			Processes						Light Fastness				Solubility		Washing			Perspiration			M&S C7		Chlorinated Water (JISL 0884-10 mg)	Dry Rubbing (M&S C8)	Wet Rubbing (M&S C9)	Perborate Wet Fade (M&S C9A)	Repeated Domestic Washing (M&S C10A)												
			Warm Exhaust	Cold Pad Batch	Pad Dry Pad Steam	Pad Dry Steam	Pad Dry Thermofix	Econtrol	Dischargeability	AATCC 16E 1/1	AATCC 16E 1/3	ISO B02 1/1	ISO B02 1/3	Water 30°C	In Presence of Salt 50°C (90 g/l)	Effect	Stain (Cotton)	Stain (Nylon)	Effect	Stain (Cotton)	Stain (Nylon)	Effect						Stain (Cotton)	Stain (Nylon)										
																														C06/C2		Acidic		Alkaline					
																														4	R	4	R	4	R				
1%	4%	Yellow ME4GL	S	NS	NS	NS	NS	NS	A	4	3-4	6	5	200	200	4	4	4-5	4	4-5	4-5	4-5	4-5	3-4	5	4	4-5	4	4	4-5	4	4							
		Golden Yellow MERL	S	S	NS	NS	NS	NS	C	4-5	4	6	5	200	200	4-5	4	4-5	4-5	4-5	4-5	4-5	4-5	4	4-5	4	4-5	4	4-5	4	4	4-5	4	4					
		Orange ME2RL	S	NS	NS	NS	NS	NS	C	3-4	3	4	3-4	40	< 5	4	3-4	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4	4-5	4	4-5	4	4	4-5	4	4					
		Red MEGF	S	S	NS	NS	NS	NS	A	3-4	3-4	4-5	4	200	30	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	4-5	3-4	4	4	4-5	4	4				
		Red ME3BL	S	S	NS	NS	NS	NS	C	4	3-4	4-5	4	40	< 5	4-5	4-5	5	4-5	4-5	4-5	4-5	4-5	4	4-5	4	4-5	3	4-5	4	4	4-5	4	4					
		Red ME4BL	S	S	NS	NS	NS	NS	C	4	3-4	4-5	4	200	200	4-5	4-5	4-5	4-5	4	4-5	4-5	4	4-5	4-5	4-5	3-4	4-5	3-4	4-5	4	4	4	4	4				
		Red MRBL	S	S	NS	NS	NS	NS	C	3-4	3	4	3	200	200	4-5	4-5	4-5	4-5	4-5	4-5	4	4-5	4-5	4-5	4-5	4	4-5	4	4	4	4	4	4	4	4			
		Red ME6BL	S	NS	NS	NS	NS	NS	C	3-4	3	4-5	4	60	< 5	4-5	4	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	3-4	4-5	3-4	4-5	4	4	4	4	4			
		Brilliant Blue JRF	S	NS	NS	NS	NS	NS	B	4	4	6	5-6	60	< 5	4-5	4	4-5	4	4-5	4-5	4-5	4	4-5	4-5	4-5	4-5	3-4	4-5	3-4	4-5	4	4	4	4	4			
		Brilliant Blue ME2RL	S	NS	NS	NS	NS	NS	C	2-3	2	3	2-3	80	40	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	4-5	4	4	4	4	4	4		
		Navy Blue ME2GL	S	S	NS	NS	NS	NS	C	3	2-3	4	3-4	120	30	4	4	4-5	4-5	4-5	4-5	4-5	4	4-5	4-5	4	4-5	3-4	4-5	3-4	4	4	4	4	4	4	4		
		Navy Blue MEBF	S	NS	NS	NS	NS	NS	B	3-4	3	4	3-4	200	120	4	4	4-5	4-5	4-5	4-5	4-5	4	4-5	4-5	4-5	4-5	4-5	3-4	4-5	3-4	4	4	4	4	4	4		

