

Anti-static additive for polypropylene (PP) films



PRODUCT NAME

Einar® 411

APPLICATION

Anti-stat for R-PP,
and H-PP

The plant-based, food-grade anti-stat solution for PP films

Einar® 411 is a plant-based, food-grade anti-static additive custom-designed for use in all PP grades. This long-lasting anti-static additive is the perfect alternative to ethoxylated amines and amides as it is able to match these while being safe enough to eat. This optimised anti-stat has been developed specifically for challenging PP film applications.

KEY FEATURES

- ✓ Highly effective replacement for anti-static ethoxylated amines and amides
- ✓ An optimised blend of mono- and diglycerides with selected fatty acid profiles, made from vegetable oils
- ✓ An internal anti-static additive for additive masterbatches based on polypropylene
- ✓ Worldwide regulatory approval for food-contact applications
- ✓ Available in pellet form

KEY BENEFITS

- ✓ Prevents dust attraction to plastic articles
- ✓ Prevents electrical discharge during filling and loading of plastic packaging
- ✓ Can be used for all polypropylene 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 polypropylene packaging in production and final application
- ✓ Consultancy and technical evaluations available from our applications team

EINAR® PLANT-BASED, FOOD-GRADE POLYMER ADDITIVES

Einar® 411 for PP film anti-stat applications

Einar® 411 offers excellent performance in a very broad range of PP applications. In most random and block copolymer films it will provide a good and sufficient performance at low loading levels. In homo polymer, a highly crystalline material where anti-stat migration is low, anti-stat concentrations need to be in the higher end of the recommended loading level of 0.1 – 0.4%.

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.

Product details

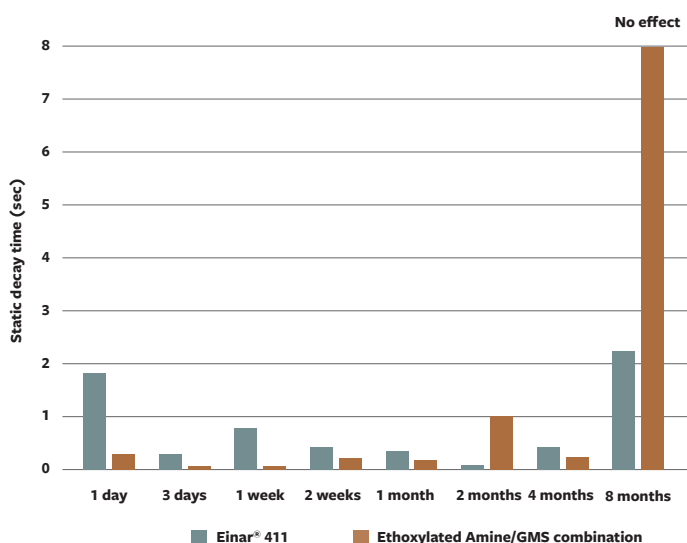
| | | |
|-------------------------------|---|--------------|
| Physical/chemical properties: | monoglycerides | min. 70% |
| | free fatty acids | max. 1.5% |
| | free glycerol | max. 1% |
| | melting point | approx. 60°C |
| | colour | white |
| | form at 25°C | pellets |
| Storage conditions: | Should 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® 411 comes in pellet form | |
| Total shelf-life: | min. 24 months | |

Guidelines for use

The product should be incorporated into the polymer matrix via a masterbatch or by direct addition at the resin manufacturer.

ANTI-STAT PERFORMANCE IN 25 µM RANDOM PP CAST FILM

Additive concentration is 0.3%, measured at 23 °C, 50% RH.



Einar® 411 is an excellent performer in PP film with both immediate and long-term performance.

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® 411

- is a dual use additive for use in food (E471) and polymers
- complies with the purity requirements of FAO/WHO regarding food additives (JECFA)
- is 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
- is GRAS according to FDA 21 CFR 184.1505, and may in accordance with FDA 21 CFR 174.5 be used as components of articles intended for 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® 411, visit polymers.palsgaard.com or contact us via polymers@palsgaard.com

BRINGING GOOD THINGS TOGETHER

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