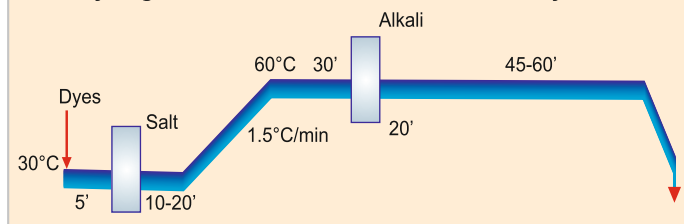


1.0 EXHAUST DYEING METHODS:

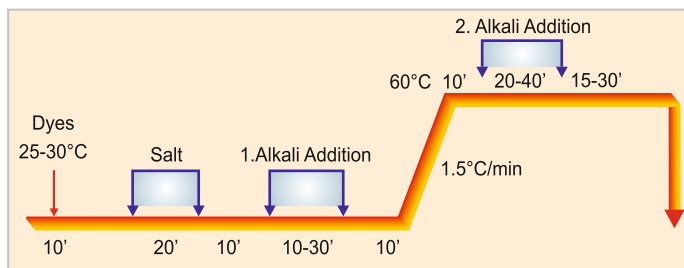
1.1 Dyeing Method for Meactive F / DS / Ultra Dyes



Salt & Alkali Requirements

Dyes conc %	Salt g/l		Alkali Addition g/l	
	Unmercerised Cotton	Mercerised Cotton	Soda ash	Soda ash + Caustic Soda 50%
Below 0.1	20 - 30	10-15	10	5 + 0.5
0.1 - 0.5	30 - 40	15 - 20	10	5 + 0.5
0.5 - 1.0	40 - 50	20 - 25	15	5 + 1.0
1.0 - 2.0	50 - 60	30 - 40	15	5 + 1.0
2.0 - 3.0	60 - 80	40 - 60	15	5 + 1.0
3.0 - 5.0	60 - 80	60	20	5 + 2.0
Above 5.0	80	70	20	5 + 2.0

2.0 Dyeing with Vinyl Sulphones / RGB'S / EPB'S :

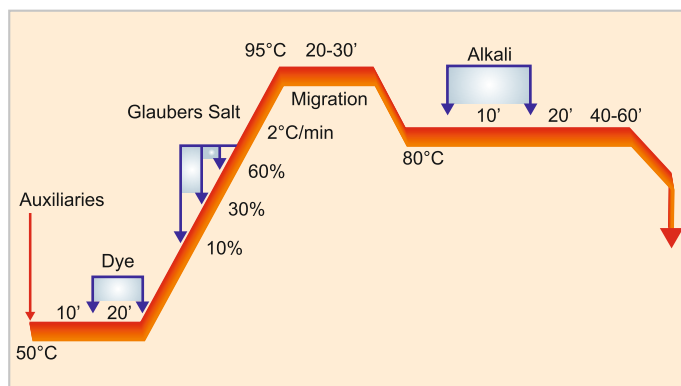


- Add dyes at room temperature in linear manner over 10 minutes.
- Then add salt as required over 20 minutes. Run for 10 minutes after complete addition of salt.
- Then add the first part of alkali over 10-30 minutes. Run for 10 minutes after complete addition of alkali.
- Now raise the temperature to 60°C. Run for 10 minutes at 60°C.
- Add the second part of alkali over 20-40 minutes & run for 30 minutes after complete addition of alkali.

