

# ENDOZYM® Protease GF

**ENDOZYM® Protease GF is a blend of a neutral protease and a proline-specific endopeptidase for the production of gluten-free beer.**

It can also be applied for beer clarification, reducing chill haze and improving beer colloidal stability.

## PRODUCT PROPERTIES

**COMPOSITION:** A blend of a neutral protease with a proline-specific endopeptidase

**ORIGIN:** Enzymatic activities isolated from selected strains of *Bacillus subtilis* and *Aspergillus niger*.

**ACTIVITY** Proline-specific endopeptidase > 2 PPU/g  
Neutral protease > 500 PNU/g

**PHYSICAL FORM** Liquid

**COLOUR** Brown

**DENSITY** 1.18 g/ml

## APPLICATION BENEFITS

**ENDOZYM® Protease GF** is an enzyme preparation suitably formulated to enhance the colloidal stability of beer and facilitate gluten-free brewing. Its specific proteolytic activity targets the degradation of gluten and proteins involved in cold cloudiness (chill haze).

Post-aging analysis of the beer reveals improved turbidity (assessed through EBC 90° and EBC 25°) and protein stability (assessed through EBC Analytica 9.40 and 9.41).

ENDOZYM® Protease GF is ideal for beer recipes that do not exceed 20 percent high-protein malt products (such as wheat malt) or ingredients (such as unmalted wheat and barley).

## SPECIFICATIONS

<b>Total viable count</b>	< 50000 ufc/ml
<b>Coliforms</b>	< 30/ml
<b><i>E. coli</i></b>	Not detected/absent
<b>Salmonella species</b>	Not detected/absent

*For additional specifications data please refer to the Compliance Group Quality Control*

## DOSAGE & APPLICATION

Typical dosage rate between 2 to 10 ml/hl of wort.

It is recommended to add the enzyme when the cold wort is transferred to the fermenter for gluten-free beer production or during beer maturation for stability purposes.

**OPTIMAL TEMPERATURE** 10-25°C / 50-77°F

**pH RANGE** 4.5 – 7.0 (Optimal 5.0-5.5)

## PACKAGING & STORAGE

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*Please contact your local AEB customer support team for country-specific pack size availability*

Store in cool dry place <10°C / <50°F for maximum 18 months.

On opening the bottle use the product as quickly as possible and within a maximum of 4 weeks while stored as specified above. If there are any signs of spoilage during storage of an opened bottle do not use and discard the contents appropriately. If in doubt, please contact AEB Technical Service.

## COMPLIANCE

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This product complies with the recommended specifications for food grade enzymes given by the joint FAO/WHO Expert committee on Food Additives (JECFA) and the Food Chemicals Codex (FCC)

*For more information, please refer to the Compliance Data Sheet (CDS) or contact AEB Group Quality Control*

## HANDLING & SAFETY

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This is a liquid product. Once opened, store in cool dry place <10°C / 50°F.

Enzymes are proteins. Exposure may induce sensitisation and may cause allergic reactions. Protective handling equipment is recommended.

Note that some natural settling and sedimentation may occur in the product, but this will not affect its performance.

*Please refer to the Safety Data Sheet (MSDS) for further information.*

## QUALITY ASSURANCE & GMO STATUS

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This product is produced in accordance with certified quality management system ISO 9001, applying GMP, and HACCP standard.

The enzyme in this product is not produced from a Genetically Modified Microorganism (GMO).

This product is not treated with ionizing radiation.

*For more information, please refer to the Compliance Data Sheet (CDS) or contact AEB Group Quality Control*

## CONTACT US

For more information, please visit us online at [www.aeb-group.com](http://www.aeb-group.com) or email [info@aeb-group.com](mailto:info@aeb-group.com)

AEB Group is a leader in yeast, fermentation, enzymes, filtration, detergents, equipment and biotechnology for the beer, wine, beverage, and food industries. AEB has a global presence with production sites worldwide and dedicated R&D facilities with quality control laboratories.