

# TREATMENT OF CO

Improvement of fastness to chlorinated water  
ZETESAL CCL

## ZSCHIMMER & SCHWARZ

... THE SOLUTIONS PROVIDER



Textile auxiliaries

ZSCHIMMER & SCHWARZ  
MOHSDORF GmbH & Co KG  
Burgstädt / Germany

[www.zsm.de](http://www.zsm.de)  
[textil@zsm.de](mailto:textil@zsm.de)



DIN ISO 9001 : 2000  
Zertifikat-Registrier-Nr.  
01 100 5330



## Aftertreatment of CO with to improve chlorine fastness

<b>Material:</b>	100 % CO knitted fabric
<b>Dyeing:</b>	4 % Lefafix Royal Blue E-FR
<b>Aftertreatment:</b>	a) without b) 4 % Rewin CLE c) 4 % Alcofix T d) 4 % ZETESAL CCL
<b>Program:</b>	45°C 20 min, pH 5.5 cold rinse
<b>Test:</b>	Fastness to washing 95°C ISO 20105 - C04 (Multifibre) Fastness to chlorinated water ISO 105-E03 20, 50 and 100 ppm Multiple treatment (3 times) 1) fastness to chlorinated water ISO 105-E03 20 ppm 2) washing 60°C with detergent Persil comparison of chlorine fastness after 1 times, 2 times and 3 times



Shade Blue (4 % Levafix Royal Blue E-FR )