2.1 Salt & Alkali Requirements

Dyes conc %	Salt g/l		Alkali Addition g/l
	Unmercerised Cotton	Mercerised Cotton	Soda ash + Caustic Soda 50%
Below 0.1	20 - 30	10-15	5
0.1 - 0.5	30 - 40	15 - 20	5 + 0.6 - 0.75
0.5 - 1.0	40 - 50	20 - 25	5 + 0.75 - 0.9
1.0 - 2.0	50 - 60	30 - 40	5 + 0.9 - 1.2
2.0 - 3.0	60 - 80	40 - 60	5 + 1.2 - 1.5
3.0 - 5.0	60 - 80	60	5 + 2.0 - 3.0
Above 5.0	80	70	5 + 3.0
1. Alkali Addition	Soda ash + 1/3 Caustic Soda		
2. Alkali Addition	2/3 Caustic Soda		

3.0 MIGRATION METHOD FOR GREEN / TURQUOISE SHADES



- Heat the water bath to 50°C. Add required amount of dyes over 10-15 mins
- Then under linear addition, add the required amount of Salt over 20 minutes.
- Raise the temperature to 95°C @ 2°C / Min. Run at this temperature for 20 - 30 mins.
- Then cool the dyebath to 80°C @ 1°C / Min. Add required amount of predissolved alkali in the following proportion, 1/6, 1/3 and then 1/2. Run for 45 minutes after the last alkali addition and check shade.

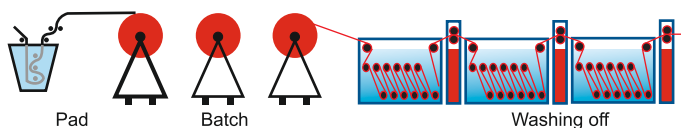
3.1 SALT & ALKALI ADDITIONS

Dyestuff concentration	0.1 - 0.5	0.5 - 1.0	1.0 - 2.0	2.0 - 4.0	> 4.0
Glauber's Salt G/L	30	45	60	70	80
Soda Ash G/L	10	15	15	20	20

SPECIAL INSTRUCTIONS FOR DISSOLUTION OF TURQUOISE BLUE:

1. After weighing the required amount of dyes in a vessel, first add water at room temperature and make a paste. After formation of a smooth paste, add hot water of about 70-80°C. under gradual stirring.
2. While dissolving the dyestuff can add about 0.5 to 1 g/l of soda ash in the dissolution bath. This will help in solubilising the dyestuff more effectively.
3. It is recommended to add a dispersing agent (0.5-1 gms / lit) which is anionic in nature. This will assist to counter residue of non ionic detergents carried over from scouring bath. The total quantity of dispersing agent can be split into two halves. First half is to be added while dissolving the dyestuff and second half to be added in the dye bath.
4. For dyeing a green shade, the Yellow dye that has to be used in combination should be dissolved in a separate vessel and not with the Turquoise Blue. The two solutions can then be mixed.

4.0 COLD PAD BATCH:



Padding condition

- Batching time = 16 hours
- Batching temperature = 25°C
- Padding solution temperature = 25°C
- Liquor Pick up = for Cotton 60% and for Viscose 80%.

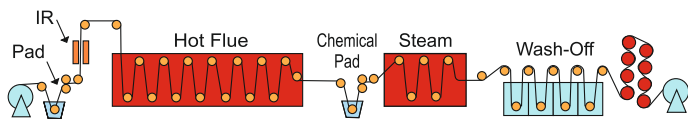
4.1 Alkali Recommendations: (Sodium Silicate Method)

Type of sodium silicate	Sodium Silicate	Dye [g/l]							
		< 5	10	20	30	40	50	80	100
°Bé (Na ₂ O : SiO ₂)	(g/l) (ml/l)	Caustic soda 50% [ml/l]							
37 - 40	1 : 3.3	135	100	4	6	7	9	9	10
40 - 42	1 : 3.3	120	85	4	6	7	9	9	10
48 - 50	1 : 2.6	105	70	—	0.5	2	3	3	5

4.2 Alkali Recommendations: (Soda ash / Caustic Soda Method)

Mohizol / Meactive	g/l	Up to 10	20	30	40	50	>60
Soda ash	g/l	10	20	20	20	20	20
Caustic Soda 36°Be (50% Lye)	ml/l	4	6	8	10	10	10

