

Everzol®
www.ecic.com

Better Chemistry
Better Life

Everzol C & LF/LX dyes

Reactive Dyes

Dyes for cellulose & regenerated
cellulosic fibers in cold pad-batch and
continuous dyeing process.




**Everlight
Chemical**

Everzol C & LF/LX dyes:

Everzol C & LF/LX dyes are reactive dyes. They are suitable for natural cellulosic fibers or regenerated cellulosic fibers and their blends, in the dyeing process of cold pad-batch and continuous.

- Designed and formulated to meet cold pad-batch and continuous dyeing properties.
- Quality assurance by cold pad-batch and continuous dyeing process.
- Enhanced padding liquor stability.
- Enhanced solubility in alkali.

The features of dyes:

- High fixation rate.
reduce effluent and save water.
- Medium substantivity.
less tailing problem from dyes, and good wash-off.
- Good build up.
high color yield, easy to dye heavy shades.
- Full range.
excellent compatibility for pale shades, and from medium to heavy shades.

Dyeing process:

- Cold pad-batch process
- Pad-dry-pad-steam process
- Pad-dry-baking process
- Pad-steam process
- Eموستفك process

Everzol C & LF/LX Dyes on Cotton

		Yellow C-4G	Yellow C-GL	Yellow C-GR	Yellow C-3RS H/C	Yellow C-RN	Yellow CE-N	Orange C-2R
		30 g/l	20 g/l	30 g/l	30 g/l	30 g/l	30 g/l	30 g/l
Solubility (g/l)	25°C	100	100	150	120	100	100	100
Solubility in alkali (g/l)	25°C	30	50	100	75	100	100	70
Lightfastness (Xenon test) ISO 105-B02 *5 g/l, *30 g/l for colors & BK C-8133% *5 g/l, *20 g/l for Y-C-GL, R-C-3B, BK-C-RL, Grey LF, R-LX, R-LF-B, R-LF-2B *30 g/l, *60 g/l for blacks	Rating [®]	5	5-6	5	5	5	5-6	3-4
	Rating [®]	6	>6	5-6	6	6	5-6	3-4
Light-fastness to Perspiration (Xenon test) ----- ISO 105-B07	Acid / Alkali	6/6	5-6/5	6/5-6	6/5-6	6/5-6	5-6/5-6	3-4/3-4
Fastness to Washing ----- ISO 105-C02 (50°C x 45')	E	5	5	5	5	5	5	5
	C	5	5	5	4-5	4-5	4-5	4
	N	5	5	5	5	5	5	5
Fastness to Washing ----- ISO 105-C06-C25 (60°C x 30')	E	5	5	5	5	5	5	5
	C	4-5	5	5	4-5	5	4-5	4
	N	5	5	5	5	5	5	5
Fastness to Water ----- ISO 105-E01 (37°C x 4hr)	E	5	5	4-5	5	4-5	5	4
	C	5	5	5	5	5	5	5
	N	5	5	5	5	5	5	5
Fastness to Perspiration (acid) ----- ISO 105-E04 (37°C x 4hr)	E	5	5	4-5	5	4-5	5	4-5
	C	5	5	5	5	5	4-5	5
	N	5	5	5	5	5	5	5
Fastness to Perspiration (alkali) ----- ISO 105-E04 (37°C x 4hr)	E	5	5	4-5	5	4-5	5	4-5
	C	5	5	5	4-5	5	4-5	5
	N	5	5	5	5	5	5	5
Fastness to Chlorinated Water(20ppm) ----- ISO 105-E03 (27°C x 1hr)	E	4-5	3	2	4	3-4	4	4-5
Fastness to Rubbing ----- ISO 105-X12	Dry	5	5	5	5	5	5	5
	Wet	4	4-5	4	3-4	4	3-4	3
Multicycle Laundering ----- M&S C10A(UK-TO)/60°Cx30'	E	4	5	3-4	4-5	4-5	4-5	4-5