Fastness to washing 95°C ISO 105 - C04

Dyeing

Multifibre

without

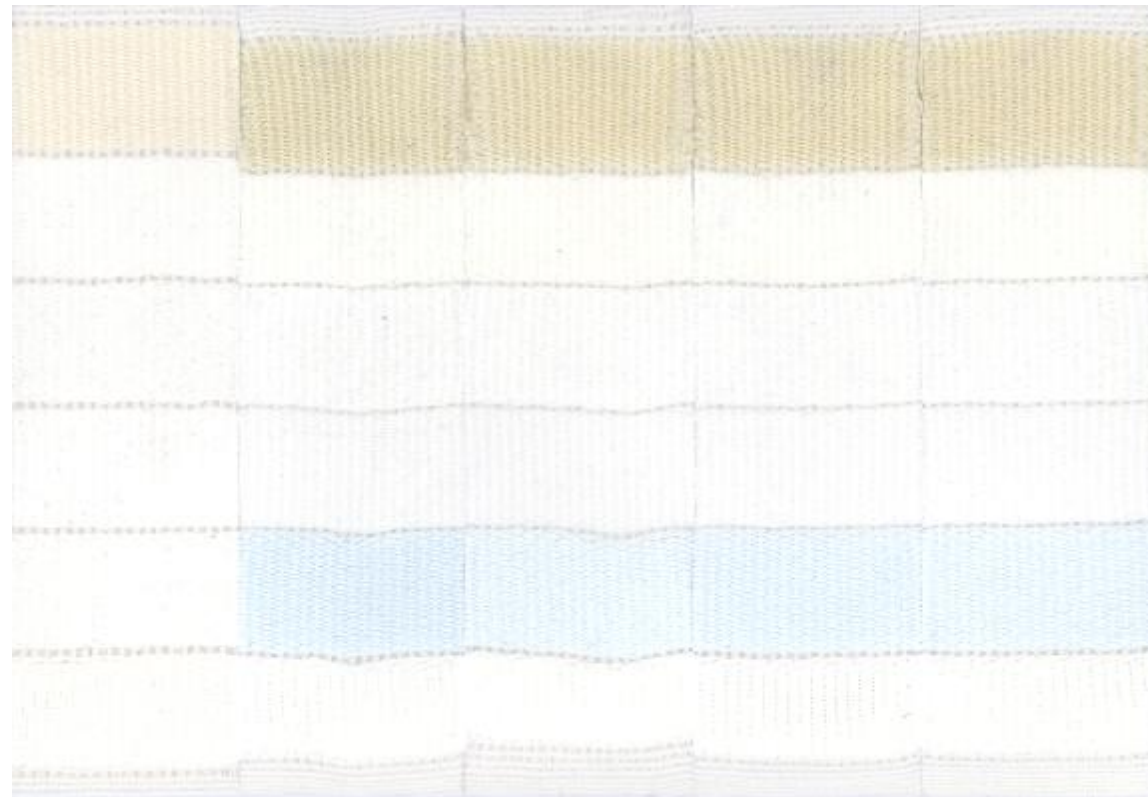
4 %  
ZETESAL  
CCL

4 %  
Rewin  
CLE

4 %  
Alcofix  
T



WO  
PAN  
PES  
PA  
CO  
CA





**Fastness to chlorinated water ISO 105-E03**  
**Shade Blue (4 % Levafix Royal Blue E-FR )**

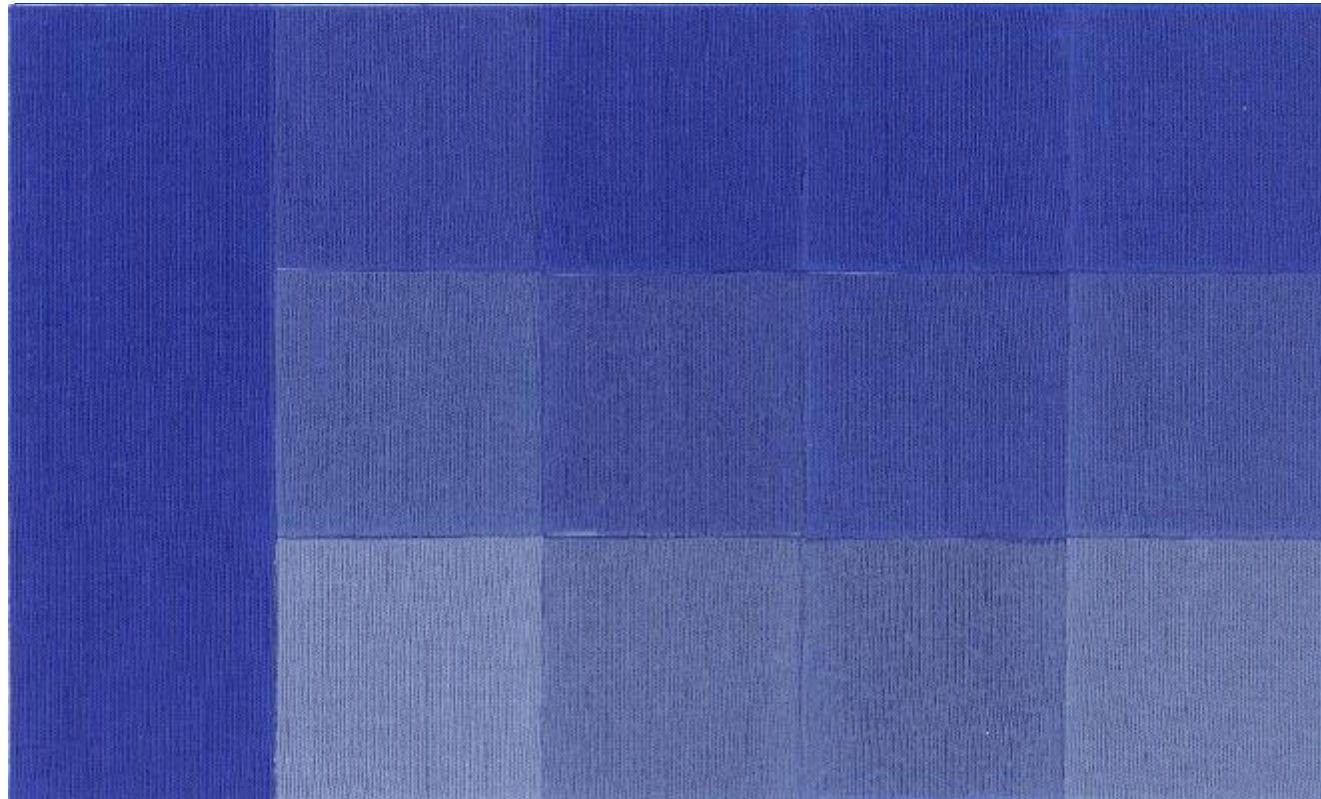
Dyeing

without  
fixing

4 %  
**ZETESAL CCL**

4 %  
Alcofix T

4 %  
Rewin CLE



20 ppm

50 ppm

100 ppm



**Multiple treatment**

**(3 times: 1<sup>st</sup> fastness to chlorinated water 20 ppm, 2<sup>nd</sup> washing 60°C with Persil)**

**Shade Blue (4 % Levafix Royal Blue E-FR )**

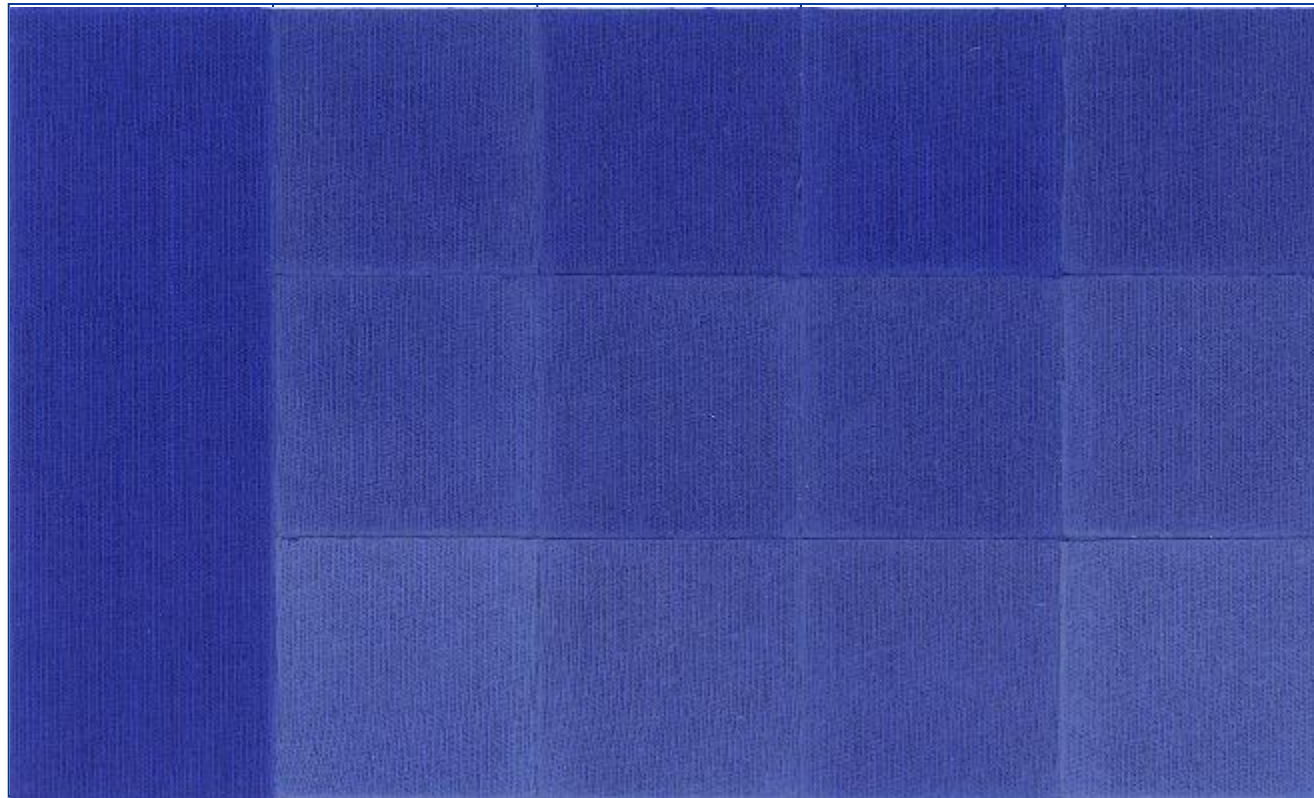
Dyeing

without  
fixing

4 %  
**ZETESAL CCL**

4 %  
Alcofix T

4 %  
Rewin CLE



1<sup>st</sup> time

2<sup>nd</sup> time

3<sup>rd</sup> time



## Aftertreatment of CO with to improve chlorine fastness

<b>Material:</b>	100 % CO knitted fabric
<b>Dyeing:</b>	4 % Lefafix Royal Blue E-FR
<b>Aftertreatment:</b>	a) without b) 50 g/l Rewin CLE c) 50 g/l Alcofix T d) 50 g/l ZETESAL CCL
<b>Program:</b>	padding with pickup of 100 % dryeing at 120°C, 3 min
<b>Test:</b>	Fastness to chlorinated water ISO 105-E03 20, 50 and 100 ppm Multiple treatment (3 times) 1) fastness to chlorinated water ISO 105-E03 20 ppm 2) washing 60°C with detergent Persil comparison of chlorine fastness after 1 times, 2 times and 3 times





