



# Catalysts

*making things happen...*

ISO 9001:2015 & FSSC 22000 Certified



# Enzyliq Super AX

## An efficient liquefaction starch

ENZYLIQ SUPER AX starch hydrolysing  $\alpha$ -amylase enzyme, specially designed for adjunct liquefaction in malt industry process in terms of cost, quality and efficiency.

ENZYLIQ SUPER AX is an endo-amylase enzyme that randomly hydrolyses  $\alpha$ -1, 4-glucosidic bonds to reduce the viscosity of gelatinized starch, and liquefy variety of adjuncts used in malt industry.

### Beneficiary Function:

- Efficient liquefaction in short time span
- No retrograded starch forms due to low temperature operational condition during mashing
- Ion exchange cost saving due to less chemical utilization and being operated on low pH
- Enables optimal, cost-effective saccharification in a variety of plant designs.
- Maximum operational flexibility ensures that your process is optimized.
- Stabilized products maintain constant activity during storage.
- Higher-activity products reduce ordering, handling, and shipping costs.

### Product Application:

The dosage requirement for liquefaction by **ENZYLIQ SUPER AX** depends upon the process, applied pH, DS, Calcium, temperature, type of raw material and reaction time, which are very important. It has shown superior performance in many different liquefaction systems with a variety of starches from different whole grains, including corn, sorghum, wheat, rice and barley.

## Product Characteristics:

Declared enzyme	Endo 1-4 Alpha Amylase
Declared activity	300 KCBU/g
Production strain	Bacillus licheniformis
Occurrence	Liquid
Appearance	Amber (Colour vary from batch to batch)
Specific gravity	1.22 – 1.26
pH	≥ 5.0
Viscosity (cps)	1 – 25

## Product dosing:

Dose 0.2 to 0.3 Kg per metric ton of dry milled starch

## Product Operating Parameters:

Temperature	90 - 95°C
pH	4.5 – 5.5
Running DS	34 ± 4 %
Ca++	20 ppm ± 15 ppm
Δp @ Jet	2 Bar (30 psig)

## Packaging:

HDPE drums 25 Kg each



## Product Storage :

Below 10°C	Minimum shelf life of 6 months
10-25°C	Best used within 3 from date of delivery

## Product Handling

- Enzymes are proteins. Inhalation of dust or aerosols may induce sensitization and may cause allergic reactions in sensitized individuals. Some enzymes may irritate the skin, eyes and mucous membranes upon prolonged contact. The product may create easily inhaled aerosols if splashed or vigorously stirred.
- Spilled product may dry out and create dust. Spilled material should be flushed away with water. Avoid splashing. Left over material may dry out and create dust.
- Wear suitable protective clothing, gloves and eye/face protection. Contaminated cloths should be properly washed.
- MSDS is supplied with the product. Follow MSDS safety instructions for more details.

## CATALYSTS BIO-TECHNOLOGIES PVT. LTD.

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