5.0 PAD DRY PAD CHEMICAL STEAM:



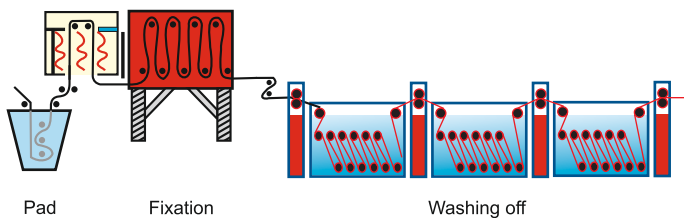
METHOD

	Chemical	Amount
Padding	Dyes	X g/l
	Migration Inhibitor	2 g/l
	Wetting Agent	1 g/l
	Reduction Inhibitor	10 g/l
	Liquor temperature	25°C
	Liquor Pick up	60%
Drying	Temperature	120°C
	Time	1 min
Padding	Soda Ash	20 g/l
	Caustic Soda (38°Be)	10 c.c/l
	Glaubers Salt	200 g/l
	Liquor temperature	25°C
Fixation	Liquor Pick up	70%
	Temperature	102°C
	Time	1 minute

6.0 E-Control Process:

The innovation utilises the physical law of water evaporation from cellulose to provide the optimum temperature and moisture condition within the hot flue drier, ideal for the efficient fixation of the selected dyes. E-control process comprises just three steps:

Padding → → Drying → → Washing off



6.1 Guide process recommendation:

Dyes	-	X g/l
Wetting Agent	-	2-4 g/l
Antimigrant	-	5-10 g/l
Resist Salt	-	0-5 g/l
Urea	-	0-50 g/l
Soda ash	-	20 g/l

Caustic soda - See tables below

6.2 Recommended alkalis and auxiliaries

Plain Soda ash or mixture of soda ash/NaOH is normally used as alkali system. To ensure optimum reliability, it is essential to dose the dye and alkali solutions separately in the ratio of 4:1 similar to CPB. Amount of alkali recommended are shown below:

Amount of Dye	Upto 20 g/l	20-40	40-60	60-80	80-100	100
Soda ash	20 g/l	20 g/l	20 g/l	20 g/l	20 g/l	20 g/l
Caustic Soda 50%	3.5 c.c./lit	6 c.c./lit	8 c.c./lit	10 c.c./lit	12 c.c./lit	12 c.c./lit

6.3 Econtrol settings:

Temperature : 110-130°C

Humidity : 30%

Time : 2-4 minutes

IMPORTANT: THE MATERIAL SHOULD COME OUT OF THE MACHINE COMPLETELY DRIED.

Common auxiliaries used in continuous dyeing process can be used, e.g. wetting agents, anti migrating agent and if necessary, sequestering agent. A mild oxidant can be added to prevent reduction of the dyes. Urea is not essential for the E-control process but up to 50 g/l may be advantageous in some circumstances.

7.0 After treatment

Exhausted dyebath :

- hydrolysed dye
- electrolyte
- alkali



Influences :

Phase 1	Phase 2	Phase 3
Dilution ; - dyestuff - electrolyte - alkali (neutralisation - VS anchors)	Diffusion ; dyestuff (optimum when electrolyte conc. is < 2 g/l)	Dilution; - dyestuff
Temperature Liquor ratio Electrolyte conc. Drain time / Carry - over Substrate Rope cycles	Hardness pH Dye chemistry Running time Its very important that the electrolyte conc is kept < 2 g/l before the fabric is taken for soaping.	



The removal of unfixed reactive dye takes place in 3 phases:

- 1) Dilution of dye and chemicals in solution and on the surface of the cellulose.
- 2) Diffusion out of the deeply penetrated unfixed hydrolysed dye to the fibre surface.
- 3) Dilution and removal of the diffused-out dye.

