

REACTIVE DYES



DEO PIYU INDUSTRIES

MANUFACTURER EXPORTER OF DYESTUFFS

www.deopiyu.com

About Us



"DEO PIYU INDUSTRIES" Since 1992, We call it a GEN-NXT organization, after striving Efforts & Sheer Dedication towards Learning the roots of Dyestuffs & Intermediates, Delivering most comprehensive range of high quality Dyes, today we are proud to own brand name "DEOFIX-DEOZOL-DEOCION-DEOCRON". The Growth & Success of DEO PIYU INDUSTRIES is because of the work force & Management of Team behind the res carpet. Confidence behind the quality is due to our client happiness, superior technology behind every equipment, process of continuous growth and becoming leader worldwide is aim of this Young DEOPIYU INDUSTRIES. We like our Dyes to speak more than us is our Mantra.

MISSION : DEO PIYU INDUSTRIES is totally committed for timely delivery, Keeping look on consistence of quality of our product, we believe to make DEO PIYU INDUSTRIES a Customer Centric Company.

VISION : Conservation of Environment and give Colourful world to our next generation (COLOR CHEMISTRY FOR EVER) by making our DEOFIX-DEOZOL-DEOCION-DEOCRON DYES under Eco-logical aspects.

QUALITY ASSURANCE : DEO PIYU INDUSTRIES is a Certified Company and Member of GCCI and Chemexcill as well. Our Motto is performance Based high quality dyes with consistant quality having State of the art Laboratory. DEO PIYU is well equipped with all international Standards of Testing Equipment Which ensures which quality of Products.

ECO FRIENDLY : We fully understand our liability towards society of which we are part of DEOPIYU INDUSTRIES religiously follows the statutory norms set by Government in order to minimize our pollution. We urges the reader to take care of our Environment in order to fulfill our motto of " COLOR CHEMISTRY FOR EVER" for our next generation.

EXPANSION PLANS : DEO PIYU INDUSTRIES presently have capacity to fulfill monthly requirement of 3000 MT Dyes, The 4 Spray Dryers With Hourly capacity of 1800 litre is one of the Ultra-Modern Drying Facility the Company possess. DEO PIYU INDUSTRIES also set up second plant in newly developing industrial area of Gujarat in Dahej. where company is estimating to make around 500 MT/ month of Reactive Dyes and 200 MT/ Month of Intermediates.

CLIENTS : Being a Young company DEO PIYU INDUSRIES is proud to inform that most of its clients are based in almost 30 countries around the world starting from East to West, We are fortunate for working with Multi Nationals around the Globe.





HIGH
PRODUCTIVITY



ENERGY
EFFICIENCY



HIGH
QUALITY

DEOZOL VS COLORS

DEOCION P COLORS

DEOCION HE COLORS

DEOFIX ME COLORS

DEOZOL RGB COLORS

DEOZOL BLACK COLORS

DEOCRON S COLORS

DEOZOL ULTRA & DS COLORS

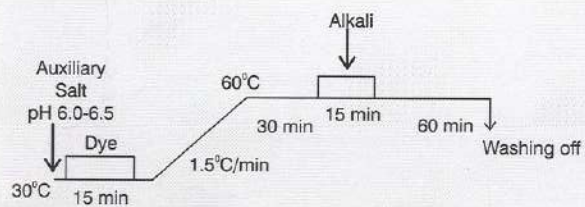
DEOZOL DLF COLORS

DEOFIX SPD CONC COLORS

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DYEING		Deozol "VS"	C.I. Number	General Properties			Fastness Properties					Suitability				
				Substantivity	Solubility at 30°C	Dischargability	Day Light 1/1 & 1/6	Washing ISO4	Perspiration		Hypochlorite Bleach	Exhaust 40 C & 60°C	One Bath Pad Batch	One Bath Pad Dry Steam	Printing	
1%	4%	Alkaline	Acidic						Steam	Silicate						
		Yellow-FG	Y 42	L	100	G	4-5	5	5	5	1	FS	S	S	S	S
		Yellow-GL	Y 37	H	80	G	6	4	5	5	2-3	S	S	S	S	FS
		G. Yellow-G	Y 17	H	100	G	4-5 6	5	5	5	1	S	S	S	S	FS
		Yellow-GR	Y 15	H	100	G	4-5 6	5	5	5	1	S	S	S	S	FS
		G. Yellow-RNL	O 107	M	100	G	4-5 5	4-5	5	5	1	S	S	S	S	S
		G. Yellow-R	Y 77	H	150	G	4-5 4	4-5	4	4	1-2	S	S	FS	FS	S
		Orange -3R	O 16	H	80	G	5-6	4-5	4-5	4-5	1	S	NS	S	S	S
		Red-5B	R 35	L	80	G	3-4	5	5	5	1	FS	S	S	S	S
		Red -BB	R 21	M	100	P	5	5	4-5	4-5	4	S	S	S	S	S
		Red-RB	R 198	M	100	F	5	4-5	4	4-5	4	S	S	S	S	S
		Red-BS	R 111	H	80	G	5-6	4-5	4-5	4-5	1	S	NS	S	S	S
		Red-CD	R 278	L	80	G	3-4 4	5	5	5	1	FS	S	S	S	S
		Violet-5R	V 5	M	100	P	5-6	4	5	5	2	S	S	S	S	FS
		T. Blue-G	B 21	H	80	P	6	4-5	4-5	4-5	3	S	S	S	S	S
		Blue-3R	B 28	H	80	G	6	4-5	4-5	4-5	3	S	S	S	S	S
		Blue-BB	B 220	M	100	G	4-5	5	4	4-5	2-3	FS	S	FS	FS	S
		Blue-R	B 19	L	150	F	4-5	5	5	4-5	4	FS	S	FS	FS	S
		N. Blue-GG	B 203	M	100	F	4-5	4-5	4-7	4-5	2-3	S	S	FS	FS	S
		Green-6B	B 38	M	80	G	5-6	5	5	5	1	S	S	S	S	S
		Black-RL	BL 31	H	100	F	6	5	5	5	1	S	S	S	S	S
		Black-B	BL 5	H	150	G	4	5	5	5	1	S	S	S	S	S

