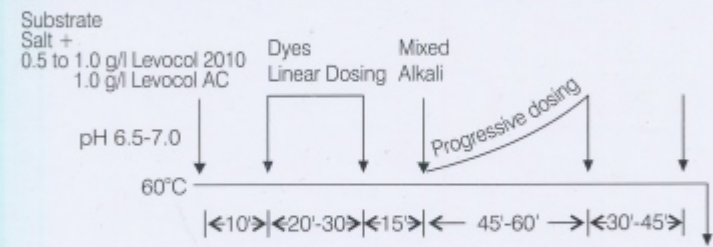
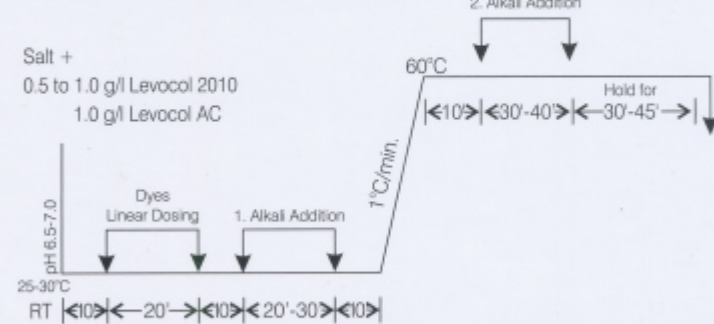


Application - Exhaust dyeing

Isothermal Process



Temperature rise Process



Salt and Alkali recommendations for Corafix RP dyeing on unmercerised cotton

Dyes %	MLR 1:10				MLR 1:5			
	Corafix RP Dyes (Dyeing at 60°C)				Corafix RP Dyes (Dyeing at 60°C)			
	Salt gpl	Soda gpl	Soda gpl	Caustic (50%) ml/lit	Salt gpl	Soda gpl	Soda gpl	Caustic (50%) ml/lit
Up to 0.5%	20	10	-	-	20	10	-	-
0.5 to 1.0%	40	10	5	0.75 to 1.0	35	12	6	0.9 to 1.1
1.0 to 2.0%	50	15	5	1.0 to 1.5	45	15	6	1.1 to 1.5
2.0 to 4.0%	60	20	5	1.5 to 2.0	60	20	6	1.5 to 2.0
4.0 to 5.0%	70	-	5	2.0 to 2.25	70	20	6	2.0 to 2.5
5.0 & above	80	-	5	2.25 to 3.0	80	20	6	3.0

Salt and Alkali recommendations for Corafix RP dyeing on mercerised cotton and regenerated cellulose (Viscose)

Dyes %	MLR 1:10		MLR 1:5	
	Corafix RP Dyes (Dyeing at 60°C)		Corafix RP Dyes (Dyeing at 60°C)	
	Salt gpl	Soda gpl	Salt gpl	Soda gpl
Up to 0.5%	20	5	15	6
0.5 to 1.0%	30	6	25	8
1.0 to 2.0%	40	8	35	10
2.0 to 4.0%	50	10	45	12
4.0 to 5.0%	50	12	50	15
5.0% above	60	15	50	20

Wash-off process in exhaust application

1. Overflow rinse cold.
2. Neutralisation with acetic acid at 50°C for 10 minutes.
3. Hot wash at 80°C for 10 minutes.
4. Soaping at 98°C with 1g/l Levocol 2010 (anionic detergent) for 10 minutes (for deep shade above 5% depth additional soaping at 98°C for 10 min. is required)
5. Again hot wash at 80°C for 10 minutes.
6. Rinse cold & adjust pH (6.0) of fabric.



Cold pad batch dyeing using Sodium Silicate and Caustic Soda

Dyes	X	gpl
Levocol NF (Wetting agent)	1-2	gpl
Urea (if required)	50-200	gpl
Sodium Silicate (58-60° Be / 133°Tw) (Na ₂ O:SiO ₂ = 1:2.1)	85	gpl
Sodium Silicate in the stock tank - should be approx. 45 to 50°Tw		
Caustic Soda (72°TW)	4-12	ml/lit. (For shades above 30gpl)
Dosing		
Dye : Alkali	4:1	
Expression	55-65%	
Batching time	16 hrs.	
Liquor Temperature	25°C ± 2°	
Fixation Temperature	25°C ± 2°	

Cold pad batch dyeing using Soda Ash - Caustic Soda

General recommendation							*Recommendation for selected range						
Dye	gpl	<20	20-40	40-60	60-80	80-100	Dye	gpl	<20	20-40	40-60	60-80	80-100
Soda Ash	gpl	20	20	20	20	20	Soda Ash	gpl	20	20	20	20	20
Caustic soda (50%)	ml/lit.	3	5	7	9	11	Caustic soda (50%)	ml/lit.	1	2	4	6	8