The depth of shade determines the number of rinses required. There should be sufficient rinses during phase 1 to reduce the electrolyte concentration to less than 2 g/l before the boiling 'soap', phase 2. This will ensure that the substantivity of the unfixed dye is at a minimum. Higher concentrations of electrolyte in the 'soaping' bath hinder dye diffusion and result in inferior wet fastness properties.
































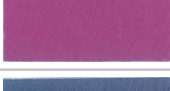


7.1 Process :





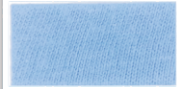





Bath	
1	Overflow rinse at 50 - 70°C for 10 min.
2	Neutralise to pH 5 - 6 with acetic acid and rinse for 10 min at 50 - 80°C
3	Rinse for 10 min at 70°C
4	Rinse for 10 min at 70°C (This bath is in general not necessary for pale shades)
5	Soap for 20 min at 95°C (If hard process water is applied, a sequestering agent with Additional dispersing properties should be added)
6	Rinse for 10 min at 70°C (This bath is in general not necessary for pale shades)
7	Rinse for 10 min at 50°C

• This number of rinse bathes at 70°C depend on depth of Shade, on liquor ratio and on squor retention of the fabric.








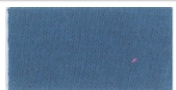
• A repeat soaping stage may be necessary when washing off deep shades or working with short liquorratios.

• If the last rinse bath is slightly alkaine, the pH of the fabric should be adjusted to pH 6 - 6.5 by addition of acetic acid.






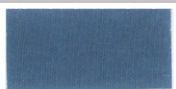
Meactive® Bi-Functional Dyes			1/1 Standard Depth %	Process Suitability						Light Source ISO 105B02		Washing ISO3	Perspiration ISO 105 E04				Rubbing Fastness ISO 105 X12		Chlorinated Water ISO 105 E03	Dischargeability
				Warm Exhaust	Cold Pad Batch	Pad Dry Pad Steam	Pad Dry Steam	Econtrol	Solubility (g/l) 30°C				Acidic		Alkaline					
													E	S	E	S				
				60°C	0.50%	3.00%	1/6	1/1												
Yellow F7GL			3.7	S	S	S	S	S	100	5-6	6	5	4	4-5	4	4-5	4-5	4	2-3	D
Yellow F4G Conc			3.8	S	NS	NS	NS	NS	150	5	5-6	5	4	4-5	4	4-5	4-5	4	3-4	D
Yellow F3R Conc			3.5	S	S	S	S	S	150	5	5-6	5	4	4	4	4	4-5	4	3-4	ND
Yellow FES			1.8	S	S	NS	NS	NS	150	5	5-6	5	4	4	4	4	4-5	4	3-4	ND
Yellow FDR			1.8	S	S	NS	NS	NS	150	5	5-6	5	4	4	4	4	4-5	4	3-4	ND
Orange F2R Conc			3.5	S	NS	NS	NS	NS	80	3-4	4	4	4	3	4	3	4	3-4	3	ND
Lumi Orange F4R			3.0	S	S	S	S	S	150	4	5	4-5	4-5	4	4-5	4	4	3-4	3-4	PD
Red F3GL			5.0	S	S	NS	NS	NS	80	4	4-5	5	4-5	4	4-5	4	4	3-4	4	D
Red FBS conc			1.5	S	S	NS	NS	NS	150	3-4	4	4-5	4-5	4	4-5	4	4	3-4	3-4	ND
Red F2B			1.9	S	S	NS	NS	NS	100	3-4	4-5	4-5	4-5	4	4-5	4	4	3-4	4	ND
Red F3B Conc			2.7	S	S	S	S	S	150	3-4	4	4-5	4-5	4	4-5	4	4	3-4	4	ND
Red FES			2.7	S	S	S	S	S	150	3-4	4	4-5	4-5	4	4-5	4	4	3-4	4	ND
Red FXL			2.7	S	S	NS	NS	NS	150	3-4	4	4-5	4-5	4	4-5	4	4	3-4	3-4	ND
Red F6B conc			2.9	S	NS	NS	NS	NS	50	3-4	4	4-5	4-5	4	4-5	4	4	3-4	3-4	ND
Red F2Y			2.8	S	S	NS	NS	NS	100	3-4	4	4-5	4-5	4	4-5	4	4	3-4	3	ND
Violet FB			2.0	S	S	NS	NS	NS	100	3	3-4	4	4	4	4	4	4	3-4	3	ND
Blue FBS			2.9	S	S	NS	NS	NS	150	3-4	4	4-5	4	3-4	4	3-4	4	3-4	3	PD