Exhaust Dyeing



Single Alkali method

Salt and Alkali Requirements

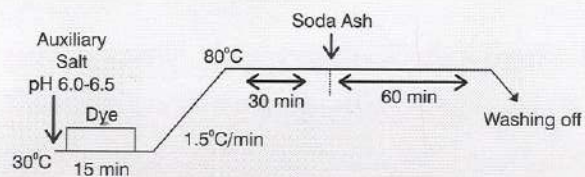
% Dye	Common Salt (g/l)	Soda Ash (g/l)
<0.1	20	5
0.1 - 0.5	20 - 25	5 - 7
0.5 - 1.0	25 - 40	7 - 10
1.0 - 2.0	40 - 50	10 - 13
2.0 - 3.0	50 - 60	13 - 15
3.0 - 5.0	60 - 80	15 - 20
5.0 - 7.0	80 - 90	20
> 7.0	100	20

Mixed Alkali method

Salt and Alkali Requirements

% Dye	Common Salt (g/l)	Soda Ash (g/l)	Caustic Flakes (g/l)
<0.1	20	5	0
0.1 - 0.5	20 - 25	5	0.3 - 0.38
0.5 - 1.0	25 - 40	5	0.38 - 0.45
1.0 - 2.0	40 - 50	5	0.45 - 0.6
2.0 - 3.0	50 - 60	5	0.6 - 0.75
3.0 - 5.0	60 - 80	5	0.75 - 1.0
5.0 - 7.0	80 - 90	5	1.0
> 7.0	100	5	1.0

Turquoise Dyeing Method



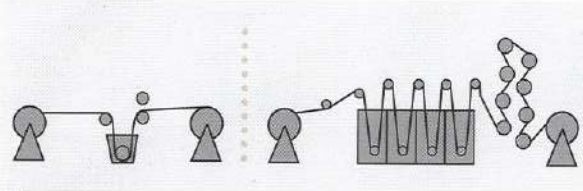
Salt and Alkali Requirements

% Dye	Glaubers Salt (g/l)	Soda Ash (g/l)
<0.1	20	3
0.1 - 0.5	20-25	3
0.5 - 1.0	25 - 40	3 - 5
1.0 - 2.0	40 - 50	5 - 8
2.0 - 3.0	50 - 60	8 - 10
3.0 - 5.0	60 - 80	10 - 12
5.0 - 7.0	80 - 90	15
> 7.0	100	20

Product placement

Light shades	-	Yellow GR Orange 3R Red BB Blue BB
Medium shades	-	Golden Yellow RNL Red RB Blue BB
Deep shades	-	Golden Yellow RNL Red RB Navy Blue GG Black B

Cold Pad Batch Dyeing



Mixing pump required
Add 10-100 g/l Urea to dye liquor (necessary for solubility)

Silicate Method

Dye (g/l)	Sodium Silicate (38° Be)	Caustic Flakes (g/l)
<5	100 ml/l	2
10 - 20	100 ml/l	3 - 3.5
20 - 30	100 ml/l	3.5 - 4.0
30 - 40	100 ml/l	4.0 - 4.5
40 - 60	100 ml/l	4.5 - 5.0
60 - 80	100 ml/l	5.0 - 5.5
80 - 100	100 ml/l	5.5 - 7.0

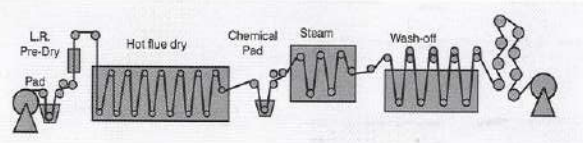
Batch 16 hrs at 25°C

Silicate Free Method

Dye (g/l)	Soda ash (g/l)	Caustic Flakes (g/l)
20	30	2
40	30	3
60	30	4
80	30	5
100	30	6
>100	30	7

Batch 24 hrs at 25°C

Pad-Dry -Chemical Pad-Steam Method



Pad : dye, wetting agent, anti - migrant, mild oxidant,
LR pre-dry : 110 - 130° C, Chemical Pad

Dye (g/l)	Common Salt (g/l)	Soda Ash(g/l)	Caustic Flakes (g/l)
<20	250	20	1.5
20-40	250	20	2
>40	250	20	3

Steam : 90 secs (saturated Steam)

Advantage

- Economical multi use product range
- Broad selection available from wide shade range
- Range of products suitable for Discharge ground
- Good fastness properties

Abbreviations

Bl - Bluer
Br - Brighter
Dl - Duller
Dk - Darker
G- Greener
R - Redder
Y - Yellower
S - Suitable
Ns - Not suitable

Dischargeability

D - Dischargeable
F - Fair (Partial dischargeable)
P - Poor (Non dischargeable)