Mixing pump required Padding / Batching Temperature - 25°C ± 2°

Pad-Dry-Pad-Steam method

Dye Padding

Dyes	x	gpl
Levocol NF (Wetting agent)	2	gpl
Levocol AMK (Anti migrating agent)	5-10	gpl
Levocol RESIST (Mild oxidant)	5	gpl
Padding temp.	25	°C
% Expression	55-65%	

Drying (with IR- pre-drying) at 120-140°C- Cool the fabric

Chemical Pad with

Dye conc. (gpl)	<20	20-40	40-60	>60
Salt (gpl)	250	250	250	250
Soda Ash (gpl)	20	20	20	20
Caustic soda (50%) (ml/lit.)	3	4	6	8

Steaming at 102°C in saturated steam for 60-90 seconds followed by Washing off process

The information provided here is in good faith, as per our current knowledge of the product without any liability.

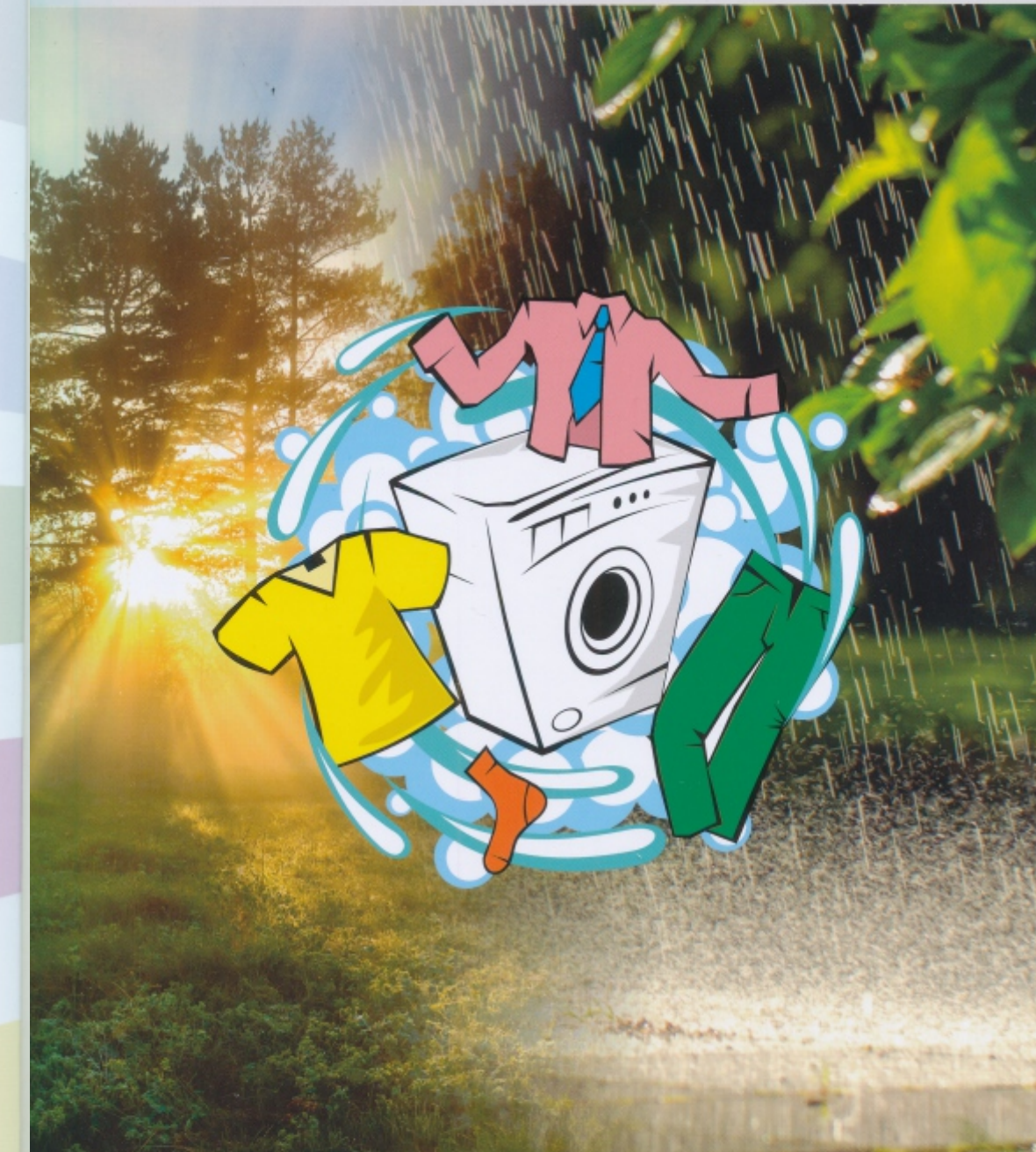


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Corafix RP

Solution to retailer fastness requirement



- Weathering fastness
- Oxidative bleach fastness



Corafix RP - Solution to retailer fastness requirement		Yellow RP*		
Dyeing on mercerised cotton				
Depth shade in 1/1 S/D		3.00%		
Solubility Neutral g/l		165		
Solubility with 50 g/l G. Salt at 50°C (g/l)		100		
Process Suitability	Exhaust (60°C)	✓		
	CPB	✓		
	Pad Dry - Pad - Steam	✓		
	Pad-Air-Steam	✓		
		✓		
Light Fastness	ISO 105 B02 (up to grade 6)	at 1/1 SD	6.0	
		at 1/6 SD	5	
		at 1/12 SD	5-6	
	AATCC 16E 20 AFU	at 1/25 SD	5.0	
		at 1/1 SD	4.0	
		at 1/6 SD	4.0	
		at 1/12 SD	4.0	
	AATCC 16E 40 AFU	at 1/25 SD	4.0	
		at 1/1 SD	3.5	
		at 1/6 SD	3.5	
		at 1/12 SD	3.5	
	M & S C-9 (upto grade 4)	at 1/25 SD	3.5	
at 1/1 SD		4 On tone		
at 1/6 SD		4 On Tone		
at 1/12 SD		4 On tone		
M & S C-9A	at 1/25 SD	4 On tone		
	at 1/1 SD	4-5 On tone		
	at 1/6 SD	4-5 On tone		
	at 1/12 SD	4-5 On tone		
