# Einar® 201 The versatile plant-based polymer additive



#### **PRODUCT NAME**

Einar® 201

#### **APPLICATION**

Anti-stat for PP injection moulding

Mould release for

R-PP, H-PP, B-PP, and PE

Ageing modifier for PE and PP foam

Processing aid and lubricant for PVC

**Palsgaard®** 

# The plant-based, food-grade solution for the polymer industry

At the core of **Einar**® **201** lies a powerful combination of versatility and renewable innovation. This additive not only addresses common challenges in plastic manufacturing but also enables progress toward a resource-efficient future.

By harnessing the power of nature, **Einar**® **201** provides a range of functionalities, including anti-static properties for PP injection molding, mould release for various types of polypropylene and polyethylene, aging modification for PE and PP foam, and serving as a processing aid and lubricant for PVC.

#### **KEY FEATURES**

- Highly effective replacement for anti-static and mould release additives based on ethoxylated amines and amides
- A high-quality glycerol monostearate made from vegetable oils
- An internal anti-static and mould release additive for additive masterbatches based on polypropylene
- Especially well-suited for PP applications
- Worldwide regulatory approval for food-contact applications

#### **KEY BENEFITS**

- Excellent anti-static performance in homopolymer and random copolymers
- Excellent mould release performance across all PP and PVC grades
- Very good denesting and slip effect for stacked containers
- Efficient release of excessive blowing agents, preventing foam collapse
- No worries when used in food-contact applications
- High heat resistance and low volatility
- Efficient performer at low loading levels
- No adverse effects on mechanical, optical, and barrier properties
- Consultancy and technical evaluations available from our applications team

## Einar<sup>®</sup> 201 for anti-stat protection in PP injection moulding applications

**Einar® 201** is an excellent general purpose anti-stat for a broad range of PP injection moulding applications and will ensure a clean, dust free and attractive appearance of packaging, appliances and other household products. Recommended loading levels for homopolymer PP are 0.3 - 0.5% and for random copolymers 0.1 - 0.3%.

**Einar® 201** is available in both powder and pellet form providing options for better mixing with either powder or pelletised PP. The pellet form is preferred in many situations where a powder will be difficult to handle and transport in feeding and dosing equipment at elevated temperatures.

# Einar® 201 for mould release applications

**Einar® 201** is a very reliable general purpose mould release for PP injection moulding applications. The product can be dosed at an optimum concentration in both homopolymers, random and impact copolymers and will secure efficient release of moulded parts. **Einar® 201** has an ideal migration profile in PP that guarantees sufficient lubrication and will promote lower cycle times and continuous operation.

**Einar® 201** is also an efficient denesting additive and allows easy separation of stacked parts. Recommended loading levels for homopolymers are 0.2-0.4%, for random copolymers 0.1 - 0.2% and for impact copolymers 0.3 - 0.5%.

### ANTI-STAT PERFORMANCE IN 1 MM HOMOPOLYMER PP

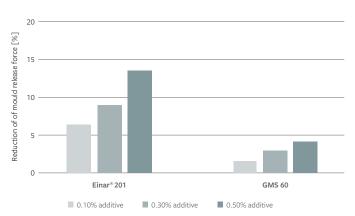
Additive concentration is 0.50%



Einar® 201 is an excellent general purpose anti-stat for PP injection moulding applications

#### MOULD RELEASE PROPERTIES IN HOMOPOLYMER PP

Results are recorded in 20 MFI homopolymer PP



Einar® 201 shows excellent performance in comparison to conventional GMS



## Einar<sup>®</sup> 201 as ageing modifier for PP and PE foams

The high consistent quality of **Einar® 201** guarantees reliable and dependable performance when the PP and PE foam is conditioned after manufacture for release of excessive 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%.

#### PVC processing aid and lubricant

**Einar® 201** will offer good lubrication properties for a range of different extrusion applications and is primarily an internal lubricant. 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%.