Remark: abbreviation => E: effect on shade C: stain on cotton N: stain on nylon

Everzol C Colors							Everzol LF/LX Colors													
Orange C-3R 133%	Red C-3B	Red C-RB 133%	Red C-3B5 H/C	Red C-D	Turq. C-G 133%	Blue C-R s/p	Blue C-BB 133%	Blue C-BRF	Navy C-GG 133%	Navy C-GB H/C	Navy C-FB	Black C-B 133%	Black C-RL	Black C-N 150%	Black C-GSP	Yellow LX	Red LX	Red LF-B	Red LF-2B	Blue C-LX
30 g/l	20 g/l	30 g/l	30 g/l	30 g/l	30 g/l	30 g/l	30 g/l	30 g/l	30 g/l	30 g/l	30 g/l	30 g/l	20 g/l	60 g/l	60 g/l	20 g/l	20 g/l	20 g/l	20 g/l	20 g/l
100	100	100	100	100	150	100	100	100	100	100	100	150	100	150	150	100	100	100	70	100
60	10	100	70	100	100	100	100	70	45	30	100	100	50	80	100	80	100	80	70	70
3-4	4-5	4	3-4	4-5	3-4	5-6	4	6	3-4	3-4	3-4	3-4	4-5	4	4-5	5-6	4	5	6	6
5	6	4-5	4-5	6	4	>6	5-6	>6	4-5	4	4-5	4	5-6	4-5	5	5-6	4-5	5-6	>6	>6
5/4	4-5/3-4	4-5/4	4-5/4	6/5-6	3/3	5-6/5-6	4-5/4	6/5-6	4-5/4-5	4/4	4-5/5-6	3-4/4	4-5/4	4/4-5	5/5-6	5-6/5-6	4/3-4	5/5	5/5	5-6/4
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3-4	4-5	2-3	5	4-5	4	4-5	4	4-5	4-5	4-5	4-5	4	2-3	4	4	4-5	5	4	4	4-5

Dark Blue LF	Grey LF								
30 g/l	20 g/l								
									
100	100							25°C	Solubility (g/l)
60	100							25°C	Solubility in alkali (g/l)
5-6	5-6							Rating ⁽¹⁾	Lightfastness (Xenon test) ISO 105-B02 *15 g/l, *30 g/l for colors & BK C-B133%.
5-6	5-6							Rating ⁽¹⁾	*15 g/l, *20 g/l for Y-C-GL, R-C-3B, BK-C-RL, Grey LF, R-LX, R-LF-B, R-LF-2B *30 g/l, *60 g/l for blacks.
5-6/5	5/5							Acid / Alkali	Light-fastness to Perspiration (Xenon test) ----- ISO 105-B07
4-5	4-5							E	
5	5							C	Fastness to Washing ----- ISO 105-C02 (50°C x 4h)
5	5							N	
4-5	4-5							E	
4	5							C	Fastness to Washing ----- ISO 105-C06-C25 (60°C x 30')
4-5	5							N	
4-5	4-5							E	
5	5							C	Fastness to Water ----- ISO 105-E01 (37°C x 4hr)
4-5	5							N	
4-5	4							E	
4-5	5							C	Fastness to Perspiration (acid) ----- ISO 105-E04 (37°C x 4hr)
4-5	5							N	
4-5	4-5							E	
4-5	5							C	Fastness to Perspiration (alkali) ----- ISO 105-E04 (37°C x 4hr)
4-5	5							N	
4-5	3							E	Fastness to Chlorinated Water(20ppm) ----- ISO 105-I03 (27°Cx1hr)
4-5	4-5							Dry	
4-5	4							Wet	Fastness to Rubbing ----- ISO 105-X12
4-5	4-5							E	Multicycle Laundering ----- M&S C10A(UK-TO)60°Cx30'