Meactive® Bi-Functional Dyes			60°C			0.50%			3.00%			1/1 Standard Depth %	Process Suitability						Light Source ISO 105 B02		Washing ISO3	Perspiration ISO 105 E04				Rubbing Fastness ISO 105 X12		Chlorinated Water ISO 105 E03	Dischargeability
													Warm Exhaust	Cold Pad Batch	Pad Dry Pad Steam	Pad Dry Steam	Econtrol	Solubility (g/l) 30°C				Acidic		Alkaline					
													E	S	E	S	Dry	Wet											
Blue FGBD			2.9	S	S	NS	NS	NS	150	4	4-5	5	4	4	4	4	4	3-4	3-4	D									
Blue FBRL			3.0	S	S	S	S	S	100	5	5-6	4	4	4	4	4	4-5	3-4	4	ND									
Blue F4R			1.9	S	NS	NS	NS	NS	150	2	3	4-5	3-4	3-4	3-4	3-4	4	3-4	2-3	ND									
Brill Blue FR			3.4	S	S	S	S	S	150	5	5-6	4-5	4-5	4-5	4-5	4	4-5	4	3	ND									
Blue HFGN			3.5	S	S	S	S	S	150	5	5-6	4-5	4	4-5	4	3-4	5	3-4	3	ND									





- Meactive® Bi-functional Dyes have relatively better exhaustion and fixation properties .
- Lower sensitivity to process variables provide good leveling and reproducibility.
- This series of dyes can apply to exhaust process for piece, package yarn, hank and jig dyeing.





Mohizol® RGB Series 3.00%																				
Yellow RGB			1.6	S	S	S	S	S	150	5	5-6	5	4	4	4	4	4-5	4	3	PD
Red RGB			1.6	S	S	S	S	S	100	3	3-4	5	4-5	5	4	5	4	3	3-4	ND
Blue RGB			3.3	S	S	S	S	S	150	3	3-4	4-5	4-5	4-5	4-5	4-5	4	3-4	3	D
Navy Blue RGB			1.6	S	S	S	S	S	150	3	3-4	4-5	4	4	4	4	4	3-4	3-4	D

- Mohizol® RGB Series offer better leveling and robustness properties than commodity dyes and are suitable for a wide variety of shades and dyeing procedures.











Mohizol® EPB Series																				
Yellow EPB			1.5	S	S	S	S	S	200	3-4	4-5	4-5	4-5	4	4-5	4	4	3	3	D
Red EPB			2.5	S	S	S	S	S	150	3-4	4	4	4-5	4	4	4	4	3	2-3	D
Navy EPB			1.6	S	S	S	S	S	150	3	3-4	4-5	4	4	4	4	4	3-4	3-4	D

Mohizol® EPB Series are dischargeable products suitable for exhaust, CPB and continuous dyeing They are ideal for deep shades and economical toning components to achieve deeper blacks or specific tones. Compatible with Meactive® DS & Bi-functional series, Ultra series and also Mohizol® RGB series.







