



CLAIROFIX CLAIROZOL



STRATEGIC INVESTORS LLP

EYE FASCINATING COLORS

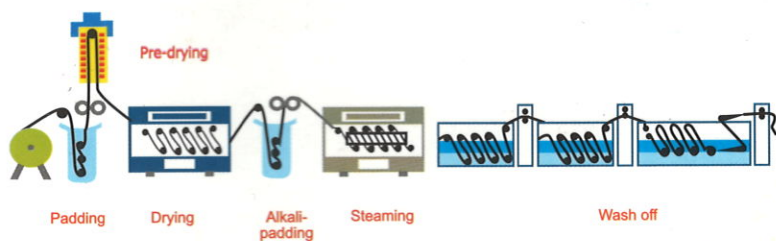
(Textiles Dyestuff & Auxiliaries Chemicals)



OEKO-TEX®
CONFIDENCE IN TEXTILES
ECO PASSPORT

CONTINUOUS DYEING

Pad-Dry-Pad-Steam (PDPS)



Pad liquor	Dyes	X g/l
	Wetting agent	1-2 g/l
	Reduction protectant	1-3 g/l
	Migration inhibitor	5-10 g/l
Pad liquor temp.	20-30°C	
Liquor pick up	60-80% Cotton : 60-70%, Viscose rayon 70-50%	
I.R. pre-drying	To a residual moisture content of 30-35%	
Drying	Dry at 110-120°C	
chemical Liquor Pick up	70-80%	
Steaming	60-90 sec. in saturated steam (101-105°C)	

Required amount of salt and alkali

Dyeing depth	g/l	< 10	10-30	>30
Salt	g/l	200	250	250
Soda ash	g/l	20	20	20
Caustic soda 36° Bé	ml/l	8	12	15

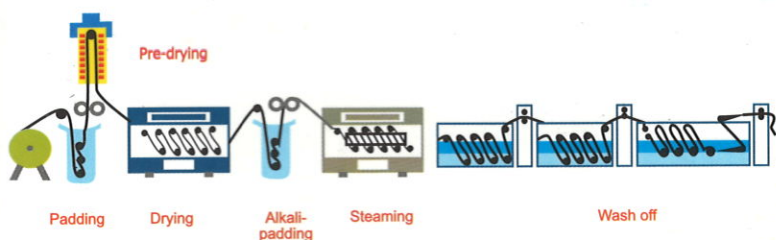
Notes

- High productivity and color yield.
- Good appearance.
- Classic procedure for continuous dyeing of woven fabrics.
- When using dyes with low reactivity such as Clairazol Turquoise Blue G and Clairazol Green 6B, the amount caustic soda should be raised by 30%
- If the goods are stored after drying but before fixation, they should be wrapped in an opaque material to protect them from daylight.



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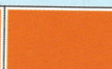
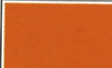





