PRINTING		Deocion "P"	C.I. Number	Processes			Solubility g/l	Light Fastness				Washing		Water		Perspiration E04				Rubbing		M&S C10A			
				Printing	Pad Dry Steam	Pad Dry Thermolix		Water 30°C	AATCC 16E 1/1	AATCC 16E 1/3	ISO B02 1/1	ISO B02 1/3	C03		E01		Acidic		Alkaline		X12		Change in Colour (Damage to Oxidative Bleach)	Chlorinated Water 20mg/ltr	
													Change in colour	Satin (cotton)	Change in colour	Satin (cotton)	Change in colour	Satin (cotton)	Change in colour	Satin (cotton)	Dry Rubbing	Wet Rubbing			
		Yellow P6GS	Y 95	S	S	S	60	5	4-5	6	5	4-5 R	4-5	5	4-5	5	4-5	5	4-5	5	4-5	5	4	4-5 R	4 R
		Yellow P4G	Y 18	S	S	NS	200	5	4-5	6	5-6	5	4-5	5	5	5	5	5	5	5	5	5	4	4-5	2-3
		G. Yellow PR	O 12	S	S	S	120	4-5	4	6	5-6	5	4-5	5	4-5	5	4-5	5	4-5	5	4-5	4	4-5	4	
		Orange P2R	O 13	S	S	S	200	3-4	3	4	3-4	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4	4-5	4 R	
		Red PB	R 24	S	S	S	120	4	3-4	5-6	5	4-5	4-5	5	4-5	4-5	4-5	5	4-5	4-5	4-5	3-4	4-5	3-4	
		Red P2B	R 45	S	S	NS	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	4-5	4	4-5	4	
		Red P6B	R 218	S	NS	NS	200	4	3-4	5	4-5	5	4-5	5	4-5	5	4-5	5	4-5	4-5	4-5	4	4-5	4	
		Red P4B	R 245	S	NS	NS	200	4	3-4	4	3-4	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	5	4	4 DI	3 DI	
		Magenta PB	V 26	S	S	S	50	4-5	4	5	4-5	5	4-5	5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4	4-5	3 DI	
		T. Blue P5G	B 25	S	NS	NS	50	5	4-5	6-7	6	4-5	3-4	4-5	3-4	4-5	4	4-5	4	4-5	4	4-5	3	4-5 Y	2-3 Y
		Blue P3R	B 49	S	S	S	200	5	4-5	6-7	6	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	5	4	4	2-3 DI
		Blue P5R	B 13	S	S	S	40	4-5	4	6	5-6	5	4-5	5	5	4-5 G	5	4-5 G	5	5	5	4	4-5	2	
		Brown P6R	BR 11	S	S	S	150	5	4-5	6-7	6	5	4-5	5	4-5	5	4-5	5	4-5	5	4-5	5	4	4-5	4
		Navy P2R	BL 39	S	S	S	200	4	3-4	4	3-4	4-5	4-5	4-5	5	4-5 G	5	4-5 G	5	5	5	4	4-5	3 G	
		Black PN	BL 8	S	S	NS	50	4	3-4	5	4-5	5	4-5	5	4-5	5	4-5	5	4-5	5	4-5	5	4	5	3 R,DI
		Black PGR	BL MIX	S	S	S	200	4	---	5	---	5	4-5	5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	3-4	4-5	3 G	



Printing Processes

Print - Silicate

Dye	X parts
Urea	50-100
Water	Y parts
Sodium Alginate (6%)	500
Stock	1000

Print : Dry - Pad Silicate (95° - 100° TW)
Batch 16 hrs

Print - Dry - Stream / Print - Dry - Bake

Substrate	Cotton	Viscose
Dye	X parts	X parts
Urea	50 - 100	100 - 200
Water	Y parts	Y parts
Sodium Alginate Paste (6%)	500	500
Resist Salt	10	10
Sodium bicarbonate	10 - 30	10 - 30
Sodium carbonate	8 - 20	8 - 20
Stock	1000	1000

Bicarbonate & Urea requirement

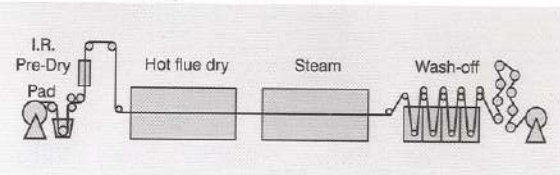
Dye (g / kg)	1-10	11-30	31-40	>40
Sodium Bicarbonate (g/kg)	10	15	25	30
Urea (g/kg)	CO	50	70	100
	CV	100	140	170

Print - Dry - Steam 7 to 10 min at 102° C - 100° C

or

Print - Dry - Bake 1-5 min at 200° C - 150° C (Process not suitable for viscose)

Pad - Dry - Steam (Cotton & viscose)

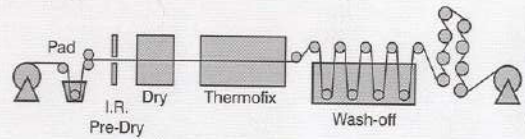


Mixing pump required : Pad : dye, wetting agent, anti - migrant, mild oxidant, alkali.
Add Urea to improve solubility

Dye (g/l)	Soda Ash(g/l)
< 20	10
> 20	20

IR Pre-dry, Dry : 100-120° C, Steam : 2 mins at 120° C

Pad - Dry - Thermofix (cotton)



Mixing pump required : pad : dye, wetting agent, anti - migrant, mild oxidant, alkali.

Dye (g/l)	Soda Ash(g/l)	Urea (g/l)
< 20	10	100
20-50	15	150
> 50	20	200

IR Pre-dry, Dry : 110 - 130° C

Thermofix : 3 mins at 160° C

Advantage

- Monochlorotriazine dyes having low substantivity
- High performance dyes suitable for different process
- Wide range of shades for broad shade gamut
- Good build up & reproducibility
- Good wash fastness levels
- Resistant to oxidative bleach damage

Product placement

- Light - Medium shades** - Golden Yellow PR
Red 6BX
Black PN
- Deep Shades** - Golden Yellow PR
Red P8B
Navy Blue P2R
- Support dyes** - Yellow P6GS
Yellow P4G
Orange P2R
Red PB
Magenta PB
Purple P3R
Turquoise Blue P5G
Blue P3R
Red Brown P6R
Black PGR

Abbreviations

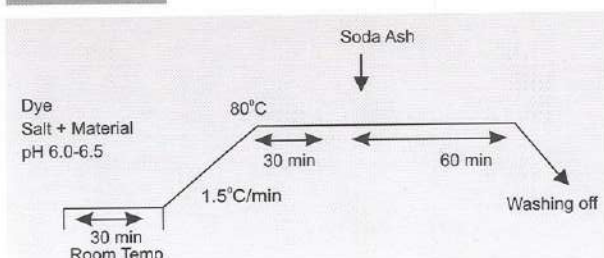
- Bl - Bluer
- Br - Brighter
- DI - Duller
- Dk - Darker
- G - Greener
- R - Redder
- Y - Yellower
- S - Suitable
- Ns - Not suitable
- CO - Cotton
- CV - Viscose