**Fastness to chlorinated water ISO 105-E03**  
**Shade Blue (4 % Levafix Royal Blue E-FR )**

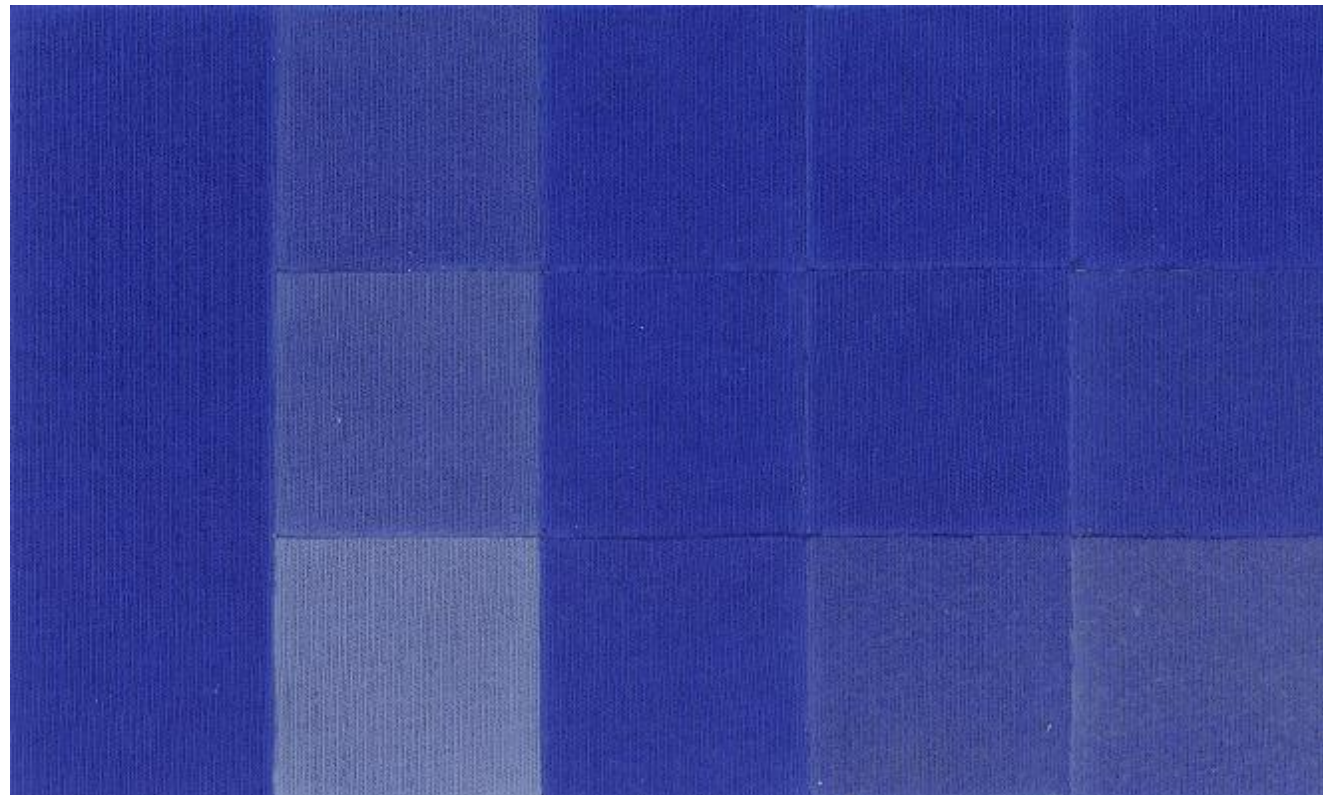
Dyeing

without  
fixing

50 g/l  
**ZETESAL CCL**

50 g/l  
Alcofix T

50 g/l  
Rewin CLE



20 ppm

50 ppm

100 ppm



### Multiple treatment

(3 times: 1<sup>st</sup> fastness to chlorinated water 20 ppm, 2<sup>nd</sup> washing 60°C with Persil)

Shade Blue (4 % Levafix Royal Blue E-FR )