Everzol C & LF/LX Dyes on Cotton

Everzol C & LF/LX trichromatic dyes

Items	Trichromatic	Supplementary
pale shades (1)	Excellent light fastness Everzol Yellow C-GL Everzol Red C-3B Everzol Blue C-BB133%	Everzol Black C-RL Everzol Grey LF
pale shades (2)	Excellent perspiration light fastness Everzol Yellow CE-N Everzol Red LF-B Everzol Blue C-LX	Everzol Yellow LX Everzol Red LF-2B Everzol Blue C-BRF Everzol Grey LF
medium- heavy shades	Bifunctional group Everzol Yellow C-3RS H/C Everzol Red C-3BS H/C Everzol Navy C-FB	
medium- heavy shades	Short fixation time in CPB Non phototropism Everzol Yellow C-RN Everzol Red C-RB133% Everzol Navy C-GB H/C	Everzol Yellow C-GR Everzol Orange C-3R133% Everzol Black C-B133%
brill. yellow, blue & green shades	Everzol Yellow C-4G Everzol Turq. C-G133%	Everzol Blue C-R s/p Everzol Navy C-GG133%
brilliant orange	Everzol Orange C-2R	
red, scarlet shades or	Everzol Orange C-3R133% Everzol Red C-RB133% Everzol Red C-D Everzol Yellow C-3RS H/C Everzol Red C-3BS H/C	Everzol Yellow C-RN
royal blue, violet shades	Everzol Red C-3BS H/C Everzol Blue C-R s/p	Everzol Blue C-BB133% Everzol Blue C-BRF
grey shades	Short fixation time in CPB Everzol Yellow C-RN Everzol Red C-RB133% Everzol Black C-B133%	Everzol Navy C-GB H/C Everzol Dark Blue LF (high fastness to light)
black shades	Everzol Black C-N150% Everzol Black C-GSP	

1. Cold Pad-Batch Process



(a) Alkali requirements in padding liquor:

A. Silicate free method:

Everzol C & LF/LX dyes	X g/l
Caustic soda 32.5% (38°B'e)	5+x/5 cc/l
Soda ash	0-20 g/l
Glauber's salt (option)	0-30 g/l

B. Sodium silicate method:

Sodium silicate	Amounts of Everzol C & LF/LX dyes used (g/l)						
	g/l	ml/l	~20	30	40	50	60
37-40°B'e	130	95	23.5	28.5	28.5	33.5	38.5
40-42°B'e	110	75	23.5	28.5	28.5	33.5	38.5
48-50°B'e	100	65	15	20	20	25	30
58-60°B'e	90	50	6	11	11	16	21

C. Modified silicate method:

Sodium silicate	Amounts of Everzol C & LF/LX dyes used (g/l)						
	g/l	ml/l	~10	20	30	40	50
37-40°B'e	65	50	7	12	12	17	22
40-42°B'e	55	40	7	12	12	17	22
48-50°B'e	50	35	5	10	10	15	20
58-60°B'e	45	25	3	7	7	11	16

Penetrating agent in padding liquor : 0-2g/l

Padding liquor temperature at 20-25°C

Alkali mixer is required.

(b) Fixation time: 4-24hrs at 25°C

(c) Wash-off:

Alkali with A	see 6 (a)
Alkali with B	see 6 (b)
Alkali with C	see 6 (b)

2. Pad-Dry-Pad-Steam Process



(a) Padding liquor:

Everzol C & LF/LX dyes	x g/l
Migration inhibitor	1 g/l
Reduction inhibitor	10 g/l
Penetrating agent	0-2 g/l

Padding liquor temperature at 20-25°C

(b) Drying:

IR predrying

Residual moisture down to appr. 30%

Drying at 110-130°C

Cooling goods after drying

(c) Chemicals padding:

A. Sodium silicate (48-50°B'e)	60-70 %
B. Caustic soda 32.5% (38°B'e)	14-20 cc/l
Salt	250 g/l
C. Caustic soda 32.5% (38°B'e)	12-18 cc/l
Soda ash	20 g/l
Salt	250 g/l

