



## Product Information Sheet

# Amylase MT-3K

An *Enzyme Supplies* medium temperature  $\alpha$ -amylase for the starch, alcohol, & ethanol industries

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### INTRODUCTION

Amylase MT-3K is a medium temperature  $\alpha$ -amylase produced by submerged fermentation of *Bacillus subtilis*. The enzyme is an endo-amylase, hydrolyzing 1,4- $\alpha$ -glucosidic linkages in amylose & amylopectin at random, producing dextrans of different chain lengths & oligosaccharides. The enzyme works both on the amorphous & crystalline components of amylopectin, resulting in a rapid decrease in the viscosity of starch solutions.

### ENZYME PROPERTIES

Amylase MT-3K has an optimum pH range of 6.0-7.0 (effective range 5.5-8.0). The enzyme is also active over a broad temperature range from 30°C to 65°C, with an optimum performance at 50°C. Calcium ions can improve the thermostability of the enzyme.

### TYPICAL CHARACTERISTICS

Activity minimum 3000  $\mu$ /ml (where 1 $\mu$ /ml is defined as the amount of enzyme in 1ml enzyme solution to liquefy 1g of soluble starch / hour at pH 6.0 & 50°C)

Appearance – brown liquid

Bulk density 1.2g/ml

### APPLICATION SCOPE

Amylase MT-3K is widely used for liquefaction applications in the starch, alcohol, brewing, & ethanol industries. The enzyme is also an effective desizing agent for the textiles industry

## **PACKAGING**

Amylase MT-3K is available in bulk (1000Kg IBC's), and in 25Kg 'non-toxic' plastic barrels

## **STORAGE STABILITY**

To maintain optimum activity, Amylase MT-3K should be stored at moderate temperatures (below 25 deg C), in the original containers and with the lid closed. When stored at temperatures below 25 deg C, the activity loss will be less than 10% in 1 year. At temperatures below 10 deg C, the activity loss will be less than 10% in 2 years.

## **SAFETY AND ENZYME HANDLING**

Inhalation of aerosols from liquid enzymes should be avoided. Open in a well-ventilated environment. In case of contact with skin/eyes, promptly rinse with water for at least 15 minutes. Clean any spillages with low-pressure water hoses, avoiding the formation of aerosols. For more detailed information please refer to the Material Safety Data Sheet for this product

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