

Product Information Textile Auxiliaries

ChemCell Cold LT

Enzyme blends for biopolishing

USES

High concentrated bio-polishing enzyme for application at neutral pH that gives the typical benefits offered by classic acid cellulase for the biopolishing process. Because of the neutral conditions at the application the biopolishing process can be combined with other enzyme or dyeing process.

PROPERTIES :

Brown Liquid

Good color retention and less cross-staining

Can be used in broad pH range without negative influence on the activity

No color change after dyeing indicated to be applied before or after the dyeing process

Can be combined with other enzymatic processes like bio-scouring or de-sizing for cost optimization.

Help to reduce water, energy and processing time versus acid cellulases less weight and strength loss

Dosable/pumpable liquid

COMPOSITION :

Combination of fatty alcohol ethoxylates and enzymes

APPLICATION :

Can be applied at 40-60 °C (optimum 50-55 °C) and in a broad pH range of 4 - 6 (optimum 4.5-6.5) without any significant reduction in the activity. The product can be used on winch, jet-dyeing machines or laundry washing machines. The mechanical action of machine should be high.

Based on this parameters the bio-polishing process can be combined with bio-scouring or de-sizing process. It can also be used in combination with some dyeing processes. If the product is used in a dyeing process with reactive dyes. Automatically the enzyme will be deactivated by adding alkaline for dyestuff fixation. This saves substantial and precious processing time. Moreover the water and energy consumption can be reduce.

APPLICATION :

This bio-polishing process can also be carried out after the dyeing process. The traditional acid cellulase often changes the shade of dyed fabric. This is based on the acid conditions and on the high color retention of the process. Under neutral pH conditions the color retention is much lower and the shades do not fade by using ChemCell Cold LT.

Standard Treatment with ChemCell Cold LT
Fill the machine with water (50-55 °C), set liquor ratio between 7:1 to 15:1 and add

0.02 – 0.1 % C.Cell Cold LT

pH: 4 -6

The amount depends on different parameters:

- Material (woven/ knitted fabric)
- Degree of pilling effect
- Treatment time
- Mechanical action of the machine (Jet/overflow/washing machine)

Woven fabrics and shirts need amounts of app. 0.5 -1 %. Thicker materials like T-shirt or sweat shirts need higher concentrations. In laundry normally concentrations of 0.5 – 1% are used and in mills 1 -2 % because of lower mechanical effects.

The process time is between 25 – 45 min. depending on the material. This process can be made before or after dyeing process.

Combination of desizing and bio-polishing process

Fill the machine with 60 °C water and set the liquor ratio 7:1 and 15:1 and add

1.0 – 2.0 g/l	ChemBack
1.0 g/l	ChemAir
1 – 2 %	ChemDe-size
0.02 – 1%	ChemCell Cold LT

The process time between 20 -30 min. at 60 °C, rinse warm and cold

Combination of dyeing process and biopolishing process.

Heat up the dyeing bath 50 - 60 °C and forerun the biopolishing process

0.02 – 0.1% Chemcell Cold LT.

After 10 – 15 min start the normal dyeing process with dyeing auxiliaries, salt and dyestuffs

X g/l Salt

A g/l Reactive dyestuffs.

The process time between 20 – 30 min. at 50 – 60 °C. By following addition of the alkaline for the dyestuff fixation automatically this results in enzyme stop (de-activation). The soaping and rinsing bathes are as in a normal dyeing process.

If direct dyes are used, heat up 50 - 60 °C for 20 – 30 minutes for the bio-polishing process. Then heat up to 90 – 95 °C for complete dyeing process. In this case the enzyme stop is caused by the complete dyeing process. In this case the enzyme stop is caused by the temperature.

Storage :

The product is sensitive to frost and heat and must not be stored at a temperature below 0°C or above 40°C. Irreparable damage is possible. In case of suspected frost or heat damage, the usability of the product has to be checked before processing.

Attention :

The above recommendations are based on comprehensive studies and experience made in practical finishing. They are, however, without liability regarding property rights of third parties and foreign laws. The user should test for himself whether the product and the application are suited for his very special purposes. We are, above all, not liable for fields and methods of application which have not been put down by us in writing. Advice for marking regulations and protective measures can be taken from the respective safety data sheet.

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