DYEING		Deocion "HE"	C.I. Number	General Properties			Fastness Properties			Suitability				
				Affinity	Solubility at 30°C	Dischargability	Day Light 1/1	Perspiration			Hypochlorite Bleach	Exhaust 40 C & 60°C	Printing	
Washing ISO4	Alkaline							Acidic	Steam	Silicate				
1%	4%													
		Yellow HE-6G	Y 135	H	70	G	4	5	4	4-5	3	3	S	FS
		Yellow HE-4G	Y 105	H	80	F	5	5	4	4	3	4-5	S	FS
		G. Yellow HE-4R	Y 84	H	80	F	5	5	4	4	3	4-5	S	FS
		ORANGE-HE-2R	O 86	H	60	P	3-4	5	4	3	3	4	S	NS
		ORANGE HE-R	O 84	H	80	P	4	5	4-5	4	3	4	S	NS
		RED HE-3B	R 120	H	80	P	4	5	4-5	4	3	4	S	NS
		RED HE-7B	R 141	H	80	P	3-4	4	4-5	4	3	4-5	S	FS
		RED HE-8B	R 152	H	80	P	3-4	4	4	4-5	2	4-5	FS	NS
		N.BLUE HE-R	B 171	H	80	F	4	4-5	5	4-5	3	4-5	S	FS
		N.BLUE HE-2R	B 172	H	80	F	4	4-5	5	4-5	3	4-5	S	FS
		BLUE HE-RD	B 160	H	80	F	5	5	5	5	1	4-5	S	FS
		BLUE HE-GN	B 198	H	80	P	4-5	5	4	4	3	4	5	FS
		GREEN HE-4BD	G 19	H	80	F	4	3	4	4	2	3	S	FS



Exhaust Dyeing



Advantage

- Economical bis MCT dyes
- Wide range of products to cover broad shade gamut
- Good wash fastness level & good reproducibility
- Good buildup behaviors for deep shades
- Level dyeing of difficult substrate with He-XL dyes

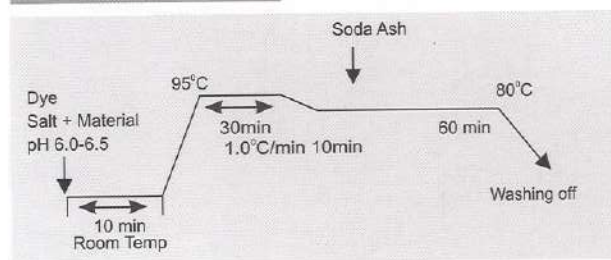
Cotton

Salt and Alkali Requirements

% Dye	Common Salt (g/l)	Soda Ash (g/l)
<0.2	30	10
0.2 - 0.5	30-45	10
0.5 - 1.0	45 - 60	15
1.0 - 2.0	60 - 80	15
2.0 - 3.0	80 - 85	20
3.0 - 4.0	85 - 90	20
> - 4.0	90	20

* Glauber's Salt is recommended with turquoise Blue

Viscose/Mercerised Cotton



Salt and Alkali Requirements

% Dye	Common Salt (g/l)	Soda Ash (g/l)
<0.2	20	10
0.2 - 0.5	20 - 30	10
0.5 - 1.0	30 - 35	15
1.0 - 2.0	35 - 45	15
2.0 - 3.0	45 - 55	15
3.0 - 4.0	55 - 65	20
> 4.0	70	20

* Glauber's Salt is recommended with turquoise Blue

Product Placement

- Light Shades** - Yellow HE-4R
Red HE-3B
Blue HE-RD
- Medium Deep Shades** - Yellow HE-4R
Red HE-7B
Navy Blue HE-R
- Support Dyes** - Yellow HE-6G
Yellow HE-4G
Orange HE-R
Blue HE-GN

Abbreviations

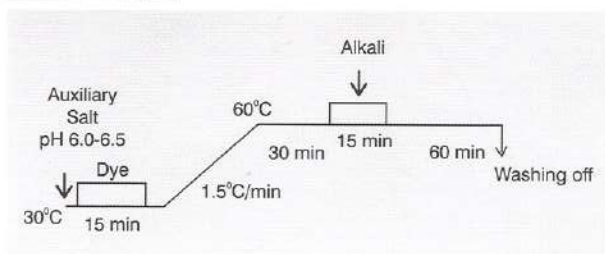
- Bl** - Bluer
Br - Brighter
DI - Duller
Dk - Darker
G - Greener
R - Redder
Y - Yellower
S - Suitable
NS - Not Suitable



DYEING		Deofix "ME"	C.I. Number	General Properties			Fastness Properties					Suitability					
				Substantivity	Solubility at 30°C	Dischargability	Day Light 1/1	Washing ISO4	Perspiration		Hypochlorite Bleach	Peroxide Bleach	Exhaust 40 C & 60°C	One Bath Pad Batch	One Bath Pad Dry Steam	Printing	
1%	4%							Alkaline	Acidic							Steam	Silicate
		Yellow ME-4GL	Y 160	M	100	F	6	4	4-5	4-5	1	4	S	FS	NS	S	S
		G. Yellow ME-RL	Y 145	M	100	P	5	3-4	4	4	1	3-4	S	FS	S	S	S
		Orange ME-2RL	O 122	H	75	P	5	4-5	4-5	4-5	3	4	S	S	S	S	S
		Scarlet - 2G	R 222	H	70	P	5	4-5	4-5	5	3	3-4	S	S	S	S	S
		RED ME-GF	R 223	M	100	F	4-5	4-5	4	4-5	2	2-3	S	S	FS	FS	FS
		RED ME-3BL	R 194	H	100	P	5	4-5	4-5	5	2-3	3	S	S	FS	FS	FS
		RED ME-4BL	R 195	H	150	P	5	4-5	5	5	1	4	S	S	S	S	S
		RED ME-6BL	R 250	H	80	P	5	4-5	5	5	1	4	S	S	S	S	S
		VIOLET MEB2	-	H	80	P	3	4	4	3	2	3	S	FS	S	S	S
		SKY BLUE FGN	B 187	M	100	F	4	4	4	4	4	4	S	FS	S	S	S
		BLUE BRF	B 221	H	100	P	5	5	4	4-5	2	3-4	S	S	FS	FS	S
		BLUE ME-2RL	B 248	H	100	P	4	5	5	5	1	3	S	S	S	S	S
		N. BLUE ME-2GL	B 194	H	100	F	6	5	5	5	1	3	S	NS	S	FS	FS
		N. BLUE MEBF	B 222	H	100	G	3-4	4-5	5	5	1	3	S	NS	S	FS	FS