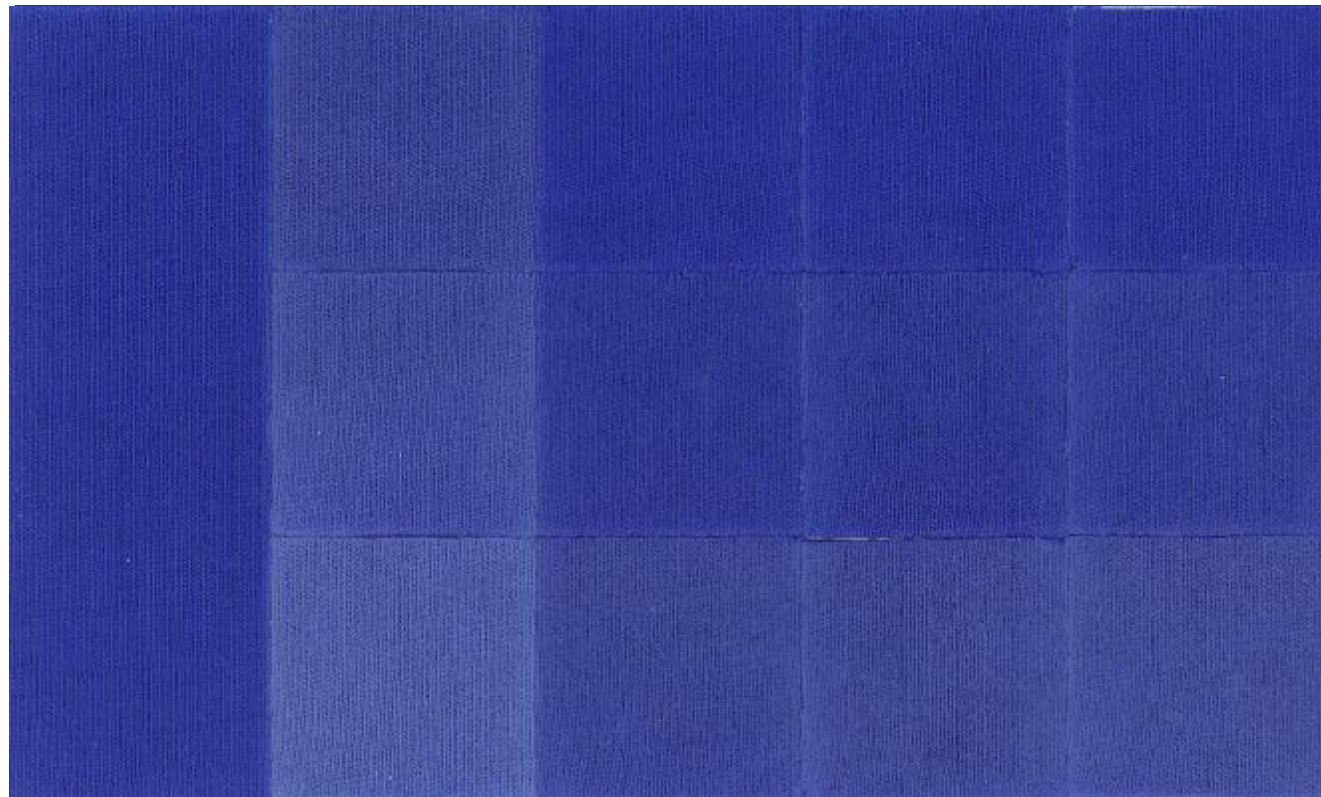
Dyeing

without  
fixing

50 g/l  
ZETESAL CCL

50 g/l  
Alcofix T

50 g/l  
Rewin CLE



1<sup>st</sup> time

2<sup>nd</sup> time

3<sup>rd</sup> time





## Aftertreatment of terry towels with to improve chlorine fastness

<b>Material:</b>	100 % CO terry towel
<b>Dyeing:</b>	2 % Remazol Turquoise Blue G 133%
<b>Aftertreatment:</b>	a) without b) 4 % Rewin CLE c) 4 % Alcofix T d) 4 % ZETESAL CCL
<b>Program:</b>	45°C 20 min, pH 5.5 cold rinse
<b>Test:</b>	Multiple treatment (3 times) 1) fastness to chlorinated water ISO 105-E03 10 ppm 2) washing 60°C with detergent Persil comparison of chlorine fastness after 1 times and after 3 times



### Multiple treatment

(3 times: 1<sup>st</sup> fastness to chlorinated water 10 ppm, 2<sup>nd</sup> washing 60°C with Persil)

Shade Turquoise (2 % Remazol Turquoise Blue G 133% )

Dyeing

without  
fixing

4 %  
ZETESAL CCL

4 %  
Alcofix T

4 %  
Rewin CLE



1<sup>st</sup> time

3<sup>rd</sup> time



## Test influence in shade - dryeing at 150°C

**Material:** 100 % CO knitted fabric (bleached)

**Pad:**

- a) water
- b) 50 g/l Rewin CLE
- c) 50 g/l Alcofix T
- d) 50 g/l ZETESAL CCL

**Dryeing:** 150°C, 4 min

