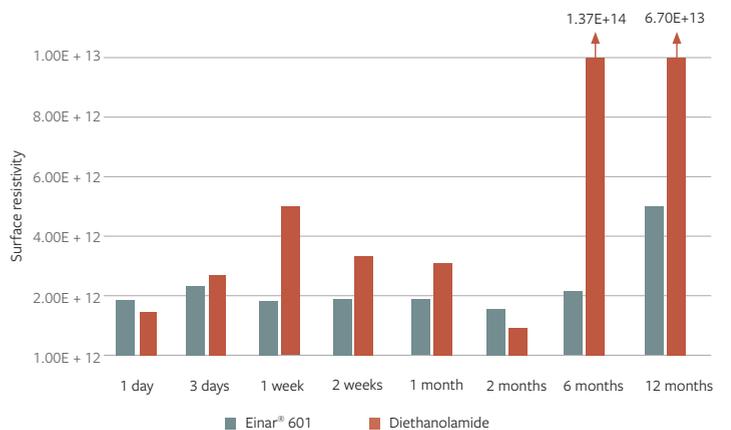
ANTI-STAT PERFORMANCE IN LDPE BLOWN FILM

Additive concentration is 0.3%, measured at 12% RH.



SURFACE RESISTIVITY IN LDPE BLOWN FILM

Additive concentration is 0.3%, measured at 12% RH.



Einar® 601 is an excellent performer in low humidity conditions



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

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