Hosiery 4%		Cotton 4%	CLAIROFIX 'ME' Brand Dyes (Bifunctional)	C. I. Number	General Properties		Fastness Properties					Suitability					
					Substantivity	Solubility At 60°C	Dischargeability	Day Light 1/1 & 1/6	Washing ISO4	Perspiration		Hypochlorite Bleach	Peroxide Bleach	Exhaust 40°C & 60°C	One Bath Pad Batch	One BathPad - Dry Steam	Printing
										Alkaline	Acidic						
		Yellow ME4GL150%	Yellow 160	M	120	G	4	4	4-5	4-5	1	4	+	(+)	-	+	+
		Yellow MERL 150%	Yellow 145	M	100	F	5	3-4	4	4	1	3-4	+	(+)	-	+	+
		Orange ME2RL150%	Orange 122	H	100	P	5	4-5	4-5	4-5	3	4	+	+	+	+	+
		Red ME3BL	Red 194	H	100	G	5-6	4-5	4-5	4-5	3	4	+	+	+	+	+
		Red ME3GL	Red 223	H	100	G	4	5	4-5	5	1	4	+	+	+	+	+
		Red ME4BL 150%	Red 195	H	100	P	5	4-5	5	5	1	4	+	+	+	+	+
		Red ME6BL 150%	Red 196 250	H	60	P	5	4-5	5	5	1	4	+	+	+	+	+
		Red Scarlet 2G X 150%	Red 222	H	70	V G	5	4-5	4-5	5	3	3-4	+	+	+	+	+
		Red MERK	Red 222A	H	100	P	5-6	4-5	4-5	4-5	3	4	+	+	+	+	+
		Blue ME2RL	Blue 248	H	100	P	4	5	5	5	1	3	+	+	+	+	+
		Blue BRF	Blue 221	H	120	G	4-5	4-5	4	4	3	3	+	+	+	+	+
		Blue RB	Blue 194	H	150	G	5	5	4-5	4	3	3	+	+	+	+	+
		N. Blue ME2GL150%	Blue 194A	H	120	G	6	5	5	5	1	3	+	+	+	(+)	(+)
		N. Blue MEBF	Blue 222	H	100	G	3-4	4-5	5	5	1	3	+	+	+	(+)	(+)
		N. Blue 3GL	Blue 223	H	100	G	4-5 5	4-5	4-5	3-4	4	4-5	+	+	+	+	+
		Violet BZ	-	H	80	P	3-4 4-5	3-4	3-4	5	3	3-4	60	+	+	+	-
		Green ME4BL	-	H	100	F	4	4	4	4	2	3	+	+	+	(+)	(+)
		Yellow HLF	-	H	100	G	5 6	4-5	4-5	4-5	4-5	5	60	+	+	+	+
		Red HLF	-	H	100	G	5 6	4-5	4-5	4-5	4-5	5	60	+	+	+	+
		Blue HLF	-	H	100	G	5-6 6	4-5	4-5	4-5	4-5	5	60	+	+	+	+











		CLAIROFIX VS' Brand Dyes	C. I. Number	General Properties				Fastness Properties				Suitability			
				Substantivity	Solubility At 60°C	Dischargeability	Day Light 1/1 & 1/6	Washing ISO4	Alkaline	Acidic	Perspiration Hypochlorite Bleach Exhaust 40°C & 60°C	One Bath Pad Batch	One Bath Pad - Dry Steam	Steam	Printing Silicate
		Yellow 4GL 150%	Yellow 186	H	100	V. G	5 6	4	5	5	1	+	+	+	+
		Yellow FG	Yellow 42	L	100	V. G	4 5	5	5	5	1	(+)	+	+	+
		Yellow IGL	Yellow 37	VH	100	V. G	5-6 6	4-5	5	5	2-3	+	+	+	+
		Yellow GR 150%	Yellow 15	H	100	V. G	4-5 6	5	5	5	1	+	+	+	(+)
		Gol. Yellow RNL	Orange 107	M	100	V. G	4-5 5	4-5	5	5	1	+	+	+	+
		Orange 3R 150%	Orange 16	H	100	V. G	5 6	4-5	4-5	4-5	1	+	-	+	+
		Red CD	Red 278	VH	100	G	4 5	3-4	4	4	1-2	+	+	+	+
		Red BS	Red 111	H	100	P	3-4 4	4-5	5	5	1	+	+	+	+
		Red RB 150%	Red 198	H	100	P	2 3	4	5	5	1	+	+	+	(+)
		Violet 5R 140%	Violet 5	M	100	G	3 4	4	5	5	2	+	+	+	(+)
		T. Blue G	Blue 21	H	100	P	6 7	4-5	4-5	4-5	3	+	+	+	+
		Blue BB	Blue 220	H	100	G	6-7 6	4	4	4	3	+	+	+	+
		Blue 3R	Blue 28	H	100	G	6 7	4-5	4-5	4-5	3	+	+	+	+
		Brill Blue R	Blue 19	H	100	P	5-6 6	4-5	4	5	3	+	+	+	+
		Black B100%	Black 5	VH	100	V. G	4 5	5	5	5	1	+	+	+	+
		Black RL	Black 31	H	100	G	6 7	5	5	5	1	+	+	+	(+)
		Black WNN	Mix	VH	100	V. G	4 5	4-5	5	5	4	+	+	+	+
		Super Blk R	Mix	VH	100	V. G	4 4-5	4-5	5	5	4	+	+	+	+
		Super Blk G	Mix	VH	100	V. G	4 4-5	4	4-5	5	3-4	+	+	+	+
		Black DN	Mix	VH	100	V. G	4 5	5	5	5	3	+	+	+	+

