



A H M E N Z Y M E C

## PAPERZYME-AH

### Heat stable specialty alpha amylase

*Aam Enzymes*  
India's #1 Speciality Enzyme Products

#### BENEFITS

Paper industry uses alpha amylase to eventually create paper  
Alpha amylase work at very high temperature and low pH  
Alpha amylase work with low calcium or without calcium, under most condition  
High activity, thus economical in use and storage  
For increase viscosity control and flexibility  
Alpha Amylases modifies the starch of coated paper  
Treatment results in smooth and strong paper  
Conversion OR modification, is to alter the viscosity of natural starch  
Improve the overall condition of the paper  
Eco-friendly and biodegradable

#### DESCRIPTION

Paperzyme AH is heat stable specialty alpha amylase high temperature starch liquefaction enzyme to be used in starch modification for paper industry.  
Paperzyme AH is a heat stable bacterial alpha amylase enzyme preparation produced from thermophilic strain of *Bacillus species*. The enzyme will randomly hydrolyzed 1, 4 alpha-D – glucosidic linkages in gelatinized starch into soluble dextrin's and oligosaccharides. Paperzyme AH is high performance starch liquefaction enzyme.  
Due to its broad pH tolerance and low calcium requirement, pH adjustments and calcium addition can often be omitted for starch modification for paper industry.

#### PRODUCT SPECIFICATION: Liquid

Parameters	Operational range	Optimal range
Temperature	<b>75°C to 110°C</b>	<b>85°C to 105°C</b>
pH	5.0 to 7.5	5.5 to 6.5
Form & appearance	Liquid	
Enzyme activity	120000 IU/mL	
Microbial source	<i>Bacillus subtilis</i>	

#### PACKGING:

Paperzyme-AH available in 25 kilogram HDPE jerry can. Special packaging is also available on request.

#### SAFETY

The product is produced under hygienic condition and is subject to stringent quality control.

#### Toxicology

The product produced by GRAS microorganism and is classified as non toxic.

#### Biodegradability

Product is Biodegradable.

**Handling precaution**

Enzymes are proteins and 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.

Liquid enzyme products may create inhalable aerosols if splashed or vigorously stirred. Spilled product material should therefore be flushed away with water.

**STORAGE:**

Enzyme products should be stored in a cool dry place. When stored below 35°C products will maintain its declared activity for at least 24 months. The enzyme preparation should not be left in direct sunlight for extended periods. Liquid preparation should not be frozen.

**REGULATORY INFORMATION:**

EEC Classification

In concentration form, the liquid enzymes products are classified as “sensitizers by inhalation” under the terms of EEC directive 88/379.

**TECHNICAL DATASHEET**

**Usage Guideline:** There are many factors that influence liquefaction of starch with Paperzyme AH such as:

[a]Types of raw materials [b] Type of process and equipment [c] Process time[d] Dry substance (DS) [e] Temperature and pH of the process

<b>Product</b>	<b>Dosage [%]</b>
Paperzyme -AH for paper industry	<b>0.4-0.8 kg/Metric tonne of starch substrate (Dry Substrate)</b>
Technical datasheet given with each product are only given as usage guidelines, but tests should be carried out under local conditions to <b>fix the optimum dosage for the machine type and condition.</b>	

**TECHNICAL SERVICE:** Aum Enzymes technical service laboratory shall be pleased to provide more information covering specific applications for all products or discuss any practical problem which many occur in the industry.

**MFG: AUM ENZYMES**

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