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BASF SE

# Dekol<sup>®</sup> Disperse SN – S

**Dispersing agent, protective colloid and complexing agent for use in all stages of dyeing processes for cotton and blends of cotton and other fibres.**

Dispersing agent, protective colloid and complexing agent for use in all processes including pretreatment, dyeing and soaping. It has a very pronounced chelating and dispersing effects on the hard water ions and other heavy metal ions.

- Dekol® Disperse SN-S prevents the deposits of hard water ions and other impurities during the dyeing process of yarn and fabric.
- Dekol® Disperse SN-S has a very pronounced soaping effect in the removal of hydrolysed reactive dyes during the soaping process of dyeing and printing with reactive dyestuff, especially for turquoise and scarlet shades.
- Dekol® Disperse SN-S can prevent the silicate scale generated from the sodium silicate when used as a pretreatment agent.

**Chemical nature**

Acrylic copolymer.

**Physical form**

Clear, colourless or yellowish, viscous liquid.

**Storage**

This product has a shelf life of at least one year if it is stored in its tightly sealed original packing at temperatures between 5°C and 35°C. Drums should be tightly resealed each time material is taken from them, and their contents should be used up as soon as possible after they have been opened.

## **Properties**

**Solubility**

Miscible with water in all proportions.

**pH**

ca. 7.5-8.5 (10% solution)

**Setting point**

ca. – 5 °C

**Stability**

Dekol® Disperse SN-S is resistant to acids, alkalis and electrolytes at the concentrations at which they are usually employed in dyeing process

**Compatibility**

Dekol® Disperse SN-S is compatible with anionic and nonionic products, but precipitation can occur if it is applied at the same time as cationic auxiliaries such as Uniperol™ Level P in acidic or neutral solutions. No precipitation occurs in alkaline solutions.

The traces of anionic Dekol® Disperse SN-S left over in textiles after they have been dyed and rinsed can precipitate when they are softened with cationic products. This can be avoided by rinsing the textiles more thoroughly at the end of the dyeing process or by adding 0.12-0.25g/l Uniperol™ Multifunction O Micro to the softening bath.

**Ecology**

Dekol® Disperse SN-S is easy to be removed from waste water in biological effluent treatment plant. It is free of phosphates and alkylphenol ethoxylates, and it does not make any contribution to the AOX of the waste water.

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## Action

Dekol® Disperse SN-S has a very pronounced dispersing effect on the impurities such as waxes and pectinates contained in raw cotton and on precipitated solids caused by hard water. It also has a moderate complexing effect on metal ions

This prevents calcium and magnesium ions from impairing the solubility of anionic dyes and their affinity for cotton.

- Virtually all the dye is taken up by the fibres when vat dyes derived from indanthrone, such as Indanthren® Blue BC, are applied in hard water.
- Hydrolyzed reactive dyes are prevented from forming calcium salts, which are difficult to wash out, in hard water.

Dekol® Disperse SN-S does not affect the shade or the fastness of textiles dyed with reactive or direct dyes that contain metals, because its complexing capacity is insufficient for it to be able to complex the metals contained in metal complex dyes.

Dekol® Disperse SN-S is low-foaming and has no affinity for anionic dyes.

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## Application

### Dyeing polyester-cotton

Because of the range of different properties that it displays, Dekol® Disperse SN-S can be used in a variety of applications at all stages of dyeing processes for cotton and blends of cotton and other fibres. Some examples of discontinuous processes are given below. We would recommend adding 1-2.5 g/l of Dekol® Disperse SN-S to the padding liquor in continuous processes.

### Examples:

If the polyester component of polyester-cotton blends is dyed in advance, impurities such as pectinates and waxes are released from the cotton fibres when they are subsequently dyed in an alkaline bath which cause vat dyes and reactive dyes to precipitate. This leads to problems, especially when wound packages are dyed, because the precipitated dye tends to form deposits on the packages owing to a filtration effect. Dekol® Disperse SN-S prevents this type of precipitation from occurring.

### Recommended concentration

1-2.5 g/l Dekol® Disperse SN-S, applied at the beginning of the dyeing

process.

**Dyeing cotton with vat dyes**

The uncontrollably high concentrations of calcium and magnesium ions contained in raw cotton react with vat dyes such as Indanthren Blue BC and cause them to precipitate. Because of its complexing action, Dekol® Disperse SN-S can be used to virtually eliminate all precipitation in moderately hard water(<18.75°Clark). A chelating agent with higher complexing power, such as Lufibrol Chelant TA or Lufibrol Chelant TB, should be used alongside Dekol® Disperse SN-S in water harder than 18.75°Clark.

Recommended concentration

<18.75°Clark

1-4 g/l Dekol® Disperse SN-S, added in advance of the alkali

>18.75°Clark

1-4 g/l Dekol® Disperse SN-S and 0.5 g/l Lufibrol Chelant TA Powder

**Dyeing cotton with reactive  
And direct dyes**

Hard water can cause calcium carbonate to precipitate when raw cotton is dyed with reactive or direct dyes. Dekol® Disperse SN-S has a high dispersing capacity for calcium carbonate, which ensures that the calcium carbonate that forms during the dyeing process is kept finely dispersed. This prevents the dye bath from becoming turbid. The moderate complexing action of Dekol® Disperse SN-S also reduces the extent to which hydrolyzed reactive dyes are able to form calcium salt, which are difficult to wash out. Dekol® Disperse SN-S does not break down metal complex dyes, and it has no detrimental effect on their shade or fastness. This is an advantage over strong chelating agents such as EDTA and NTA.

Recommended concentration

1-4 g/l Dekol® Disperse SN-S

**Soaping after printing/dyeing  
with reactive dye**

Dekol® Disperse SN-S can be used in the washing process after dyeing and printing with reactive dyes due to its high dispersing capacity. It will ensure the hydrolysed dyes remain dispersed during the soaping process, and prevent the redeposition of these dyes onto the fabric. It can also help to improve the washing fastness and rubbing fastness.

Recommended process concentrations: 1-2g/L Dekol® Disperse SN-S

For deep shades/ difficult shades, repeat the step as necessary.

Recommended process concentrations: 1g/L Dekol® Disperse SN-S

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## Safety

When using this product, the information and advice given in our **Safety Data Sheet** should be observed. Due attention should also be given to the **precautions** necessary for handling chemicals.

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## Note

The data contained in this publication are based on our current knowledge and experience. In view of the many factors that may affect processing and application of our product, these data do not relieve processors from carrying out their own investigations and tests; neither do these data imply any guarantee of certain properties, nor the suitability of the product for a specific purpose. Any descriptions, drawings, photographs, data, pro-portions, weights etc. given herein may change without prior information and do not constitute the agreed contractual quality of the product. It is the responsibility of the recipient of our products to ensure that any proprietary rights and existing laws and legislation are observed. Responsibility for compliance with the requirements of the downstream textile market rests with the textile processor.

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