

Product Information Process Auxiliaries

Lava® Zyme AET

Amylase enzyme for desizing

Function	Amylase for the desizing of starch treated fabrics, suitable for all desizing processes
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Properties	<ul style="list-style-type: none"> - universally applicable in all desizing processes - very effective in wide temperature range (40 – 110°C) - applicable in a wide pH-range of 5 – 10 . Ideal working pH recommended as 6.5 – 7.5 - stable to substances from fabrics, e.g. fats, oils, waxes and singeing residues etc.
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Chemical Characteristics	Enzyme formulation
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Technical Data	<table> <tr> <td>Appearance:</td> <td>brownish liquid</td> </tr> <tr> <td>pH (direct):</td> <td>5,5 -7,5</td> </tr> <tr> <td>Dilution procedure:</td> <td>in cold water</td> </tr> <tr> <td>Shelf life:</td> <td>in originally sealed drums 12 months</td> </tr> </table>	Appearance:	brownish liquid	pH (direct):	5,5 -7,5	Dilution procedure:	in cold water	Shelf life:	in originally sealed drums 12 months
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Application

The amounts to be applied depend on:

- method of desizing
- type of used starch size
- degree of sizing
- time of treatment

We recommend the following amounts:

Exhaust, long liquor ratio

1.0 - 4.0 g/l Lava Zyme AET, e.g. winch, overflow

Exhaust, short liquor ratio

2.0 - 6.0 g/l Lava Zyme AET, e.g. jet, beam

Impregnation

4.0 - 8.0 g/l Lava Zyme AET

Preparation of the desizing liquor

For the preparation of the desizing liquor hard water with a degree of 7 - 10°dH (German hardness) should be used for stabilizing the enzymes.

Temperatures above 80°C should be avoided during extended storage of the liquor in the storage tank, otherwise the enzyme activity of Lava Zyme AET may be reduced.

Heavy metals which may come from water or fabric can affect enzyme activity negatively (act as enzyme killer) so sequestering agent addition to enzyme bath is highly recommended (i.e. Sera Quest C-PX 0.5-1 g/l).

Examples of application

Lava Zyme AET can be applied in all desizing processes, e.g.:

Desizing in pad batch process

Impregnating temperature: 20 - 95°C

Time (depending on temperature): at least 8 h at 20 - 70°C
30 - 45 min at 95°C

Impregnation with subsequent dwelling step

In the soaking box: Temperature: 95 - 100°C
 Time: 10 - 20 min

In a heater zone dwelling
chamber (pad roll): Temperature: 95 - 100°C
 Time: 30 - 45 min

Continuous steamer with saturated steam

Temperature: 98 - 105°C
Impregnating temperature: 20 - 95°C
Dwelling time: 2 - 15 min depending on impregnating
and steaming temperature

Continuous desizing on open-width and rope washing machine

Temperature: 90 - 95°C

Time: 2 - 5 min

On all discontinuous dyeing machines and machines like jig, jet, beam and winch vat

Temperature: 60 - 95°C

Time: 60 - 10 min (depending on temperature)

Wetting agent and deaerator

In order to guarantee a good wetting and deaeration of the goods it is necessary to add suitable wetting agents when using Lava Zyme AET.

The employed wetting agents must not impair the enzyme-activating action. Anionic wetting agent and /or de-aerating agents may cause negative affect so any surfactant which will be used for this purpose should be nonionic.

We recommend:

Sera Wash M-CEO, Sera Wet C-NR.

Amounts to be used: 1.0 - 3.0 g/l depending on process.

Washing off oily and fatty soiling

Soiling from spinning and weaving can be removed in the desizing bath by the simultaneous use of our fat solvent and spotting agents:

Sera Wash M-RK.

Especially suited are pad batch and pad steam processes.

Afterscouring of desized goods

The afterscouring of desized goods should be carried out as hot as possible in alkaline medium.

2.0 - 3.0 g/l soda ash

1.0 - 2.0 g/l Sera Wash M-CEO

Temperature: 80 - 95°C

Time: 20 - 30 min

Test of the degree of desizing

The degree of desizing is determined by the iodine test according to TEGEWA. The assessment of the degree of desizing is effected according to the TEGEWA violet scale.

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