












		Processes						Light Fastness				Solubility gms./lit.		Washing			Perspiration		M&S C7		Chlorinated Water (JIS-L 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
0.5%	2%																														
	Yellow LD New	S	S	S	S	NS	S	B	4	4	4-5	4	200	80	4-5 R	4	4-5	4	4-5	4-5	4	4-5	4-5	3-4 G	4-5	4	4-5	4			
	Red LD	S	S	S	S	NS	S	C	3-4	3-4	3-4	3	200	200	4 BI	4-5	5	4-5 BI	4-5	4-5	4-5 BI	4-5	5	4	5	4	4	2-3			
	Blue LD	S	S	S	S	NS	S	B	3-4	3	4	3-4	200	200	4-5	4-5	4	4-5 G	4-5	4-5	4-5 G	4-5	4	4-5	4-5	4	3-4	3-4			
1%	4%																														
	Yellow CE New	S	S	S	S	S	S	A	4	3-4	4	3-4	200	200	4-5	4-5	4	4-5	4-5	4	4-5	4-5	4	4	5	4	4-5	4-5			
	Orange CE	S	NS	NS	NS	NS	NS	A	4-5	4	4-5	4	200	200	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4	4-5	4-5	4-5 G,DI	4-5	4	4-5	4-5		
	Red CE	S	S	S	S	S	S	C	4	3-4	4	3-4	200	150	4-5	4-5	5	4-5	4-5	5	5	4-5	5	4	5	4	4	3-4			
	Deep Red CE	S	S	S	S	S	S	C	4	3-4	4	3-4	200	200	4-5	4	4-5	4	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4	4-5	4-5			
	Blue CE	S	S	S	S	S	S	B	3-4	2-3	3-4	3	200	150	4-5	4-5	5	4-5 G	4-5	5	4-5 G	4-5	4-5	4	4-5	4	4	3			
	Navy CE	S	S	S	S	S	S	A	3-4	2-3	3-4	2-3	200	200	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	5	4-5	4-5	5	4 G,DI	5	4	4	4
4%	8%																														
	Black CE	S	S	S	S	S	S	B	4 (2/1)	-	4 (2/1)	-	200	200	4	4-5	4	4-5	4-5	4-5	4-5	4-5	4-5	4-5	3 Y	4-5	4	4	3 R		
	Black CECL	S	S	S	S	S	S	A	3 (2/1)	-	3 (2/1)	-	200	200	4-5	4-5	4-5	4-5 G	4-5	4-5	4-5 G	4-5	4-5	3 R,DI	4-5	4	3-4	3 R,DI			
1%	4%																														
	Yellow DS	S	S	S	S	S	S	B	4-5	4	6	5-6	200	200	4-5	4	4-5	4-5	4	4	4	4	4	4	4	4	4	4-5 DI			
	Yellow DSR	S	S	S	S	S	S	B	4-5	4	6	5-6	200	150	4-5	3-4	5	4-5 G	4-5	5	4-5	4	5	4-5 G	5	3-4	4-5	4-5 R			

Jakazol® LD/CE/DS/Dyes

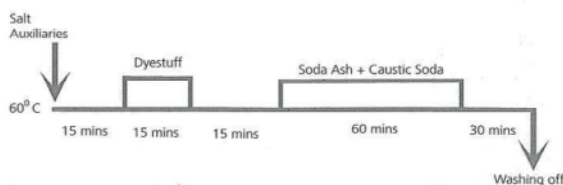


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Jakazol® LD /CE/DS/Dyes		Processes					Light Fastness				Solubility gms / lit.		Washing		Perspiration		M&S C7		Chlorinated Water (JIS L 0884-10 mg)	Dry Rubbing (M&S CB)	Wet Rubbing (M&S CB)	Perborate Wet Fade (M&S CSA)	Repeated Domestic Washing (M&S C10A)							
		Warm Exhaust: Cold Pad Batch	Pad Dry Pad Steam	Pad Dry Steam	Pad Dry Thermofix	Econol	Dischargeability	AATCC 16E 1/1	AATCC 16E 1/3	ISO 802 1/1	ISO 802 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)			
1%	4%																													
		Orange DS	S	S	S	S	S	A	4	3-4	6	5-6	200	200	4-5	4-5	5	4-5	4-5	4-5	4-5	4-5	4	4-5 R	5	4	4-5	4-5		
		Brilliant Red DS2B	S	S	S	S	S	C	4	3-4	5	4	200	200	4-5	4-5	4-5	4-5 BI	4-5	4-5	4-5 BI	4-5	4-5	4-5	4-5	4-5	3-4	4-5	4-5	
		Red DS	S	S	S	S	S	C	4	3-4	4	3-4	200	200	4-5	4	4-5	4	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4	4-5	4	4-5	4-5
		Red DSB New	S	S	S	S	S	A	4-5	4	4	3-4	200	200	4-5	4	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4	4-5	4	
		Navy DSG	S	S	S	S	S	A	3-4	2-3	3-4	2-3	200	200	4-5	4-5	5	4-5	4-5	4-5	4-5	4-5	4-5	4	5	3-4	4	4		
4%	8%								(2/1)	(2/1)																				
		Black DSG	S	S	S	S	S	A	3-4	-	3	-	200	200	4-5	4-5	5	4-5	4-5	5	4-5	4-5	5	3-4 DI	4-5	4	3-4	3 R,DI		
		Black DSR	S	S	S	S	S	A	3	-	3	-	200	200	4-5	4	4-5	4-5	4-5	4-5	4-5	4-5	4-5	3-4	4-5	4	3-4	3 R,DI		

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

### LD Dyes ( For Pale Shades )

- Customer Benefits**
- Modified hetero bi-functional dyes
  - Excellent compatibility
  - Excellent reproducibility for high RFT levels
  - Good level dyeing properties
  - Easy to wash-off

### CE Dyes ( For Medium / Heavy Shades )

- Customer Benefits**
- Economical hetero bi-functional Dyes
  - Good build - up
  - Good level dyeing properties
  - Resistant to perborate wet fading

### Dye Selection

- Medium Shades** Yellow CE New Red CE Blue CE
- Heavy Shades** Yellow CE New Deep Red CE Navy CE
- Support Dyes** Orange CE Black CE Black CECL