



**BETTER CHEMISTRY,
BETTER LIFE...**

**Manufacturer & Exporter
of Reactive Dyes**



OBERON™ 'C' Series of Reactive Dyes

To implement Blind Dyeing Concept of Reactive Dyeing in Medium to Dark Shades with excellent build-up, our Oberon 'C' Series Reactive Dyes, being Spray Dried R/O products with minimal salt content, offer prudent solutions for Dye Houses. The performances of the products usually match the specifications set by International Retailers and Buying Houses like – Walmart, Gap, Adidas, Nike, Tommy Hilfiger, J.C. Penny, M & S, Inditex, H & M and so on.

Salient Features of Oberon™ 'C' Reactive Dyes

- Highly compatible range over a spectrum of dark to extra dark shades.
- Robustness in dyebath by achieving excellent reproducibility and consistency.
- Right profile with respect to exhaustion, diffusion and fixation to balance cost and performance.
- Least sensitive to minor processing variables when used in combinations.
- Excellent wash-off properties, thereby reducing ecological costs and improving productivity.
- Very good leveling properties due to better fixation yield and excellent migration behavior.
- Satisfies excellent wash fastness standards.
- High performance Non Flaring properties in different illuminants.
- Satisfies the requirements set by major ecological standards.

Exhaust Dyeing

The process application adopted for Oberon 'C' Reactive Dyes exhibit level dyeing with excellent reproducibility due to low dependence on dyeing parameters and high fixation behavior, thereby, easy to operate and control in dye house with minimum manual intervention.

The Dyeing Methods adopted depends exclusively on the type of substrate, Shade and machinery available.

The starting dyebath pH is set between 5.5 and 6.5 by using adequate quantity of Acetic Acid.

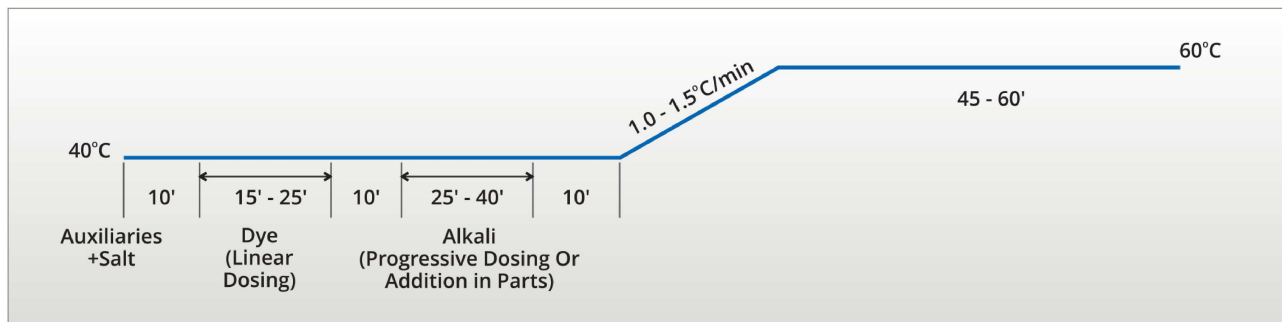
A general recipe for Dyebath Assistants during dyeing process with water of minimum hardness will be:

Acetic Acid	0.30 to 0.50 gpl
Sequestering Agent	0.50 to 1.00 gpl
Defoaming Agent	0.10 to 0.30 gpl
Lubricating Agent	0.25 to 0.40 gpl
Tri Sodium Phosphate	0.20 to 0.25 gpl

Dyeing Method

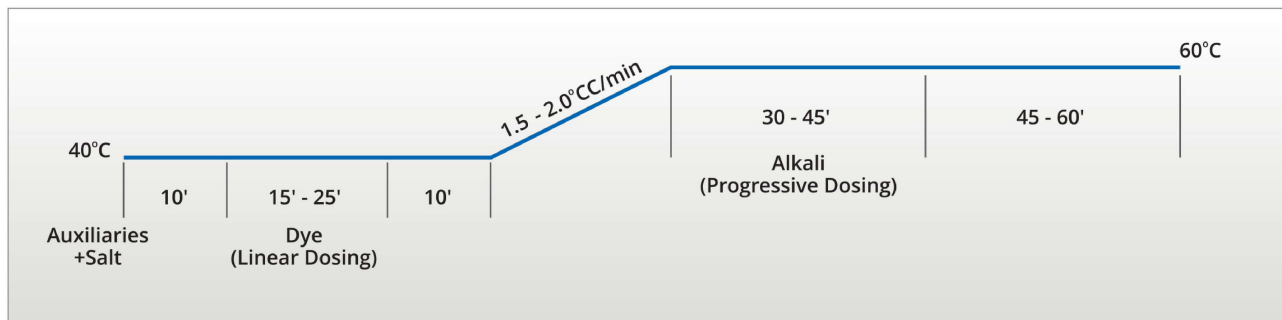
I) All-In-One Method:

This method provides better levelness when difficult to obtain, esp. with darker shades.