(d) Steaming: Saturated steam at 102-105°C

30-70secs

(e) Wash-off:

Chemical padding with A	see 6 (b)
Chemical padding with B	see 6 (a)
Chemical padding with C	see 6 (a)

3. Pad-Dry-Baking Process



(a) Padding liquor:

Everzol C & LF/LX dyes	x g/l
Alkali	Y g/l
Urea	50-100 g/l
Migration inhibitor	1 g/l
Reduction inhibitor	10 g/l
Penetrating agent	0-2 g/l

Padding liquor temperature at 20-25°C

(b) Drying:

see 2 (b)

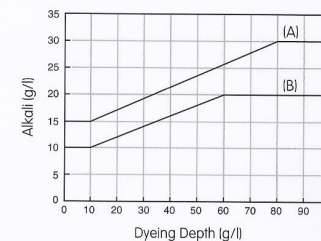
(c) Baking:

2-3min at 150-160°C

(d) Wash-off:

see 6 (a)

(e) Alkali requirements:



NaHCO₃ or Na₂CO₃, 50% + NaHCO₃, 50%, (1:1)

Na₂CO₃

— (line A)

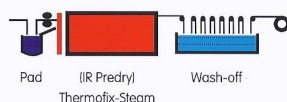
— (line B)

4. Pad-Steam Process



- (a) Padding liquor:
- | | |
|-----------------------------|-----------|
| Everzol C & LF/LX dyes | x g/l |
| Caustic soda 32.5% (38°B'e) | 5-10 cc/l |
| Soda ash | 20 g/l |
| Glauber's salt | 30 g/l |
| Reduction inhibitor | 10 g/l |
| Penetrating agent | 0-2 g/l |
- Padding liquor temperature at 20-25°C
Alkali mixer is required.
- (b) Steaming:
- | | |
|------------------------------|-------------|
| Saturated steam at 102-105°C | 60-100 secs |
|------------------------------|-------------|
- (c) Wash-off: see 6 (a)

5. Emoistfix Process



- (a) Padding liquor:
- | | |
|------------------------|----------|
| Everzol C & LF/LX dyes | X g/l |
| Reduction inhibitor | 5-10 g/l |
| Migration inhibitor | 0-1 g/l |
| Urea (option) | 0-50 g/l |
- (b) Alkalis requirements :
- | Everzol C & LF/LX dyes | Amounts of Everzol C & LF/LX dyes used (g/l) | | | | | |
|---------------------------------|--|-------|-------|-------|--------|-------|
| | ~20 | 20-40 | 40-60 | 60-80 | 80-100 | 100 ↑ |
| NaOH 32.5% (38°B'e) | Amounts of caustic soda 32.5% (38°B'e) required (cc/l) | | | | | |
| | 7 | 11 | 14 | 17 | 21 | 24 |
| Na ₂ CO ₃ | 20 g/l | | | | | |
- Penetrating agent in padding liquor : 0-2g/l
Padding liquor temperature at 20-25°C
Alkali mixer is required.
- (c) Fixation time : 2-3 min at 120-130°C
Humidity control at 25%
- (d) Wash-off : see 6 (a)

6. Wash-off Process



- (a) Cold rinsing (with overflow) 1 box at 30-40°C
Warm rinsing and neutralizing 1 box at 50-60°C
Hot rinsing 1 box at 90-95°C
Hot rinsing 1 box at 90-95°C
Soaping 1 box at 90-95°C
Soaping 1 box at 90-95°C
Warm rinsing 1 box at 50-60°C
Cold rinsing and PH check 1 box at 30-40°C
- (b) Cold rinsing (with overflow) 1 box at 30-40°C
Warm rinsing 1 box at 50-60°C
Hot rinsing 1 box at 90-95°C
Hot rinsing 1 box at 90-95°C
Soaping 1 box at 90-95°C
Soaping 1 box at 90-95°C
Warm rinsing and neutralizing 1 box at 50-60°C
Cold rinsing and PH check 1 box at 30-40°C