Mohizol® Vinyl Sulphone			1/1 Standard Depth %	Process Suitability						Light Source ISO 105B02		Washing ISO3	Perspiration ISO 105 E04				Rubbing Fastness ISO 105 X12		Chlorinated Water ISO 105 E03	Dischargeability
				Warm Exhaust	Cold Pad Batch	Pad Dry Pad Steam	Pad Dry Steam	Econtrol	Solubility (g/l) 30°C				Acidic		Alkaline					
													E	S	E	S				
				60°C	0.50%	3.00%	1/6	1/1												
Yellow FG			4.0	LS	LS	LS	LS	LS	150	4-5	5-6	5	5	5	4	5	5	4-5	2	D
Yellow GR			3.5	S	S	S	S	S	150	5	5-6	5	5	5	5	5	4-5	4	2-3	D
G.Yellow R Conc			3.0	S	S	S	S	S	100	3-4	4-5	4	4	4-5	3-4	3-4	4-5	4	2	D
G.Yellow RN Conc			2.0	S	S	S	S	S	150	5	5-6	5	5	5	5	5	4-5	4	2-3	D
Orange 2R			2.2	S	S	S	S	S	150	3-4	4	4	3-4	3-4	3-4	3-4	3-4	3	2	D
Orange 3R			2.2	S	LS	NS	NS	NS	40	4-5	5	4	4-5	4-5	4-5	4	4	3-4	3-4	D
Red 5B Conc			4.0	LS	S	S	S	S	100	3-4	4	4-5	4-5	4-5	4-5	4-5	4	3-4	3-4	D
Red RB			3.8	S	S	S	S	S	100	3-4	4	4-5	4-5	4-5	4	4-5	4	3-4	3-4	ND
Red BBLC Conc			2.5	S	S	NS	NS	NS	100	3-4	4	4-5	4-5	4-5	4-5	4-5	4	3	2	D
Blue 2B			4.6	S	S	S	S	S	150	5	5-6	4-5	5	5	4-5	4-5	4	3-4	2-3	D
Blue 3R			4.8	S	S	NS	NS	NS	50	5	5-6	4-5	4	4-5	4	4-5	4-5	3-4	2-3	D
Blue RN			3.0	S	S	S	S	S	80	6	6-7	4-5	4	4-5	3-4	4-5	4	3-4	2-3	PD
Royal Blue RA			3.0	S	S	S	S	S	150	5	5-6	4	4-5	4-5	4-5	4	4	3-4	2-3	ND
Navy Blue 2G			2.5	S	S	S	S	S	200	3-4	4	5	4	4	4	4	4	3-4	3	D
Navy MB			2/1 6	S	S	S	S	S	200	-	4	4-5	5	4-5	5	4-5	3-4	3-4	3	D
Black BG H/C			2/1 6	S	S	S	S	S	200	-	4	4-5	5	4-5	5	4-5	3-4	3-4	3	D
Turq Blue GN Spl			5.0	S	S	S	S	S	125	4-5	5	3-4	5	4-5	5	4-5	3-4	3	3	PD







Mohizol® Vinyl Sulphone 60°C0.50%3.00%			1/1 Standard Depth %	Process Suitability						Light Source ISO 105 B02 1/61/1		Washing ISO3	Perspiration ISO 105 E04				Rubbing Fastness ISO 105 X12 DryWet		Chlorinated Water ISO 105 E03	Dischargeability
				Warm Exhaust	Cold Pad Batch	Pad Dry Pad Steam	Pad Dry Steam	Econtrol	Solubility (g/l) 30°C				Acidic		Alkaline					
													E	S	E	S				
				Turq. Blue H2GP H/C			5.0	S	S	S	S		S	125	5	6	3-4	5		
Violet 5R Conc.			3.0	S	S	S	S	S	100	5	6	4-5	4-5	4-5	4-5	4-5	4	3	3-4	PD

- Mohizol® Vinyl Sulphone is suitable for exhaust, CPB & continuous dyeing as well as printing applications.
- Good fastness, low affinity and therefore good leveling properties. Excellent Discharge properties.
- Blue RN and all Turquoise Blues are not suitable for discharge printing and the recommended electrolyte for these 2 products is Glaubers Salt only. Dyeing Turq Blue is suggested at 80°C.