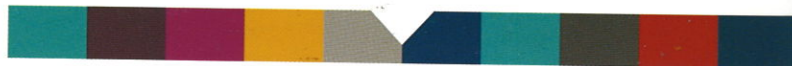





















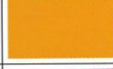






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Hosiery 4% Cotton 4%		CLAIROFIX 'SI-ED' Dyes	C. I. Number	General Properties			Fastness Properties					Substrate						
				Substantivity	Solubility At 60°C	Dischargeability	Day Light 1/1 & 1/6	Washing ISO4	Alkaline	Acidic	Perspiration	Hypochlorite Bleach	Peroxide Bleach	Exhaust 40°C & 60°C	One Bath Fast Batch	One Bath Fast Dry Steam	Steam	Boiling
		Re.Yellow ED	-	H	100	G	4 4-5	4	4	4	3	-	4	4	+	+	+	+
		Re.Orange ED	-	H	100	G	4 5	4-5	4	4	4-5	4-5	4-5	4-5	+	+	+	+
		Re.Red ED	-	H	100	P	4 4-5	4-5	4	4	2	-	4	4	+	+	+	+
		Re.Red ED2B	-	H	100	P	4-5 5	4	5	5	4	4-5	4-5	4-5	+	+	+	+
		Re.Red ED3B	-	H	100	P	4-5 5	4-5	4-5	4-5	2-3	-	4	4	+	+	+	+
		Re.Red ED4B	-	H	100	P	4-5 5	4-5	4	3-4	3	-	4	4	+	+	+	+
		Re.Red ED7B	-	H	100	F	4-5 5	4	5	5	4	4-5	4-5	4-5	+	+	+	+
		Re. Blue-ED	-	V. H	100	F	5 5-6	4-6	5	4	3-4	-	4	4	+	+	+	+
		Re. N. Blue ED	-	V. H	100	G	4-5 5	4-5	5	5	4	-	4	4	+	+	+	+
		Re. N. Black ED	-	H	100	G	4 5	5	4	3-4	4	-	4	4	+	+	+	+
		Re. Blue LC-3R	-	H	100	G	5 6	4-5	5	5	4-5	5	4	4	+	+	+	+
		Re. Red 3BN	-	V. H	100	P	4-5 5	4	4-5	5	4	4-5	4-5	4-5	+	+	+	+

CLAIROZOL 'ULTRA RGB' Dyes

Hosiery 4%		Cotton 4%																
		Re. Ultra Yellow RGB	-	H	100	G	4 4-5	4-5	5	5	4	4	4	60	+	+	+	
		Re. Ultra Orange RGB	-	H	100	G	4 4-5	4	4-5	4-5	5	5	5	60	+	+	+	
		Re. Ultra Red RGB	-	H	100	P	5 5-6	4-5	4-5	5	3-4	4-5	4-5	60	+	+	+	
		Re. Ultra N. Blue RGB	-	H	100	G	5 5-6	5	5	5	3	-	4	60	+	+	+	



Hosiery 4% Cotton 4%		CLAIROFIX 'S' & 'W' Dyes	C. I. Number	General Properties		Fastness Properties						Suitability					
				Substantivity	Solubility At 60°C	Dischargeability	Day Light 1/1 & 1/6	Washing ISO4	Perspiration		Hypochlorite Bleach	Peroxide Bleach	Exhaust 40°C & 60°C	One Bath Pad Batch	One BathPad - Dry Steam	Printing	
									Alkaline	Acidic						Steam	Silicate
		Re. Yellow S3R	-	H	100	F	4-5	4-5	5	5	4-5	60	+	+	+	+	
		Re. Orange S4R	-	H	100	G	4-5	4	4	4	4-5	5	60	+	+	+	
		Re. Red S2B	-	H	100	P	4-5	4	4-5	5	4-5	4-5	60	+	+	+	
		Re. Deep Red SB	-	H	100	F	4-5	4-5	5	5	4	4-5	60	+	+	+	
		Re. Ocean SR	-	V. H	100	P	4-5	4	4-5	4-5	4	4	60	+	+	+	
		Re. Navy-SGL	-	V. H	100	V. G	5	4-5	5	5	2-3	4	60	+	+	+	
		Re. Deep Cherry SD	-	V. H	100	F	5	4	4-5	4-5	4-5	4-5	60	+	+	+	
		Re. Dark Blue SGL	-	V. H	100	G	4	4-5	4-5	4-5	4	4	60	-	-	+	
		Re. Yellow WR	-	H	100	F	4-5	5	4-5	4	3-4	-	60	+	+	+	
		Re. Orange W3R	-	H	100	G	4	4-5	4-5	4	3-4	-	60	+	+	+	
		Re. Red WR	-	H	100	P	4-5	5	4-5	4	3	-	60	+	+	+	
		Re. Dark Blue. WR	-	V. H.	100	G	5	5-6	5	4-5	4	4	-	60	+	+	
		Re. Navy Blue WB	-	V. H.	100	G	4-5	5-6	4-5	4	4	4	-	60	+	+	

