



## ENZYME - TECHNICAL DATA SHEET

# ABV ALPHAMYLAZE FA (AFA 511)

abv Alphamylase FA is a liquid fungal alpha-amylase obtained from a selected strain of *Aspergillus oryzae* (EC 3.2.1.1). abv Alphamylase FA hydrolyzes the  $\alpha$ -1,4 glucosidic linkages in starch, producing large amounts of maltose.



## BENEFITS

- Enables a higher level of fermentable sugars in wort fermentations.
- Eliminates residual starch in wort.
- Allows control of attenuation of brewery fermentation.
- Facilitates removal of starch hazes in beer.
- Can be used for liquefaction and saccharification of gelatinized starch.
- In starch industry, it can be used for the production of high maltose syrup (45-60%).
- In the alcohol industry, it can be used in the saccharification stage.



## DOSE RATE & APPLICATION

- A typical dosage is 0.5-4ppm for carbohydrate haze removal in beer.
- 5-20ppm for correction of slow fermentation.
- 20-75ppm for improving attenuation limit.
- Can be added during fermentation to improve the attenuation limit, correct slow fermentation, and to prevent starch haze formation. Can be added in the brew house when the attenuation needs adjusting.



## SPECIFICATIONS

### PHYSICAL & CHEMICAL

#### PHYSICAL FORM

Liquid with a SG of 1.1

#### COLOR

Brown (color may vary from batch to batch)

#### ACTIVITY

standardized at 2500 FAU/g (min 2300 FAU/g)

One FAU is defined as the amount of enzyme which hydrolyzes 1g of starch per hour at pH 4.8 and 30C.

### MICROBIOLOGICAL

TOTAL VIABLE COUNT	< 50000/g
SALMONELLA SP.	absent/25g
COLIFORMS	< 30/g
STAPHYLOCOCCUS AUREUS	absent/25g
ANAEROBIC SULPHATE REDUCERS	absent/1g
ANTIBACTERIAL ACTIVITY	negative by test
MYCOTOXINS	negative by test

### HEAVY METALS

ARSENIC	< 3 mg/kg
LEAD	< 5 mg/kg
MERCURY	< 0.5 mg/kg
CADMIUM	< 0.5 mg/kg



## PACKAGING & STORAGE

abv Alphamylase FA is available in 25 kg or 1000 kg containers that should be stored in a dry cool area (max 10C) and not exposed to direct sunlight. Maintains declared activity for minimum 6 months under these conditions.



## SAFETY & HANDLING

Avoid unnecessary contact with enzyme preparation during handling. In case of spillage rinse with water. Additional information can be found in the Material Safety Data Sheet.



## CONFORMITY TO STANDARDS

abv Alphamylase FA complies with the current recommended specifications for food grade enzymes given by the Joint FAO/WHO Expert Committee on Food Additives (JECFA) and the Food Chemicals Codex (FCC).



## ADDITIONAL INFORMATION

The optimum pH is 5.0 and the optimum temperature is 50-55C. Will be completely inactivated after 10 minutes at 80C.

Calcium ions are present in the structure of the enzyme molecule and are necessary for its stability. Consequently EDTA or other calcium chelating agents can reduce the activity of the enzyme.

### CONTACT US

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