Exhaust Dyeing



Advantage

- Commodity BI-Functional dyes for economical shades
- Wide range of products to cover broad shade gamut
- Good build-up behaviour for deep shades
- Good wash fastness levels & good reproducibility

Single Alkali method

Salt and Alkali Requirements

% Dye	Common Salt (g/l)	Soda Ash (g/l)
<0.1	20	5
0.1 - 0.5	20-25	5 - 7
0.5 - 1.0	25 - 40	7 - 10
1.0 - 2.0	40 - 50	10 - 13
2.0 - 3.0	50 - 60	13 - 15
3.0 - 5.0	60 - 80	15 - 20
5.0 - 7.0	80 - 90	20
> 7.0	100	20

Product Placement

Light Shades	-	Golden Yellow MERL Red ME4BL Blue BRF
Medium Shades	-	Golden Yellow MERL Red ME4BL Blue ME2GL
Deep Shades	-	Golden Yellow MERL Red ME4BL Navy MEBF
Support Dyes	-	Yellow ME4GL Orange ME2RL SCARLET 2G Red MEGF Red ME3BL Red ME6BL

Mixed Alkali method

Salt and Alkali Requirements

% Dye	Common Salt (g/l)	Soda Ash (g/l)	Soda Ash (g/l)
<0.1	20	5	0
0.1 - 0.5	20 - 25	5	0.3 - 0.38
0.5 - 1.0	25 - 40	5	0.38 - 0.45
1.0 - 2.0	40 - 50	5	0.45 - 0.6
2.0 - 3.0	50 - 60	5	0.6 - 0.75
3.0 - 5.0	60 - 80	5	0.75 - 1.0
5.0 - 7.0	80 - 90	5	1.0
> 7.0	100	5	1.0

Abbreviations

BI	-	Bluer
Br	-	Brighter
DI	-	Duller
Dk	-	Darker
G	-	Greener
R	-	Redder
Y	-	Yellower
S	-	Suitable
NS	-	Not Suitable

DYEING		Deozol "RGB"	Light	Washing ISO 4	Acidic Perspiration	Alkaline Perspiration	Hypochlorite Bleach	Peroxide Bleach	Dischargeability	Solubility 60° C
1%	4%									
		Yellow RGB	4-5	4-5	5	4-5	2	2	F	100
		Orange RGB	4-5	4-5	4	4	4-5	4-5	F	100
		Red RGB	4-5	4-5	4-5	4-5	4	4	P	120
		Deep Red RGB	4-5	4	4	4-5	4	4-5	P	120
		Carmine RGB	4	4	4	4	3-4	3-4	D	100
		Navy RGB	5	5	5	5	3	3	D	120
		Deep Black RGB	4	4	4	4	3-4	3-4	D	100

Advantage

- Modified BI-Functional dyes
- Very good leveling & Compatibility
- Suitable for light to medium depths
- Suitable for medium to deep depths
- Good build up properties
- Resistant to oxidative bleach damage

Product placement

- Light - Medium shades - Golden Yellow RGB
Red RGB
- Deep shades - Yellow RGB
Deep Red RGB
Navy RGB
- Very Heavy Shades - Yellow RGB Conc.
Red RGB Conc.
Navy RGB Conc.

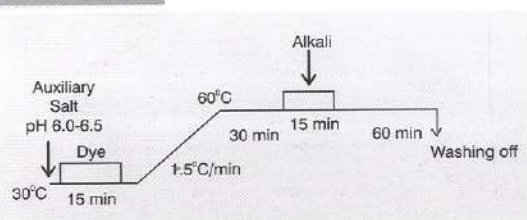
Abbreviations

Bl - Bluer
Br - Brighter
Dl - Duller
Dk - Darker
G - Greener
R - Redder
Y - Yellower
S - Suitable
Ns - Not suitable

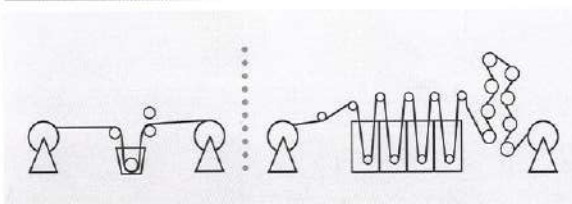
Dischargeability

D - Dischargeability
F - Fair (Partial dischargeable)
P - Poor (Non dischargeable)

Exhaust Dyeing



Cold Pad Batch Dyeing



Mixing pump required Add 10 - 100 g/l urea to dye liquor (as necessary for solubility)

Single Alkali method

Salt and Alkali Requirements

% Dye	Common Salt (g/l)	Soda Ash (g/l)
<0.1	20	5
0.1 - 0.5	20-25	5 - 7
0.5 - 1.0	25 - 40	7 - 10
1.0 - 2.0	40 - 50	10 - 13
2.0 - 3.0	50 - 60	13 - 15
3.0 - 5.0	60 - 80	15 - 20
5.0 - 7.0	80 - 90	20
> 7.0	100	20

Silicate Method

Dye (g/l)	Sodium Silicate (38° Be)	Caustic Flakes (g/l)
<5	100 ml/l	2
10 - 20	100 ml/l	3.0 - 3.5
20 - 30	100 ml/l	3.5 - 4.0
30 - 40	100 ml/l	4.0 - 4.5
40 - 60	100 ml/l	4.5 - 5.0
60 - 80	100 ml/l	5.0 - 5.5
80 - 100	100 ml/l	5.5 - 7.0

Batch 16 hrs at 25°C

Mixed Alkali Method

Salt and Alkali Requirements

% Dye	Common Salt (g/l)	Soda Ash (g/l)	Caustic Flakes (g/l)
<0.1	20	5	0
0.1 - 0.5	20-25	5	0.3 - 0.38
0.5 - 1.0	25 - 40	5	0.38 - 0.45
1.0 - 2.0	40 - 50	5	0.45 - 0.6
2.0 - 3.0	50 - 60	5	0.6 - 0.75
3.0 - 5.0	60 - 80	5	0.75 - 1.0
5.0 - 7.0	80 - 90	5	1.0
> 7.0	100	5	1.0