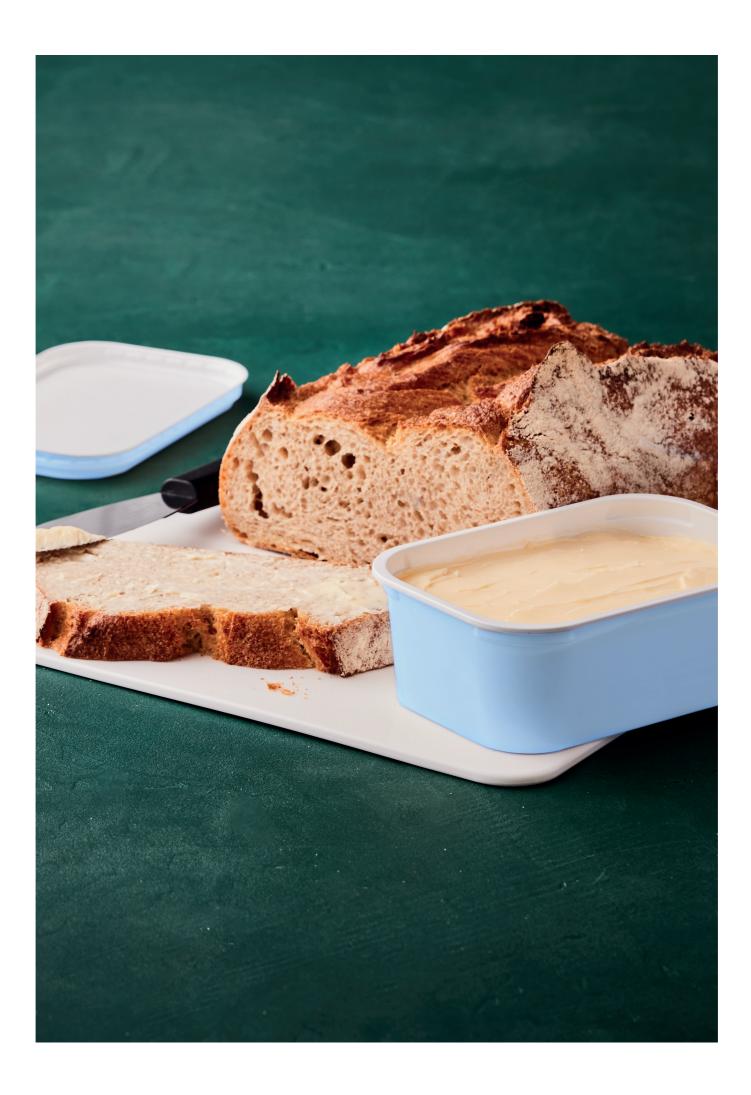
#### Einar® 201 product details

Physical/chemical	monoglycerides	min. 90%
properties:	free fatty acids	max. 1.5%
	free glycerol	max. 1%
	melting point	approx. 65°C
	colour	off-white
	form at 25°C	pellets or powder
Storage	Should be stored in a cool and dry place	
conditions:	in tightly closed packaging	
Packaging:	20 kg multiply paper bag with an inner	
	polyethylene bag (35 bags per pallet) or	
	500 kg or 800 kg anti-static polyethylene	
	big-bag	
Product form:	Einar® 201 comes in both powder and	
	pellet form	
Total shelf-life:	Min. 24 months	

#### Guidelines for use

When used as an anti-stat or mould-release additive, **Einar® 201** can be incorporated into the polymer matrix via a masterbatch or by direct addition of the neat additive to the injection moulding process of plastic articles and packaging.

When used as an ageing modifier, **Einar® 201** should be incorporated into the polymer matrix via liquid injection into the extruder in the foam manufacturing process.



# 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® 201

- Is a dual use additive for use in plastics and in food
- Complies with the purity requirements of food additives (FAO, WHO, JECFA)
- Food contact compliance for EU, USA, Mercosur, China
  Detailed information available on request

