

EINAR® PLANT-BASED, FOOD-GRADE POLYMER ADDITIVES

# Anti-fouling additive for polypropylene (PP) and polyethylene (PE)



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**PRODUCT NAME**

Einar® 981

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**APPLICATION**

Anti-fouling for PP and PE

BRINGING GOOD THINGS TOGETHER

**Palsgaard®**

# The plant-based, food-grade polymerisation additive

**Einar® 981** has been developed to remove severe concerns about the ethoxylated amine chemistry currently used and is an unquestionably safe and efficient alternative that has worldwide regulatory approval.

With its origin in food-grade renewable raw materials, it is the ideal candidate to maintain the highest possible efficiency and eliminate any regulatory concerns.

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## KEY FEATURES

- ✓ Highly effective, drop-in replacement for ethoxylated amines
- ✓ Worldwide regulatory approval for food-contact applications
- ✓ Polyglycerol ester (PGE) blend of fatty acids derived from RSPO certified palm oil
- ✓ Supplied as a clear, pumpable liquid in drums
- ✓ Produced in CO<sub>2</sub>-neutral factories

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## KEY BENEFITS

- ✓ Eliminates regulatory concerns without compromising catalyst mileage, productivity or final polymer performance
- ✓ Effectively eliminates static charges of particles during polymerisation and prevents fouling of the reactor wall and maintains the cooling efficiency of the reactor
- ✓ High efficiency at low concentrations (100-300 ppm)
- ✓ Ease of use in existing dosing systems
- ✓ Ideal in PP and PE polymerisation processes for sensitive applications, e.g. medical devices and baby food containers
- ✓ Consultancy and technical evaluations available from our applications team



Einar® 981 for PP and PE anti-fouling applications

Einar® 981 is supplied as a clear and easily pumpable liquid for use in existing dosing systems. It kills static build-up during polymerisation and prevents fouling of the reactor wall, thus helping PP and PE producers maintain the cooling efficiency of the reactor.

Building on Palsgaard’s proven chemistry of renewable anti-static polymer additives, it provides high anti-fouling efficiency at low concentration (100-300 ppm) without any negative effects on catalyst mileage, productivity or final polymer performance.

The active compound of Einar® 981 is a polyglycerol ester (PGE) blend of fatty acids derived from RSPO certified sustainable palm oil. As a non-toxic and food-contact approved anti-fouling additive, the product offers a drop-in regulatory-compliant solution to replace incumbent ethoxylated amines and can also be used as a more efficient alternative to sorbitan monooleates. This makes it an ideal process additive in the polymerisation of PP and PE materials for sensitive applications, including e.g. medical devices and baby food containers.

Einar® 981 product details

Physical/chemical properties:	Mixture of glycerol esters	
	Acid value max.	3%
	Saponification value	55-75 mg KOH/g
	colour	clear liquid
Storage conditions:	form at 25°C	liquid
	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® 981 comes in liquid form	
Total shelf-life:	min. 12 months	

Guidelines for use

Einar® 981 should be added as a liquid to the feed for the polymerisation reactor.

# 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® 981

- 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 food-stuffs 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

To find out more or to order samples of Einar® 981,  
visit [polymers.palsgaard.com](https://polymers.palsgaard.com) or contact us via [polymers@palsgaard.com](mailto:polymers@palsgaard.com)

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