Mohizol® Black Series V.S. Based 0.50% 8.00%																				
Black WNN Conc			2/1 6	S	S	S	S	S	200	-	4	4-5	4	4	4	4	4	3	3-4	D
Black WRS-XL			2/1 6	S	S	S	S	S	200	-	4	4	3-4	3-4	3-4	3-4	4	3	3-4	D
Supra Black N			2/1 6	S	S	S	S	S	200	-	4	4-5	4	4	4	4	4	3	3-4	D
Jet Black N			2/1 6	S	S	S	S	S	200	-	4	4	3-4	3-4	3-4	3-4	4	3	3-4	D
Deep Black G			2/1 6	S	S	S	S	S	200	-	4	4-5	4	4	4	4	4	3	3-4	D

- Mohizol® Vinyl Sulphone Black Series is available in a variety of different tones from the Greenest to the Reddest hues to suit the customers desired shade, application and fastness properties.





















Meactive® DS (Deep Shades) Series 60°C 0.50% 3.00%																				
Yellow DS5R			1.8	S	S	S	S	S	200	4-5	5-6	4-5	4	4	4	3	4	3-4	3-4	PD
Red DS4B			2.5	S	S	S	S	S	100	3-4	4	4	4-5	4	4-5	4	4	3	3-4	ND
Red DSGD			2.5	S	S	S	S	S	200	3-4	4	4	4	3-4	4	3-4	4	3	3-4	ND

Meactive® DS (Deep Shades) Series 60°C0.50%3.00%			1/1 Standard Depth %	Process Suitability						Light Source ISO 105 B02		Washing ISO3	Perspiration ISO 105 E04				Rubbing Fastness ISO 105 X12		Chlorinated Water ISO 105 E03	Dischargeability
				Warm Exhaust	Cold Pad Batch	Pad Dry Pad Steam	Pad Dry Steam	Econtrol	Solubility (g/l) 30°C				Acidic		Alkaline					
				1/6	1/1	E	S	E	S	Dry	Wet									
Brill Red DSGR			2.5	S	S	S	S	S	100	3-4	4	4-5	4-5	4	4-5	4	4	3	3	ND
Red DSGR			3.0	S	S	S	S	S	150	3-4	4-5	4-5	4-5	4	4	4	4-5	4	4	ND
Blue DS3B			3.0	S	S	S	S	S	200	3-4	4	4-5	4	3-4	4	3-4	4	3-4	3	D










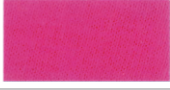




Meactive® DS Series contains multi-chromophoric groups exhibiting very high Tinctorial values unlike any other class of reactive dyes. This series is characterized by its high exhaustion and fixation values.

Key Features -



- Very low dye residue in dye bath due to high exhaustion/fixation characteristics.
- Lesser amount of dyes and electrolytes required to achieve deep shades as compared to conventional dyes.

Meactive® & Mohizol® Ultra Series 0.50% 3.00%																				
Lemon F4G			3.8	S	NS	NS	NS	NS	150	4-5	5-6	5	4	4	4	4	4	3-4	3-4	D
Yellow CLD			3.5	S	S	S	S	S	100	4-5	5	5	4-5	4-5	4-5	4-5	4-5	4	45	PD
Red CLD			2.5	S	S	S	S	S	150	3-4	4	4-5	4	4	4	4	4-5	4	4	ND
Deep Red CLD			2.0	S	S	S	S	S	100	3-4	4	4-5	4-5	4-5	4-5	4-5	4-5	4	4	ND
Red FD			1.5	S	S	S	NS	NS	100	3-4	4	4	4-5	4	4-5	4	4	4	3	ND
Carmine CLD			1.0	S	S	S	S	S	100	3-4	4	4-5	4-5	4-5	4-5	4-5	4-5	4	3-4	D
Maroon CLD			1.0	S	S	S	S	S	100	3-4	4	4-5	4-5	4	4-5	4	4-5	3	3-4	D
Navy BG			2/1 6	S	S	S	S	S	200	3-4	4	4-5	5	4-5	5	4-5	4	3-4	3	D
Turq Blue G			5.0	S	S	S	S	S	150	5	5-6	3-4	4-5	4-5	5	4-5	4	3	2-3	PD
Sea Blue FR			2.5	S	S	S	S	S	90	5	5-6	4	4-5	4	4-5	4	4-5	3-4	2-3	ND

