

## DENIMCOL FIX-FSN

<b>Character</b>	Cationic pretreatment and aftertreatment agent
<b>Chemical Structure</b>	Polyammonium compound
<b>Appearance</b>	Yellow liquid
<b>Ionic Character</b>	Cationic
<b>pH Value</b>	3.8 – 6.3
<b>Specific Weight at 20 °C</b>	Approx. 1.10
<b>Stabilities</b>	<p>DENIMCOL FIX-FSN is stable to hard water, electrolytes and the usual concentrations of acid and caustic soda. It can be combined very well with non-ionic and cationic products. Together with anionic products precipitations may occur.</p> <p>The product is sensitive to frost to a certain extent. Changes occurring at low temperatures will disappear after warming up and after stirring well.</p>

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## Properties

DENIMCOL FIX-FSN is an aftertreatment agent with affinity to the fibre for improving the washing and contact fastnesses of dyeings with direct dyes on natural and regenerated cellulose fibres. The product can also be used for aftertreating reactive dyeings. Here, DENIMCOL FIX-FSN prevents bad wet fastnesses caused by dye hydrolysis and thermocracking.

DENIMCOL FIX-FSN has the following properties:

- improves the washfastnesses at 40 °C and 60 °C with direct and reactive dyes
- improves the contact fastnesses such as water fastness and fastness to perspiration, etc.
- has only little impact on the shade and on the light fastness
- has no impact on the fabric handle and therefore no influence on the sewability
- does not deteriorate the re-wettability
- is free from formaldehyde

In addition, DENIMCOL FIX-FSN can be used as mordant for cationizing cotton materials which are subsequently dyed with anionic dyes such as pigment dyes. In pigment dyeing DENIMCOL FIX-FSN can also be used in one-bath processes saving thus time, water and energy.

## Application Technique

### Diluting Instructions

DENIMCOL FIX-FSN can be diluted with cold water at any ratio.

### Recommendation for Use

#### Cationic aftertreatment

The aftertreatment with DENIMCOL FIX-FSN is always done on a fresh bath. The well rinsed or well soaped dyeing is treated in the exhaust procedure at 20 – 40 °C with

2.0 – 3.0 % DENIMCOL FIX-FSN

for 20 - 30 min at a pH value of approx. 5.0 – 7.0.

#### Stripping off of dyeings already treated with DENIMCOL FIX-FSN

If dyeings are to be redyed or levelled out, DENIMCOL FIX-FSN must be stripped off first.

The following stripping procedure has proven well:

4.0 – 5.0 g/l DENIMCOL DIS-SMS  
pH 4.0, adjusted with acetic acid 60 %  
20 - 30 min at 98 °C, then rinse thoroughly warm and cold

If the dyeing shall also be stripped off, we recommend the following method:

#### 1. Stripping off of DENIMCOL FIX-FSN

4.0 – 5.0 g/l DENIMCOL DIS-SMS  
pH 4.0, adjusted with acetic acid 60 %  
20 - 30 min at 98 °C

#### 2. Stripping off of the dyeing

x ml/l caustic soda  
y g/l hydrosulphite or REDULIT F  
3.0 – 5.0 g/l DENIMCOL DIS-SMS  
30 min at 98 °C  
rinse thoroughly warm and cold

#### Cationic pretreatment for pigment dyeing processes

Liquor ratio: 1 : 8 to 1 : 10

#### 1. Cationic pretreatment with

2.5 – 3.0 % DENIMCOL FIX-FSN  
0.0 – 2.0 g/l DENIMCOL LUB-BPA  
10 – 20 min at 30 – 40 °C

Remark:

If DENIMCOL FIX-FSN is to be used as mordant for subsequent dyeing with metal complex dyes, the application of DENIMCOL FIX-FSN in the alkaline range (pH 9.0 – 10.0 with soda ash) improves the subsequent dyeing bath exhaustion. Our main recommendation for this field is however DENIMCOL FIX-OS because of the stronger colour depth and better washfastness of the dyeing.

2. Dyeing on a fresh bath with

x % pigment dye (e.g. BEZAPRINT dye)  
0.0 – 2.0 g/l DENIMCOL LUB-BPA  
15 – 30 min at 60 °C  
Rinse

3. Fixation with

3.0 – 5.0 % DENIMCOL BINDER GF-C (depending on the colour depth)  
10 min at 40 °C  
drying and fixation in the drum drier at 90 – 100 °C

For an additional handle improvement and simultaneously good rubbing fastnesses we recommend the separate addition of a product from the DENIMCOL SOFT range after the fixation of the binder.

One bath process for pigment dyeing

Liquor ratio 1 : 8 to 1 : 10

Start cold

2.5 – 3.0 % DENIMCOL FIX-FSN  
1.0 – 2.0 g/l DENIMCOL LUB-BPA  
10 – 15 min at 50 °C

Add to the same bath

x % pigment dye (e.g. BEZAPRINT dye)  
15 – 30 min at 50 °C

depending on the dye exhaustion  
application of the binder in the same bath or in a fresh bath

2.0 – 3.0 % DENIMCOL BINDER-RE NEU  
10 – 15 min at 40 – 50 °C

Tumbler drying at 90 – 100 °C (drying and fixation)

**We reserve the right to modify the product and technical leaflet.**

**Our department for applied technique is always at your service for further information and advice.**

Our technical advice and recommendations given verbally, in writing or by trials are believed to be correct. They are neither binding with regard to possible rights of third parties nor do they exempt you from your task of examining the suitability of our products for the intended use. We cannot accept any responsibility for application and processing methods which are beyond our control.

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