KAPPAZYM C 94
GOTS approved, liquid cellulase preparation for enzymatic finishing (bio-polishing)

CHEMICAL-PHYSICAL DATA
Chemical composition: aqueous enzyme preparation based on cellulase
Appearance: clear, dark-brown liquid
pH-value 20 °C (product): approx. 5.0
Density 20 °C (g/ml): approx. 1.16

FUNCTION
KAPPAZYM C 94 is GOTS approved and used for the enzymatic finishing of cellulosic fibres, the “bio-polishing” process. It has a specific effect on cellulosic fibres and is completely biodegradable. It changes the surface of woven and knitted fabrics by controlled hydrolysis (de-composition) of cellulosic fibres.

Bio-polishing with KAPPAZYM C 94
- prevents or removes pilling, slubs, knots.
- creates a glossy, smooth surface.
- gives a soft, smooth handle.
- prevents interlocking of fibre ends and thus a conglutination of the fabric.
- creates stone-wash effects on ready-made jeans.

To achieve optimal effects the following conditions need to be observed:
Temperature: between 40 – 55 °C
pH-value: optimal activity and stability pH 4.5 – 5.5

APPLICATION
KAPPAZYM C 94 can be used in the continuous as well as in the discontinuous process for the surface modification of woven and knitted fabrics made of cellulosic fibres.

KAPPAZYM C 94 can be applied on its own or integrated in the after-soaping or conditioning process.

Discontinuous process (winch, jet, paddle, drum)

<table>
<thead>
<tr>
<th>0.5 – 3.0 %</th>
<th>KAPPAZYM C 94</th>
</tr>
</thead>
<tbody>
<tr>
<td>liquor ratio: 5:1 to 25:1</td>
<td></td>
</tr>
<tr>
<td>treatment time: 30 – 60 minutes (depending on required effect)</td>
<td></td>
</tr>
<tr>
<td>temperature: 45 – 55 °C</td>
<td></td>
</tr>
<tr>
<td>pH-value: 4.5 – 5.5 adjust with acetic acid</td>
<td></td>
</tr>
</tbody>
</table>

After the treatment, the enzymatic decomposition process must be terminated (enzyme stop, deactivated) either by a temperature increase to 70 °C and dwelling for 20 minutes at 70 °C (rinse hot and cold afterwards) or by rinsing hot and cold and immediate drying of the fabric at 120 °C minimum in order to prevent further decomposition of the cellulose and thus material damage.

Any overdose or prolonged treatment with KAPPAZYM C 94 should therefore be avoided.

DILUTION INSTRUCTION
KAPPAZYM C 94 can be diluted with cold water at any ratio. The product can also be added directly to the liquor.

STORAGE
At a storage temperature of 25 °C, KAPPAZYM C 94 generally maintains its declared activity for at least 3 months. Longer storage above 30 °C should be avoided.