

Protozyme series

Protozyme ADS

Amylase desizing enzyme for removal of size before pretreatment.

INTRODUCTION

This treatment is carried out on woven fabrics to remove the sizing substance from the warp. The size must be totally eliminated since the fabric must absorb the liquor of subsequent processes homogeneously. Since amylaceous sizes are generally used for cotton yarns, it is possible to apply amylolytic enzymes (*amylase*), which carry out a biological degradation process of the starch, transforming it into soluble by-products which can be then eliminated by washing.

The enzymatic process depends on the quantity of enzyme molecules per gram of fabric, while the thermal stability of the enzyme depends on the bacteria strain from which it originates. The amylases only react with starch molecules and do not affect the other glucose polymer (cellulose), since they attack the 1.4 alpha-glucoside bond of starch and not the 1.4 beta-glucoside bond of cellulose. This reaction makes the use of amylases profitable (when applying starchy sizes) compared to other desizing agents such as alkali and oxidising agents (*oxidising desizing*), which attack both starch and cellulose.

Protozyme ADS is a new generation alpha amylase based desizing agent highly effective in wide temperature and pH range. Multi component feature of Protozyme ADS equips the user with great flexibility in working pH and temperature. The high dose response of Protozyme ADS enables its use in both Garments & Fabric desizing applications. Protozyme ADS has been designed for maximum stability with respect to storage time, climate and handling. Protozyme ADS stands apart in this regard in comparison with other brands of its kind.

FEATURES

- Rapid conversion of starch size into dextrins.
- Consistent activity throughout process.
- Works well in high and low mechanical action processing
- Compatible with surfactants.
- No influence on subsequent processing.
- Completely biodegradable.

STALWART ADVANCE MATERIAL INDS

Application & Business Center, B-120, Ansa Industrial Estate, Saki Vihar Road, Sakinaka, Andheri (E), Mumbai – 400 072.
email: sales@stalwartadvance.com; web: www.stalwartadvance.com; Customer care:1800 121 3497

PROPERTIES

Appearance	Pale yellow liquid
pH (1%)	approx. 7.0
Stability to hard water	Good
Stability to acid/alkali	Good
Stability to temperature	Good

SCOPE OF APPLICATION

Many factors can influence desizing such as: Type and nature of size, Quantity of size, Fabric Construction, Process and equipment used, Subsequent treatments, water hardness etc.

Following parameters can be maintained for better results.

Process Paramaters	Operational range	Optimum values
pH	5.0-9.0	7.0
Temperature	40-100°C	80°C
Liquor ratio	1:5 – 1:15	1:10
Processing time	45-120 mins	60-90 mins
Dosage guide lines	Jet/winch/autoclave	1.0 - 1.5 g/l
	Continuous	10.0 - 20.0 g/l
	Jig/rotary washer/pad roll	3.0 – 10.0 g/l
	Pad batch : Cold	6.0 – 15.0 g/l
	Pad batch : Hot	4.0 – 15.0 g/l

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SAMPLE RECIPE

Desizing Cellulosics *Jet/Winch*
 1.0 – 1.5 g/l **Protozyme ADS**
 0.5 - 1 g/l Versetol NPA/Evosurf ndc
 0.5 - 1 g/l Neoquest PP
 Temperature: 80°C. pH : 6-7. Time: 45 mins
 Pad Batch :8 hrs.
 Pad Steam: 8-10 mins

STORAGE AND HANDLING

Precautions for safe handling	Do not eat, drink or smoke while handling the product.
Conditions for safe storage	Store in a cool, dry & ventilated area away from the sources of heat.
Shelf Life	6 months.

Note: Kindly refer SDS for further information on Storage & Handling.

Protozyme is a registered trade name of Stalwart Advance Material Inds.

The information and recommendations presented here were based on our general experience and correspond to the state of our knowledge. They are intended to service as non-binding guidelines and must be adapted to the prevailing conditions. We cannot accept liability for any injury, loss or damage resulting from reliance upon such information.

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