- Ultra Series are higher concentration products which are ideally suitable for medium to higher depth shades. Products are compatible with Meactive DS series, Meactive Bi-functional and Mohizol EPB series.

Meactive® HE (High Exhaust) Dyes			80°C			0.50%			3.00%			1/1 Standard Depth %	Process Suitability							Light Source ISO 105 B02		Washing ISO3	Perspiration ISO 105 E04				Rubbing Fastness ISO 105 X12		Chlorinated Water ISO 105 E03	Dischargeability
													Warm Exhaust	Cold Pad Batch	Pad Dry Pad Steam	Pad Dry Steam	Econtrol	Solubility (g/l) 30°C	Acidic				Alkaline							
													E	S	E	S	Dry	Wet												
Yellow HE4G			4.8	S	NS	NS	NS	NS	50	4	4-5	5	4-5	4-5	4-5	4-5	4	3-4	2	ND										
Yellow HE6G			3.5	S	NS	NS	NS	NS	100	4-5	5	5	4-5	5	4-5	4	5	4	3	ND										
Yellow HE4R			2.5	S	NS	NS	NS	NS	100	5	5-6	5	4-5	4-5	4-5	4-5	5	4	3-4	ND										
Red HE3B			2.9	S	NS	NS	NS	NS	140	3-4	4	4-5	4-5	4-5	4-5	4-5	4	3	3-4	ND										
Red HE7B			2.0	S	NS	NS	NS	NS	150	3	4	4-5	4-5	4-5	4-5	4-5	4	3	4	ND										
Blue HERD			4.0	S	NS	NS	NS	NS	140	5-6	6	4-5	4-5	4-5	4	4-5	4-5	4	3	ND										
Blue HEGN			4	S	NS	NS	NS	NS	100	5	5-6	4	4-5	4-5	4-5	4-5	4-5	3-4	3	ND										

- Meactive® HE dyes have very good diffusion and migration at high temperature and so have excellent penetration and levelness especially for critical items such as mercerized cotton, viscose etc.
- This series has high fixation rate, good light and chlorinated water fastness.

Meactive® SEL (Super Exhaust & Levelling) Dyes 80°C 3.00%																				
Yellow SEL			3.0	S	NS	NS	NS	NS	150	4-5	5	5	5	5	5	5	4-5	4	4	ND
Crimson SEL			2.0	S	NS	NS	NS	NS	150	3-4	4	5	4	4-5	4	4-5	4	3-4	4-5	ND
Navy SEL			2.8	S	NS	NS	NS	NS	150	3-4	4	5	4	4-5	4	5	4-5	3-4	3-4	ND

- Meactive® SEL dyes have excellent reproducibility and level dyeing in difficult dyeing conditions.
- Suitable for post mercerization with excellent leveling properties.
- Highly recommended for articles with poor dye penetration e.g.CV, merc.CO, CEL/elastomeric fibers, garment dyeing, articles with poor dye penetration.
- Suitable and robust for dyeing PES/CEL blends, Good oxidative wash fastness (multiple wash cycles).
- Compatible with Meactive® HE dyes.

S = Suitable

NS = Not Suitable

LS = Less Suitable

D = Dischargeable

ND = Not Dischargeable

PD = Partially Dischargeable

[illegible]