Nike Perspiration Light Fastness	Alkaline	at 1/25 SD	4-5 On tone	
		at 1/1 SD	4.5	
		at 1/6 SD	3.5	
		at 1/12 SD	3.5	
	Acidic	at 1/25 SD	3.5	
		at 1/1 SD	4.0	
		at 1/6 SD	4.0	
		at 1/12 SD	4.0	
Fastness to Weathering	ISO 105 B04	at 1/25 SD	3.5	
		at 1/6 SD	4	
		at 1/12 SD	4	
Fastness to Washing	ISO 105 C10 - C3 (at 60°C)	CS / SC	4/4-5	
	M & S C4A (at 60°C) (at 60°C)	CS / SC	4/4-5	
	ISO 105 C10 - D4 (at 95°C)	CS / SC	4/4-5	
	AATCC 61 - 2A	CS / SC	4.0/4.5	
	AATCC 61 - 3A	CS / SC	4.0/4.5	
	Home Laundry ISO 105 C06 - C2S	CS / SC	4/4-5	
	Water Severe M & S C6	CS / SC	4-5/4-5	
Fastness to Perspiration	M & S C7 (Acidic)	CS / SC	4-5/4-5	
	M & S C7 (Alkaline)	CS / SC	4-5/4-5	
Fastness to Chlorinated Water	Fastness to Oxidative Bleach M & S C10A	CS	at 1/1 SD	4 On tone
			at 1/6 SD	4 On tone
			at 1/12 SD	4 On tone
Rubbing Fastness	Fastness to Hypochlorite Bleaching ISO 105 N01	CS	3-4	
	Fastness to peroxide Bleaching ISO 105 N02	CS	4	
	ISO 105 E03 (20ppm)	CS	3-4	
Dischargeability	ISO 105 E03 (50ppm)	CS	3	
	Dry Rubbing ISO 105 Z12 x 12		4-5	
	Wet Rubbing ISO 105 Z12 x 12		3-4	
	Fastness to Saliva LFGB B82 10.1 (Colour Staining)	CS	5	
	Fastness to Perspiration LFGB B82 10.1		5	
	Fastness to Burnt Gas Fumes ISO 105 G02	CS	After 3 Cycles	
	Fastness to Hydrolysis M & S C11		4-5/4-5	
	Fastness to Dry Cleaning M & S C5		4/4-5	
	Fastness to Hot Pressing ISO 105 X11:1994 200°C (Immediate - dry/wet)	CS	4-5/4-5	
	Fastness to Hot Pressing ISO 105 X11:1994 200°C (After conditioning - dry/wet)	CS	4-5/4-5	
Remarks Abbreviations :				
D = Dischargeable				
ND = Not Dischargeable				
CS = Change in Shade				
SC = Staining on Cotton				
NA = Not Analysed				
X = Not Suitable				
✓ = Suitable				