Silicate Free Method

Dye (g/l)	Soda ash (g/l)	Caustic Flakes (g/l)
20	30	2
40	30	3
60	30	4
80	30	5
100	30	6
>100	30	7

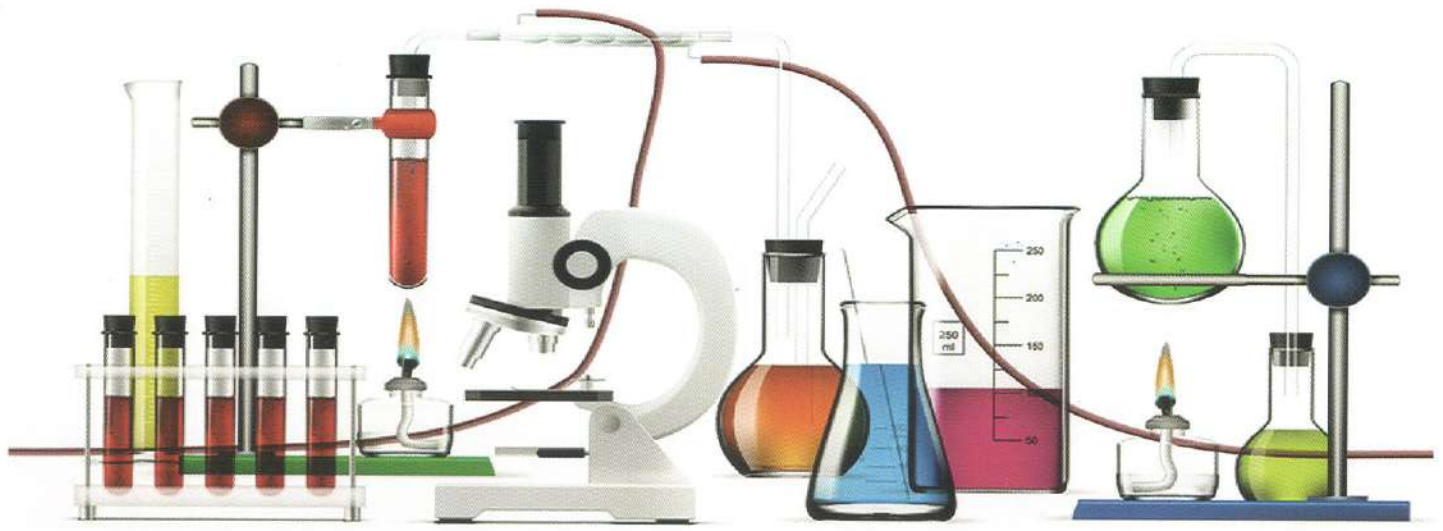
Batch 24 hrs at 25°C

DYEING		Deozol "Black"	Light	Washing ISO 4	Acidic Perspiration	Alkaline Perspiration	Hypochlorite Bleach	Peroxide Bleach	Dischargability	Solubility 60°C
4%	8%									
		Black WNN	4-5	5	5	5	3-4	3-4	D	150
		Black DN	4-5	5	5	5	3-4	3-4	D	150
		Black NG	4-5	5	5	5	3-4	3-4	D	150
		Black PFR	4	4	4-5	4-5	3-4	3-4	D	120
		Deep Black ED	4	5	5	5	3-4	3-4	D	150
		Deep Black EDR	4	5	5	5	3-4	3-4	D	150
		Deep Black GWF	3-4	5	5	5	3-4	3-4	D	150
		Black GSP	3-4	4	4	4	3-4	3-4	D	140
		Black N150	3-4	5	5	5	3-4	3-4	D	150
		Black HFGR	4-5	5	5	5	3-4	3-4	D	150
		Black Mix - N	4-5	5	5	5	3-4	3-4	D	150
		Black DSDN	4-5	5	5	5	3-4	3-4	D	150
		Black NN	4	4	4-5	4-5	3-4	3-4	D	120
		Black EDR	4	5	5	5	3-4	3-4	D	150
		Black SD	3-4	4	4	4	3-4	3-4	D	140
		Jet Black RD	3-4	5	5	5	3-4	3-4	D	150

		Direct Black 22	2-3	3-4	4	4	4	4	D	30
		Acid Black 194	6	4-5	4	4	4	3-4	D	65



Deocron "S - Dyes"		Product Name	Xenon light ISO 105 B02 72/168h	Xenon light AATCC 16E 1/1 SD		Wsh 60 C 5x ISO 105 C06 C1S	Perspiration ISO 105 E04 Ch/CO		Chlorinated Water ISO 105 E03 20MG/l	M&S C10A	Nitric oxides AATCC 164 3cyc es
1%	4%		1/12/ 1/1/ SD	20 AFU	40 AFU	Ch/CO	acid	alkaline	Ch	Ch	Ch
		Lemon S-3G	3/4	4/5	4/5	4/5	5/5	5/5	3/4	4	5
		Yellow S-3R	3/4	5	4/5	4/5	5/5	4/5	2/3	5	5
		Deep Orange S-4R	3/4	3	3	4/5	5/5	5/5	4	4/5	5
		Red S-2G	3/4	4/5	4	5/5	4/5	4/5	2/3	4/5	3
		Deep Cherry S-D	4/5	4/5	4	4/5	4/5	5/5	4/5	4/5	4/5
		Red S-B	3/4	4/5	4	4/5	5/4	4/5	2/3	2	5
		Ruby S-3B	3/4	4/5	4	4/5	4/5	4/5	4/5	5	4/5
		Ocean S-R	5	4/5	4/5	4/5	4/5	4/5	1/2	4/5	3/4
		Dark Blue S-GL	3/4	5	4	5/5	5/5	5/5	3/4	4/5	3/4
		Navy S-G	4/5	5	4/5	5/5	5/5	5/5	4/5	5	4
		Deep Night S-R	4/5	4/5	4	4/5	5	5	2/3	3	4/5
		Black NN	5	4/5	4/5	4/5	5/5	5/5	4/5	4	5
		S. Black G	5	5	4/5	4/5	5	5	4	4	5
		S. Black R	5	5	4	4/5	5	4/5	4/5	4	4/5