Jakofix® ME Dyes

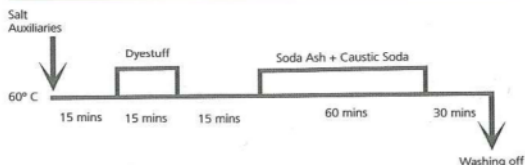


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Jakofix[®] ME Dyes

Warm Exhaust Dyeing Method

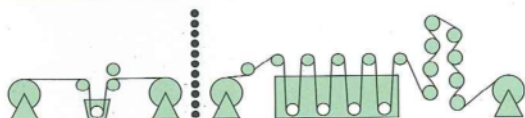


% Dye	Salt (g/l)	Soda Ash (g/l)	Caustic Soda 50% (ml/l)
< 0.1	20	5	0
0.1 - 0.5	20 - 25	5	0.6 - 0.75
0.5 - 1.0	25 - 40	5	0.75 - 0.9
1.0 - 2.0	40 - 50	5	0.9 - 1.2
2.0 - 3.0	50 - 60	5	1.2 - 1.5
3.0 - 5.0	60 - 80	5	1.5 - 2.0
> 5.0	80 - 100	5	2.0

Washing-off Process

- 10 mins at 50° C (de-ionised water)
- 10 mins at 50° C (at pH 5-6 with acetic acid)
- 10 mins at 80° C (de-ionised water)
- 10 mins at 95° C (de-ionised water)
- 10 mins at 80° C (de-ionised water)
- 10 mins at 25° C (de-ionised water)

Cold Pad Batch Dyeing Method



Mixing pump required : Add 100g/l urea to dye liquor (as necessary for solubility)

1. Cold Silicate Method

Dyestuff (g/l)	Sodium Silicate (38° Be)	Caustic Soda 50% (ml/l)
< 20	50 ml/l	11
30	50 ml/l	14
40	50 ml/l	14
50	50 ml/l	14
60	50 ml/l	17
70-100	50 ml/l	20

Washing-off Process

- Cold (de - ionised water).
- Cold (de - ionised water)
- 60° C (de - ionised water)
- 60° C (de - ionised water)
- 60° C (de - ionised water) (acetic acid to pH 7)
- 95° C (de - ionised water + detergent)
- 95° C (de - ionised water + detergent)
- 95° C (de - ionised water)
- Warm (de - ionised water)

Batch 16 hours at 25° C

2. Tropical Method

Dyestuff (g/l)	Sodium Silicate (38° Be)	Caustic Soda 50% (ml/l)
< 5	100 ml/l	4
10	100 ml/l	6
20	100 ml/l	7
30	100 ml/l	9
40	100 ml/l	9
50	100 ml/l	10
80	100 ml/l	11
100	100 ml/l	14

Washing-off Process

- Cold (de - ionised water)
- Cold (de - ionised water)
- 60° C (de - ionised water)
- 60° C (de - ionised water) (acetic acid to pH 7)
- 95° C (de - ionised water + detergent)
- 95° C (de - ionised water + detergent)
- 95° C (de - ionised water)
- Warm (de - ionised water)

Batch 16 hours at 35° C.

Jakofix[®] ME Dyes

Customer Benefits for Warm Exhaust Dyeing

- Wide range of products for broad shade gamut
- Good build-up behaviour for dark shades
- Moderately good reproducibility for good RFT levels
- Good wash-off properties for good fastness levels

Dye Selection

Pale Shades

- Jakofix Golden Yellow MERL
- Jakofix Red ME4BL
- Jakofix Brilliant Blue JRF

Medium-Heavy Shades

- Jakofix Golden Yellow MERL
- Jakofix Red ME4BL
- Jakofix Navy Blue MEBF

Support Dyes

- Jakofix Yellow ME4GL
- Jakofix Orange ME2RL
- Jakofix Red MEGF
- Jakofix Red ME3BL
- Jakofix Red ME6BL
- Jakofix Red MRBL
- Jakofix Brilliant Blue ME2RL
- Jakofix Navy Blue ME2GL

Customer Benefits for Cold Pad Batch Dyeing

- Simple process requiring minimal capital investment
- Easy clean - down process suitable for short runs
- Good wash - off properties for good fastness levels

Dye Selection

Medium - Heavy Shades

- Jakofix Golden Yellow MERL
- Jakofix Red ME4BL

Support Dyes

- Jakofix Red MEGF
- Jakofix Red ME3BL
- Jakofix Red MRBL
- Jakofix Navy Blue ME2GL

Abbreviations

- BI - Bluer
- Br - Brighter
- Dk - Darker
- DI - Duller
- G - Greener
- R - Redder
- Y - Yellower
- A - White Discharge
- B - Moderately Dischargeable
- C - Non Dischargeable
- S - Sultable
- NS - Not Suitable

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