CLAIROZOL 'RR' Dyes

Hosiery 4%	Cotton 4%																
		Yellow RR	-	M	100	G	4-5 4	4-5	5	5	1	+	+	+	+	+	+
		Orange RR	-	M	100	P	4-5	4-5	5	5	2	+	+	+	+	+	+
		Red RR	-	—	100	P	5 4-5	5	5	4-5	2	+	+	+	+	+	+
		Blue RR	-	—	100	G	5 4-5	4-5	4-5	4	2	+	+	+	+	+	+



Printing 1% Printing 4%		CLAIROFIX 'H' Brand Dyes	C. I. Number	General Properties				Fastness Properties				Suitability				
				Affinity	Solubility At 20°C	Dischargeability	Day Light 1/1 & 1/6	Washing ISO4	Alkaline	Perspiration	Hypochlorite Bleach	Exhaust 40°C & 60°C	One Bath Pad Batch	One Bath Pad - Dry Steam	Printing	
										Acidic					Steam	Silicate
		Yellow P6GS	Yellow 95	M	100	F	4 5	4-5	5	4	3	-	+	+	+	+
		Yellow H4G	Yellow 18	L	80	G	5-6 6-7	5	4-5	5	1	(+)	+	+	+	+
		G. Yellow HR	Orange 12	H	100	F	5 6	5	5	5	3	+	+	+	+	+
		Orange H2R	Orange 13	H	100	M	3-4 4-6	5	5	4	4	+	+	+	+	+
		Brown P6RI	Brown 11	H	100	P	4 4-5	4	4	4	3	-	+	+	+	+
		Red PB	Red 24	H	80	P	4-5	4	4-5	4-5	4	+	+	+	+	+
		Red RP	-	H	60	P	4 4	4	4	4	3	+	+	+	+	+
		Red P3B	Red 45	H	80	M	3 4	5	4	4	3-4	+	+	+	+	+
		Red P4B	Red 245	H	100	P	4 4-5	4-5	4-5	4-5	3-4	-	+	+	+	+
		Red 6BX	Red 76	H	60	P	4 3-4	3	4	4-5	2-3	+	+	+	+	+
		Red H8B	Red 31	H	100	P	4 4	5	4	4	3-4	+	+	+	+	+
		Red P6B	Red 218	H	100	P	4 4-5	4-5	4	4	4	-	+	+	+	+
		Red Brown H4R	Brown 9	L	80	F	4 5	4	4	4	4	+	+	+	+	+
		Magenta HB	Violet 13	M	100	P	3 4	4	4	4	1	+	+	+	+	+
		Purple H3R	Violet 1	M	100	P	5-6 6-7	5	3	3	4	+	+	+	+	+
		Blue H5R	Blue 13	L	80	P	5 6	5	4-5	5	1-2	+	+	+	+	+
		Blue P3R	Blue 49	H	100	P	4-5 4	4-5	4	4	3	+	+	+	+	+
		N. Blue P2R	Black 39	H	80	P	4 4	4	3-4	4	3	+	+	+	+	+
		Black HN	Black 8	L	60	P	4-5 5	4-5	4-5	4-5	3-4	(+)	+	+	+	+
		Black PGR	Black Mix	M	60	P	4 4	3-4	3	4	+	+	+	+	+	+



CLAIROFIX/CLAIROZOL - "S" & "W"/ "RGB" & "RR", or Poly Functional Dyes

These are Poly Functional Reactive dyes where three groups are linked to chromophore through a mono Chlorotriazine groups as a bridge link. They are applicable on cellulosic material at dyeing temp. of 60°C

Medium Substantiivity

Polyfunctional Dyes are designed on medium substantivity to avoid tailing problem from dyestuff and achieve good washing-off property to save valuable water and energy.