Salt, Soda ash and Alkali Recommendations

Soda Ash Method

Liquor ratio below 6:1

Dye %	<0.5	0.5	1	2	3	4	>5
Salt g/l	20	30	40	50	60	70	80
Soda ash g/l	14	16	18	20	20	20	20

Soda Ash Method

Liquor ratio below 8:1

Dye %	<0.5	0.5	1	2	3	4	>5
Salt g/l	20	30	40	50	60	70	80
Soda ash g/l	10	12	14	16	18	20	20

Soda Ash Method

Liquor ratio at and above 8:1

Dye %	<0.5	0.5	1	2	3	4	>5
Salt g/l	30	40	50	60	80	80	100
Soda ash g/l	8	10	12	14	16	18	18

Alkali Method

Liquor ratio below 6:1

Dye %	<0.5	0.5	1	2	3	4	>5
Salt g/l	20	30	40	50	60	70	80
Soda ash g/l	10	10	5	5	5	5	5
NaOH 36 Bej66 Tw%	0.5	1	2	2.5	3	3.5	4

Alkali Method

Liquor ratio below 8:1

Dye %	<0.5	0.5	1	2	3	4	>5
Salt g/l	20	30	40	50	60	70	80
Soda ash g/l	10	10	5	5	5	5	5
NaOH 36 Bej66 Tw%	-	0.75	1.25	1.5	2	2.5	3

Alkali Method

Liquor ratio at and above 8:1

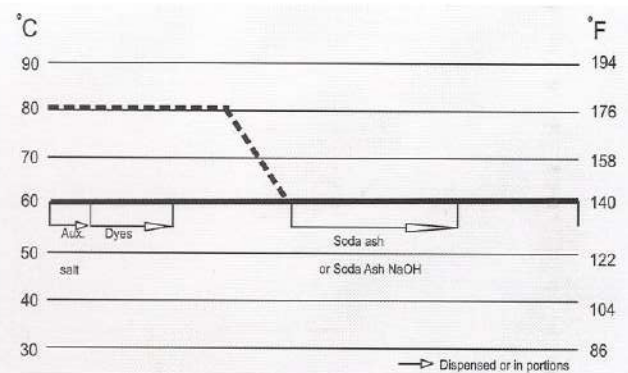
Dye %	<0.5	0.5	1	2	3	4	>5
Salt g/l	30	40	50	60	80	80	100
Soda ash g/l	8	5	5	5	5	5	5
NaOH 36 Bej66 Tw%	-	0.5	1	1.25	1.5	2	2.5

Product Placement Chart

Product	Placement	Warm Exhaust	Hot Exhaust	Cold Pad Batch	Pad Dry Chemical Pad System	Printing
Deocron	High Performance Printing					S
Deocron	Economical warm exhaust dyeing	S		S		
Deocron	Commodity multi-use vinyl sulphone	S		S	S	S
Deocron	High Performance dyeing (Md-Dp shades)	S		S		

Economical All Purpose Value Added

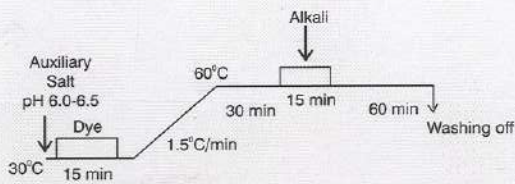
60°C/140°F METHOD FOR DEEP SHADES (DEOFIX - S TYPE)



WASHING OFF METHOD - S DYES

Rinse for 10 min at 50 C/122 F	One rinse is sufficient if liquor ratio is 10:1 if liquor ratio is below 10:1, overflow or intermittent rinse
Neutralize for 10 min at 50 C/122 F	Acetic acid (PH=5.5 to 6)
Soap for 10 min at 95 C/194 F	The addition of a soaping agent is advisable. See dyeing Additives/Soaping
Soap for 10 min at 95 C/194 F	A second soaping operation is recommended for very deep shades
Rinse for 10 min at 70 C/122 F	
Rinse for 10 min cold	
Soften as usual or aftertreat	See dyeing additives/after treatment

Exhaust Dyeing



Single Alkali method

Salt and Alkali Requirements

% Dye	Common Salt (g/l)	Soda Ash (g/l)
<0.1	20	5
0.1 - 0.5	20-25	5 - 7
0.5 - 1.0	25 - 40	7 - 10
1.0 - 2.0	40 - 50	10 - 13
2.0 - 3.0	50 - 60	13 - 15
3.0 - 5.0	60 - 80	15 - 20
5.0 - 7.0	80 - 90	20
> 7.0	100	20

Mixed Alkali Method

Salt and Alkali Requirements

% Dye	Common Salt (g/l)	Soda Ash (g/l)	Caustic Flakes (g/l)
<0.1	20	5	0
0.1 - 0.5	20-25	5	0.3 - 0.38
0.5 - 1.0	25 - 40	5	0.38 - 0.45
1.0 - 2.0	40 - 50	5	0.45 - 0.6
2.0 - 3.0	50 - 60	5	0.6 - 0.75
3.0 - 5.0	60 - 80	5	0.75 - 1.0
5.0 - 7.0	80 - 90	5	1.0
> 7.0	100	5	1.0

Silicate Free Method

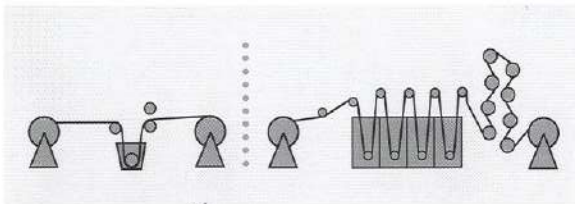
Dye (g/l)	Soda ash (g/l)	Caustic Flakes (g/l)
20	30	2
40	30	3
60	30	4
80	30	5
100	30	6
>100	30	7

Batch 24 hrs at 25°C

Product placement

Light - Medium shades	- Yellow S-3R Deep Orange S-4R Dark Blue S-GL Red S-2G
Deep shades	- Yellow S-3R Deep Orange S-4R Red S-B Navy S-G
Support Dyes	- Lemon S-3G Deep Cherry S-D Ruby S-3B Red S-2G Deep Night S-R
Jet Black	- Greener Black-Black G Redder Black-Black R Neutral Black-Black WNN