Gold RP	Orange RP	Red Brown RP	Red RP-N*	Maroon RP	Blue RP*
2.50%	2.50%	1.35%	5.20%	1.14%	3.0%
165	70	125	100	125	140
100	<20	100	40	100	100
✓	✓	✓	✓	✓	✓
✓	X	✓	✓	✓	✓
✓	X	✓	✓	✓	✓
✓	X	✓	✓	✓	✓
6	5	5-6	4	6	6
5	4	4	3-4	3-4	5-6
5	4	3-4	3-4	4	5-6
---	---	---	3-4	---	5-6
4.5	4.0	4.0	4.5	4.0	4.5
4.0	3.5	3.5	4.0	4.0	4.5
4.0	3.0	3.5	4.0	3.5	4.0
---	---	---	3.5	---	4.0
4.0	3.5	3.5	4.0	3.5	4.0
3.5	3.0	3.0	3.0	3.5	4.0
3.5	2.5	3.0	3.0	2.5	3.5
---	---	---	3.0	---	3.5
4 On tone	3-4 On tone	4 On Tone	4 On Tone	4 On Tone	4 On Tone
4 On Tone	3 On tone	4 On Tone	4 On Tone	4 On Tone	4 On Tone
4 On Tone	2-3 On tone	3-4 On tone	4 On Tone	3-4 On tone	4 On tone
---	---	---	3-4 On tone	---	4 On tone
4-5 On tone	4-5 On Tone	4-5 On Tone	4-5 On tone	4-5 On Tone	4-5 On Tone
4-5 On Tone	4-5 On tone	4-5 On tone	4-5 On tone	4-5 On Tone	4-5 On Tone
4-5 On Tone	4-5 On tone	4-5 On tone	4-5 On tone	4-5 On Tone	4-5 On Tone
---	---	---	4-5 On tone	---	4-5 On Tone
4.5	3.5	3.5	3.0	3.5	3.5
3.5	3.0	2.5	2.5	2.5	3.5
3.5	3.0	2.5	2.5	2.5	3.5
---	---	---	2.5	---	3.0
4.5	4.0	4.0	3.5	4.0	4.0
3.5	3.5	3.0	3.0	3.0	3.0
3.5	3.5	3.0	3.0	3.0	3.0
---	---	---	3.0	---	3.0
5-6	4	3-4	6	4	4
5-6	3-4	3-4	4-5	4	4
5-6	3	3-4	4-5	4	4
4/4-5	4/4	4/4-5	4/4-5	4/4-5	4/4-5
4/4-5	4/4	4/4-5	4/4-5	4/4-5	4/4-5
4/4-5	4/4	4/4-5	4/4-5	4/4	4/3-4
4.0/4.5	4.0/4.0	4.0/4.5	4.0/4.0	4.0/4.0	4.0/4.5
4.0/4.5	4.0/4.0	4.0/4.5	4.0/4.0	4.0/4.0	4.0/4.0
4/4-5	4/4	4/4.5	4/4.5	4/4.5	4/4.5
4-5/4-5	4-5/4-5	4-5/4-5	4-5/4-5	4-5/4-5	4-5/4-5
4/4.5	4/4	4/4.5	4/4.5	4/4.5	4/4.5
4-5/4-5	4-5/4-5	4-5/4-5	4-5/4-5	4-5/4-5	4-5/4-5
4-5/4-5	4-5/4-5	4-5/4-5	4-5/4-5	4-5/4-5	4-5/4-5
4-5/4-5	4-5/4-5	4-5/4-5	4-5/4-5	4-5/4-5	4-5/4-5
3-4 On tone	4 On tone	4 On tone	4-5 On Tone	4-5 On Tone	4 On Tone
3-4 On tone	4-5 On Tone	4-5 On Tone	4-5 On Tone	4 On Tone	4 On Tone
3-4 On tone	4-5 On Tone	4-5 On Tone	4-5 On Tone	4 On Tone	4 On Tone
3-4 On tone	4 On tone	4 On tone	4 On tone	4 On tone	4 On tone
3-4	4	3-4	4	4	4
3-4	4	4	4	4	4
3	4	3-4	3-4	4	3-4
3-4	4	4-5	4-5	4-5	4-5
4-5	3	3	2-3	2-3	3
5	5	5	5	5	5
5	5	5	5	5	5
3	3-4	3	3	3-4	2-3
4-5/4-5	4-5/4	4-5/4-5	4-5/4-5	4-5/4-5	4-5/4
4/4-5	4/4-5	4/4-5	4-5/4-5	4/4-5	4/4-5
4-5/4-5	4-5/4-5	4-5/4-5	4/4	4/4	4-5/4-5
4-5/4-5	4-5/4-5	4-5/4-5	4-5/4-5	4-5/4-5	4-5/4-5
D	ND	D	ND	ND	ND