Alkali & Salt Recommendation

Dyeing depth (% o.w.f.)	Clairofix "ME" / "ED" / "S" / "W" or Polyfunctional					Clairozol "VS" / "RR" / "RGB"				
	Salt (g/l)		Soda ash or Mixed alkali (g/l)			Salt (g/l)		Soda ash or Mixed alkali (g/l)		
	unmerc.	merc.	Soda ash	Soda ash+NaOH		unmerc.	merc.	Soda ash	Soda ash+NaOH	
up to 0.1	8	5	5	5	0.2	10	7	7	5	-
0.3	17	10	8	5	0.5	20	10	10	5	1.0
0.5	25	15	10	5	0.5	30	15	12	5	1.3
1.0	30	20	15	5	1.0	35	20	15	5	1.5
1.5	35	25	15	5	1.2	40	25	15	5	1.8
2.0	40	30	15	5	1.5	45	30	20	5	2.0
2.5	45	35	20	5	1.8	50	35	20	5	2.3
3.0	50	40	20	5	2.0	55	40	20	5	2.5
3.5	55	45	20	5	2.0	60	45	20	5	2.6
4.0	60	50	20	5	2.5	65	50	20	5	2.7
4.5	65	55	20	5	2.5	70	55	20	5	2.8
5.0	70	60	20	5	2.5	75	60	20	5	2.9
5.5	75	65	20	5	2.5	80	65	20	5	3.1
above 6.0	80	70	20	5	2.5	85	70	20	5	3.3

*Mixed alkali : NaOH 36°Bé

Key to abbreviations :

L = Low
 M = Medium
 H = High
 V = Very High

} Affinity or Substantivity on cotton

+ = Suitable
 (+) = Fairly Suitable
 - = Not Suitable

Discharge ability : G = Good F = Fair: P = Poor
 Light : 1 to 8 in increasing order
 Washing : 1 to 5 in increasing order



CLAIROZOL VINYL SULPHONE DYES

VS Dyestuffs are Reactive Dyes possessing Vinyl Sulphone as the reactive group. In presence of Alkali, these dyes chemically react with the hydroxyl group of cellulose and form firm, covalent linkages. These dyes are versatile enough to suit different dyeing methods. Results are excellent and shades come clean and brilliant with no variation in dyeing as well as in printing.

VS dyestuffs possess poor affinity for cellulosic fibres in absence of salt and alkalis. For this reasons, they are suitable for use on pad. Their substantivity can be increased by addition of Glauber's salt or common salt and alkali, making the dyestuff suitable on all conventional dyeing machines for loose material, yarn in hanks and packages and piece goods. The dyeing methods may therefore, be classified under the padding and exhaust processes. Standing baths are not recommended, as in alkaline medium inactivation of the dyestuffs by reaction with water takes place as a side reaction.

The main features of VS dyes are :

- 1) Possess excellent brightness and good wet fastness.
- 2) They are dischargeable.
- 3) They are suitable for Exhaust & different pad dyeing methods and discharge printing.
- 4) Ease of washing off unfixed dyestuffs i.e. minimum staining of the white ground in printing.
- 5) They are applicable at 40° C and 60° C.

CLAIROFIX BI - FUNCTIONAL DYES

These are mixed Bifunctional reactive dyes where Vinyl Sulfone group is linked to chromophore through a mono chloro triazine group as a bridge link. They are applicable on cellulosic material at lower dyeing temperature of 60°C. The main features of 'Bi-functional' dyes are as under :

- i) The dye-fibre bond between Vinyl sulfone group and cellulose is stable to acid hydrolysis, hence stability of dyed goods in industrial acidic atmosphere is very good with the time lapse.
- ii) The dyes which are not fixed during the dyeing process can be washed off easily because the hydrolysed dye has low substantivity and thus there is a little risk of staining of adjacent whites.
- iii) Excellent levelling properties.
- iv) Better reproducibility in dyeings.
- v) High exhaustion and high fixation efficiency.
- vi) Good all round fastness properties.

