Britacel Silicones Ltd.

EUROSOL R

Dispersant and chelating agent for all stages in dyeing textiles produced from cotton and its blends.

CHARACTERISTICS	BENEFITS
EUROSOL R exerts an outstanding dispersing effect on the impurities in raw cotton (e. g. waxes and pectinates) and on the precipitates caused by hard water. It also has a moderate chelating effect on metal ions.	As a consequence, it eliminates the adverse effect of calcium and magnesium ions on the solubility of anionic dyes and their affinity to cotton. It is also responsible for the following effects if hard water is used for dyeing
The chelating effect of EUROSOL R does not suffice to remove the metal ions from metal complex dyes. Consequently, it does not impair the shade and fastness properties of dyeings obtained with reactive and direct metal complex dyes.	Consequently, it does not impair the shade and fastness properties of dyeing obtained with reactive and direct metal complex dyes.
Washing off	very efficiently used for washing-off reactive dyes;

PROPERTIES

Physical Appearance:	Clear to pale yellowish liquid
Specific Gravity at 25ºC - 30ºC:	0.99-1.10
pH (Meter) (5% Solution)	7.0 - 9.0
Storage stability:	EUROSOL R is stable for 12 months when properly stored in closed containers at 25ºC
Ecology/Toxicology:	The usual hygiene and safety rules for handling chemicals should be observed in handling, storage and use of the product. The product must not be swallowed.

APPLICATION

By virtue of its two-fold efficiency, EUROSOL R is widely used for all stages in dyeing textile materials produced from cotton and its blends. Examples that concern batch dyeing presented below. Our recommendation for continuous processes is to add 1 to 2 g/l of EUROSOL R to the chemical padding liquor.

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Dyeing polyester/cotton

Impurities in the cotton (pectinates and waxes) that are soluble in acid media are extracted when the polyester component in blends with grey cotton is pre-dyed in the acid pH range. They are subsequently precipitated in the alkaline dye-baths when the material is dyed with vat or reactive dyes. As a result, filter effects occur, particularly in dyeing wound packages. EUROSOL R prevents these precipitates. Recommended concentration 1 to 2 g/l of EUROSOL R to be added at the beginning of the dyeing process.

Dyeing cotton with vat dyes

The uncontrollably high concentrations of calcium and magnesium ions in raw cotton are responsible for considerable losses in the colour yield that can be obtained with many vat dyes, e.g. Indanthren Blue BC. By virtue of its chelating effect EUROSOL R allows cotton to be dyed with almost no losses in liquors of low to moderate hardness. (<150 German hardness = 150 mg Cao/liter) If the water is of greater hardness, a stronger, purely chelating agent would have to be added, Recommended concentration <150 German hardness 1 to 3 g/l of EUROSOL R before the alkali is added >150 German hardness 1 to 3 g/l of EUROSOL R

Dyeing cotton with reactive and direct dyes.

If the water is hard, calcium carbonate may be precipitated during the dyeing of raw cotton with reactive and direct dyes. EUROSOL R is a very effective direct dyes dispersant for the calcium carbonate thus formed and thus maintains it in a finely dispersed state. As a result, opalescence of the dyeing liquor is avoided. Another factor in favor of EUROSOL R in this application is its moderate chelating effect. It thus suppresses the formation of calcium salts of reactive dye hydrolysates that are difficult to wash out. Yet another benefit offered by EUROSOL R in this connection is that it does not attack metal complex dyes, with the result that it does not impair the shade and fastness properties of dyeing obtained from them. Thus EUROSOL R offers many advantages over strong, purely chelating agents based on EDTA and NTA.

Recommended concentration. : 1 to 3 g/l of EUROSOL R

- ## Batch wise washing-off

The efficiency of **EUROSOL R**, as a soaping aid combined with an efficient wash-off procedure, could lead to excellent removal of unfixed/hydrolysed dyes, thus meeting the required degree of fastness. A typical wash-off cycle, depending on the depth of shade could be:

drop bath
rinse cold for 5 to 10 minutes
rinse warm around 70 °C for 5 to 10 minutes
soap off at the boil with x g/l of **EUROSOL R**

An overflow or cold rinse should be incorporated at this stage, as necessary, in preparation for fixing and/or softening.

In real use, it is important to consider the need for shortening or extending the wash-off process, depending on the depth of shade and the amount of liquor used.

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As a general guidance, based on a L:R of 10:1, it is recommended to use the following amounts of **EUROSOL R**

	EUROSOL R (g/l)
Pale shade	0.5 - 0.75 g/l
Medium shade	1.0 - 1.5 g/l
Dark shade	2.0 g/

Continuous wash-off

The unique dye scavenging/suspending characteristics of
EUROSOL R are equally effective when used in continuous washing-off process of reactive dyed material. As the type of machinery used for continuous wash-off cycles vary, the precise area of addition of auxiliary is best decided by initial trials.

In order to establish the optimum recipe, when using for the first time, up to 2 g/l of **EUROSOL R** is recommended to be used, preferably in the second or third wash beck, at near boiling point of water as possible (based on a 7-beck unit).

It is recommended to pre-dilute **EUROSOL R** before adding to the bath.

NOTES

If exposed to the atmospheric air for a prolonged period it may cause creaming which on stirring dissolves completely. Product should be kept all the times in closed containers away from direct sunlight

ATTENTION

The information given above is in line with our present state of knowledge and experience and is without any guarantee. Users must thoroughly test any application before any commercialization. We are not liable for damages due to improper application of our products.

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