Cold Pad Batch Dyeing



Mixing pump required

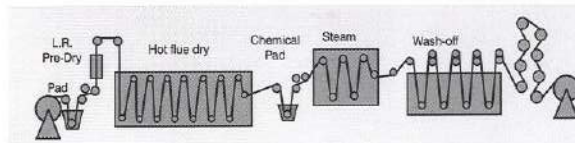
Add 10 - 100 g/l urea to dye liquor (as necessary for solubility)

Silicate Method

Dye (g/l)	Sodium Silicate (38° Be)	Caustic Flakes (g/l)
<5	100 ml/l	2
10 - 20	100 ml/l	3.0 - 3.5
20 - 30	100 ml/l	3.5 - 4.0
30 - 40	100 ml/l	4.0 - 4.5
40 - 60	100 ml/l	4.5 - 5.0
60 - 80	100 ml/l	5.0 - 5.5
80 - 100	100 ml/l	5.5 - 7.0

Batch 16 hrs at 25°C

Pad-Dry -Chemical Pad-Steam Method



Pad : dye, wetting agent, anti - migrant, mild oxidant,
IR per-dry : 110 - 130° C, Chemical Pad

Dye (g/l)	Common Salt (g/l)	Soda Ash(g/l)	Caustic Flakes (g/l)
<20	250	20	1.5
20-40	250	20	2
>40	250	20	3

Steam : 90 secs (saturated Steam)

Advantage

- Hetero BI-Functional dyes for medium to deep shades
- Very good buildup behaviour
- Good wash fastness level & good reproducibility
- Resistant to oxidative bleach damage

Abbreviations

Bl - Bluer
Br - Brighter
Dl - Duller
Dk - Darker
G- Greener
R - Redder
Y - Yellower
S - Suitable
Ns - Not suitable

Dischargeability

D - Dischargeability
F - Fair (Partial dischargeable)
P - Poor (Non dischargeable)

DYEING		Deozol "Ultra" & "DS"	Dyeing Depth(%)	C.I. Reactive	Solubility (g/l)	Discharge-ability		Light	Effect of Metal		Washing		Chlorinated Water
1%	4%					Neutral	Alkaline		Cu++	Fe++	Alteration	Staining	
		Yellow DS-2G	3.0	Unknown	100	4	4	4	4RD	4-5	4-5	4	3-4
		Ultra Yellow DS	3.0	Unknown	100	4-5	4-5	4-5	4RD	4-5	4-5	4-5	3
		Orange DS-2R	3.0	Unknown	100	2-3	2-3	4	3BD	4-5	4-5	4	4
		Ultra Orange DS	3.0	Unknown	100	4	4	4	4BD	4-5	4-5	4	3-4
		Orange DS-HR	3.0	Unknown	100	4	4	4	4BD	4-5	4-5	4	3-4
		Ultra Red DS	3.0	Unknown	100	2-3	2-3	4	4Y	4-5	4-5	4-5	4
		Ultra Wine DS	3.0	Unknown	100	2-3	2-3	4	4BD	4-5	4-5	4-5	3-4
		Red DS-3B	3.0	Unknown	200	2-3	2-3	4	4BD	4-5	4-5	4-5	3-4
		Red DS-4B	3.0	Unknown	100	2-3	2-3	4	4BD	4-5	4-5	4-5	4
		Red DS-2R	3.0	Unknown	100	2-3	2-3	4	4BD	4-5	4-5	4-5	4
		Red DS-HR	3.0	Unknown	150	2-3	2-3	4	4BD	4-5	4-5	4-5	4
		Blue DS-RS	3.0	Unknown	100	2	2	5-6	4-5Y	5	4-5	4-5	4-5
		Ultra Blue DS	3.0	Unknown	100	2-3	2-3	4	3YG	4-5	4-5	4	4
		Navy Blue DS-2G	3.0	Unknown	100	4-5	4-5	4	2G	4-5	4-5	4-5	4
		Ultra Navy SDR	3.0	Unknown	150	4-5	4-5	4	2R	4-5	4-5	4-5	3-4

DEOZOL ULTRA DS COLORS have following characteristics

- Applicable for cost effective medium to dark shades.
- It can be applied in continuous dyeing, printing and exhaust dyeing.
- High reproducibility and good overall fastness.
- Increased build up properties.



DYEING		Deozol "DLF"	Dyeing Depth(%)	C.I. Reactive	Solubility (g/l)	Dischrge-ability		Light	Effect of Metal		Washing		Chlorinated Water
1%	4%					Neutral	Alkaline		Cu++	Fe++	Alteration	Staining	
		Yellow DLF	1.0	Unknown	200	4	4	4-5	3-4YD	3-4YD	5	4	4
		Red DLF	1.0	Unknown	100	3	3	4-5	1-2B	1-2B	5	5	2-3
		Blue DLF	1.0	Unknown	150	2	2	5	5	4	4-5	4	4

DYEING		Deofix "SPD CONC"	Dyeing Depth(%)	C.I. Reactive	Solubility (g/l)	Dischrge-ability		Light	Effect of Metal		Washing		Chlorinated Water
1%	4%					Neutral	Alkaline		Cu++	Fe++	Alteration	Staining	
		Yellow SPD Conc	3.0	Unknown	200	4	4	5	4-5	4-5	5	4-5	4-5
		Red SPD Conc	3.0	Unknown	200	2	2	4-5	4BD	4-5	4-5	4-5	4
		Blue SPD Conc	3.0	Unknown	150	2	2	5	4	4	4-5	4	4
		Navy Blue SPD Conc	3.0	Unknown	200	4-5	4-5	4	2G	4-5	4-5	4-5	3-4

DEOZOL DLF COLORS have following characteristics.

- Economic light fastness dyestuffs.
- Good reproducibility and compatibility.
- Suitable for trichromatic dyeing in light fastness.
- Suitable for exhaust dyeing and continuous dyeing process.





DEO PIYU INDUSTRIES

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