Bi-functional dyes are applicable on cellulosic materials by dy

CLAIROFIX 'H' DYES (HOT BRAND)

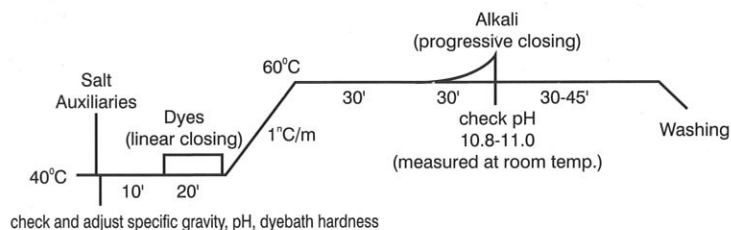
These are monochlorotriazine reactive dyes having a low reactivity and low substantivity. Since these dyes have low reactivity, they require more severe conditions for fixation with cellulosic materials. They are readily soluble by pouring water of 80-85°C on powder & stirring well. They are applicable on cellulosic materials by both dyeing as well as printing methods.

In comparison with cold brand dyes, the 'H' brand dyes require either a long steaming time or a high thermofixation temperature (with urea) for optimum fixation. 'H' dyes of low to medium substantivity and medium to high Reactivity are most suitable. Dyes of very low substantivity may lead to migration problems in dyeing prior to fixation.

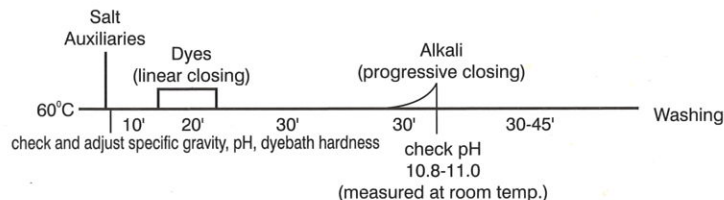
When low concentration of highly substantive dyes are used, tailing becomes evident. Tailing is avoided by selecting dyes of low or medium substantivity using small padding through fed to constant level and operating at the highest running speed commensurate with the needs of the rest of the proces



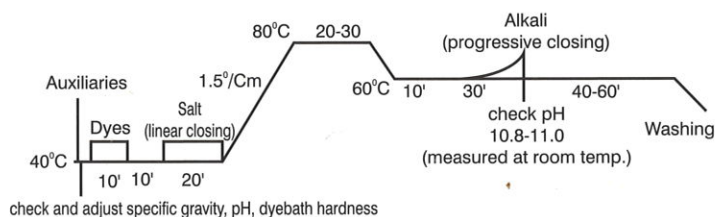
A. Standard method
Temperature rise



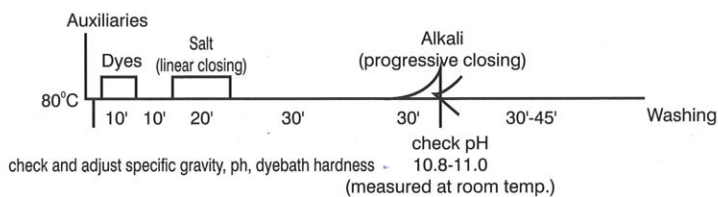
B. Standard method
Isothermal at 60°C



C. Specific method
Migration



D. Specific method
Isothermal at 80°C



A. Standard method
Temperature rise

-Normal fabric

- Clairofix "ME"
- Clairofix "S"

- Clairofix "W"
- Clairofix "W" Polyfunctional

B. Standard method
Isothermal at 80°C

Micro processor
dosing system

- Mercerised cotton,
Viscose rayon, Lyocell

- Clairofix "Turquoise Blue G"
- Clairofix Green 6B

with - Clairofix Blue RS
Blue-R

C. Specific method
Migration

- Tightly wound packages,
High twist yarns

- Clairofix H-E
- Clairofix H-EL

- For turquoise and
green shades

D. D. Specific method
Iso thermal at 80°C





- | Clairifix / Clairazol Reactive Dyes
- | Clairamine Direct Dyes
- | Clairacid Acid Dyes
- | Clairaset Fast Bases Salt
- | Clairorthols Napthols
- | Clairovat Vat Dyes
- | Clairperse Disperse Dyes
- | Clairoment Pigment Dyes
- | Clairphur Sulphur Dyes



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