Dark Blue RP*	Grey RP*	Cyan RP	Royal Blue RP	Navy RP-R	Navy RP-G
2.42%	4.5%	2.70%	3.00%	1.43%	1.50%
125	100	200	100	150	125
100	60	200	80	100	90
✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓
✓	NA	✓	✓	✓	✓
✓	NA	✓	✓	✓	✓
5	6	5-6	6	3-4	3
4	6		5	3	2-3
4	5-6	4-5	5	3	
---	5-6	4-5	---	---	---
4.0	4.5	4.5	4.5	3.5	4
3.5	4.5	---	4.5	3.0	3
3.0	4.5	4	4.0	3.0	
---	4.5	4	---	---	---
3.5	4.0	4	4.0	2.5	3.5
3.0	4.0		4.0	2.0	2.0
2.5	4.0	3.5	3.5	2.0	---
---	4.0	3	---	---	---
4 On Tone	4 On Tone	4	4 On Tone	3-4 On Tone	3-4 On Tone
3-4 On Tone	4 On Tone	---	4 On Tone	3 On Tone	2-3 Off Tone
3-4 On Tone	4 On Tone	3-4	3-4 On Tone	3 On Tone	---
---	4 On Tone	3-4	---	---	---
4-5 On Tone	4-5 On Tone	4-5	4-5 On Tone	2-3 On Tone	4-5 On Tone
4-5 On Tone	4-5 On Tone	---	4-5 On Tone	2-3 On Tone	4 On Tone
4-5 On Tone	4-5 On Tone	4-5	4-5 On Tone	2-3 On Tone	---
---	4-5 On Tone	4-5	---	---	---
3.0	3.5	4.5	4.5	2.0	4
2.5	3.5	---	3.5	2.0	3.0
2.5	4.0	4.5	3.5	2.0	
---	3.5	4.5	---	---	---
3.5	4.0	---	4.5	2.5	---
3.0	3.5	---	3.5	2.0	---
3.0	4.0	---	3.5	2.0	---
---	3.5				
5.0	6	Better than 6	4	3	4-5
4.0	6	Better than 6	4	2-3	3.0
3-4	5-6	6	4	2-3	3.0
4/4-5	4/3	4/4	4/4-5	4/4-5	4/4-5
4/4-5	4/3	4/4	4/4-5	4/4-5	4/4-5
4/4-5	4/3	4/4-5	3-4/4-5	4/4-5	4/3
4.0/4.5	4.0/4.5	4/4	4.0/4.5	4.0/4.5	4/4.5
4.0/4.0	3.5/2.5	4/3.5	4.0/4.5	4.0/4.5	4/4-5
4/4.5	4/3	4/3-4	4/4.5	4/4.5	4/4.5
4/4.5	4.5/4.5	4.5/4	4.5/4.5	4.5/4.5	4-5/4-5
4-5/4-5	4.5/4.0	4.5/4	4-5/4-5	4-5/4-5	4-5/4-5
4-5/4-5	4.5/4.5	4.5/3-4	4-5/4-5	4-5/4-5	4-5/4-5
3-4 On Tone	4 On Tone	4-5 On Tone	3-4 On Tone	2-3 Off Tone	4 On Tone
3-4 On Tone	4 On Tone	4-5 On Tone	3 On Tone	2-3 Off Tone	---
3-4 On Tone	4 On Tone	4-5 On Tone	2-3 On Tone	2-3 Off Tone	---
3-4	2-3	3	4	2-3	3
3	2-3	3-4	1-2	3	4
3-4	3	2-3	3	3	3-4
3-4	2-3	1-2	3	2-3	3
4-5	4	4-5	4-5	4-5	4-5
3	3-4	3	3-4	3	3
5	5	3	5	5	5
5	5	3-4	5	5	5
2-3	2	3-4	3.0	2-3	3-4
4-5/4	4-5/3	4-5/4	4-5/4	4-5/4-5	4-5/4-5
4/4-5	4/4-5	4/4-5	4/4-5	4/4-5	4/4-5
4/4	4/4	NA	4/4	4/4	NA
4-5/4-5	4-5/4-5	NA	4-5/4-5	4-5/4-5	NA
ND	ND	ND	ND	D	D