

## Technical - Information

# AVCO-SON DNL CONC

## NEUTRAL CELLULASE FOR FOR BIO-POLISHING

AVCO-SON DNL CONC is a liquid neutral cellulase enzyme preparation, which is recommended for the bio-polishing of cellulose fabrics and for bio-stoning of denim garments at the neutral pH range.

AVCO-SON DNL CONC is producing a controlled hydrolysis of fine cellulose fibres protruding from the fabric surface. The result is a softer fabric with a smooth appearance and reduced pilling problems during subsequent washing processes.

AVCO-SON DNL CONC is a neutral cellulase, and is superior to acidic cellulase preparations with respect of the possibility of applying the bio-polishing before and also after the dyeing process.

The AVCO-SON DNL CONC is active at a broad pH range of 5 – 8. For cost saving it is possible to apply the bio-polishing process in one step together with other processes such as enzymatic peroxide elimination and enzymatic bio-scouring.

### SPECIFICATIONS:

<b>Appearance</b>	Clear, light brown liquid.
<b>Chemical nature</b>	Aqueous cellulase enzyme preparation.
<b>Solubility</b>	Soluble in water at any ratio.
<b>pH (0.1% sol.)</b>	4.5 – 4.9
<b>Compatibility</b>	Can be used at a pH range of 5 to 8.
<b>Storage</b>	Keep in cool and dry place in tightly closed packages. When properly stored shelf life is at least 12 months.

### PROPERTIES & USES:

1. AVCO-SON DNL CONC is a neutral cellulase enzyme preparation, designed for the anti-pilling finish of cellulosic fabrics, producing a smoother and softer fabrics with less pilling after repeated laundries.
2. AVCO-SON DNL CONC is effective in a broad pH range of 5 - 8 compared to conventional acid cellulase preparations. There is no need to adjust the pH of the treatment bath to an acid pH, and there is no need to re-adjust it after the treatment.
3. AVCO-SON DNL CONC is effective in a wide temperature range of 45 - 65°C.
4. Bio-stoning of denim garments with AVCO-SON DNL CONC ensures good colour retention and less back staining.

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5. AVCO-SON DNL CONC can be used together with other enzymatic processes such as desizing, bio-scouring, peroxide elimination.
6. Using AVCO-SON DNL CONC ensures higher tensile strength and less weight loss compare to conventional acid cellulases.
7. AVCO-SON DNL CONC is a free flowing liquid which can be metered very easily to the machine.

### ***APPLICATION:***

1. The bio-polishing process with AVCO-SON DNL CONC should be applied before or after the dyeing process.
2. For optimum results, the process should be done in a dyeing machine with high turbulence such as jet, winch and drum garments dyeing machines.

### ***BIO-POLISHING TREATMENT:***

1. Load the machine with the cellulosic fabrics. Liquor ratio should be 1:6 - 1:10.  
Add if required nonionic wetting agent and an anti-crease agent.
2. Warm up to 45 - 65°C (optimum is at 50 - 60°C).
3. Check pH, should be 5 - 8 (optimum is at 5.5 – 6.5).
4. Add 0.5 - 2 % o.w.g. of AVCO-SON DNL CONC
5. Run for 30 - 40 minutes.
6. Stop the activity of AVCO-SON DNL CONC by raising the temperature to 80°C.  
Run for 10 minutes and drop bath.
7. Rinse well and neutralize.

### ***REMARKS:***

1. Mechanical abrasion is needed.
2. Use a filter system in jets to collect the loose fibres.