II) For Highly Absorbent Cellulosic Substrate:

This is versatile method suitable for highly absorbent cellulosic material.



Salt and Alkali Requirement & Fixation Time During Exhaust Dyeing:

Liquor Ratio 10:1			0.01 to 0.5	0.5 to 1.0	1.0 to 2.0	2.0 to 3.0	3.0 to 4.0	4.0 & Above
Depth of Shade (% o.w.f.)								
Salt	Unmercerized Cotton		20	30	40	50	60	70
(gpl)	Mercerized Cotton		10	20	30	40	50	60
	Soda Ash		10	15	20	20	20	20
Alkali	Mixed	Soda Ash	★	★	8	8	8	10
(gpl)	Alkali	Caustic Soda	★	★	1.0	1.0	1.0	1.5
Fixation Time (Min.)			30	45	60	60	60	70

★ = Not Recommended

Notes:

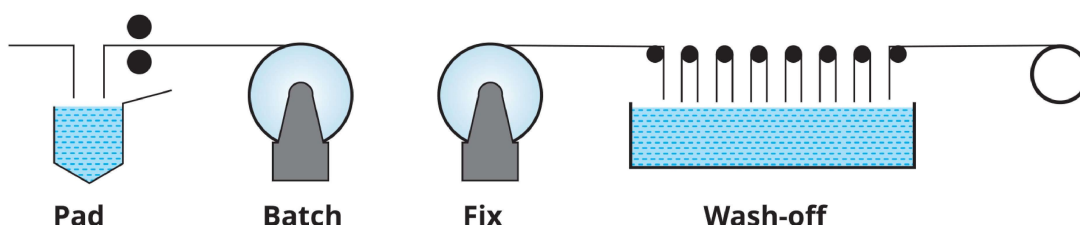
- Glauber's Salt is recommended as electrolyte(Salt) for dyeing self shade or shade based on Turquoise .
- Soda Ash is always the preferred alkali, however to reduce the amount of handling, the mixed alkali (Soda Ash & Caustic) can be used especially in dark shades.
- Caustic Soda used in mixed alkali should be originally in the flakes form.
- In case of dyeing of regenerated cellulosic, like-Viscose, Mixed Alkali should always be avoided.

Washing Off Process of Oberon™ 'C' Reactive Dyes During Exhaust Dyeing

On completion of the Dyeing Cycle, washing off steps to be followed are as:

- Cold Wash with Overflow for 10 minutes.
- Hot Wash at 80°C for 10 minutes.
- Neutralization with Acetic Acid.
- Soaping with 1-2 gpl Non-Ionic Soaping Agent and 0.50 gpl of Sequestering Agent at 90°C for 10 minutes.
- Hot Wash for 10 minutes at 80°C.
- Cold Rinse.
- For maximum wet fastness properties for dark to extra dark shades, additional soaping and hot wash may be repeated before final cold rinse.
- Hot or cold rinse is necessary till final clear solution is obtained.

Cold Pad Batch System



Application Procedure

Sodium Silicate Method

Description

This is the most commonly adopted method by the Process Houses for applying Oberon™ 'C' Reactive Dyes. The general approach is to apply the dye at neutral pH and after distribution of the dye on the substrate, the pH is raised for fixation.

Padding Liquor Recipe

(A) Dyestuff Solution

COMPOSITION OF DYESTUFF SOLUTION	QUANTITY (GPL)
Oberon™ 'C' Reactive Dye	X GPL
Wetting-cum-penetrating Agent	1-2 GPL
Antimigration Agent	2-4 GPL
Sequestering-cum-Dispersing Agent	1-2 GPL
Urea	30-40 GPL(Upto 20 GPL Shades) 50-80 GPL(Above 20 GPL Shade)

(B) Silicate / Caustic Solution

Na ₂ SiO ₃ (48 - 50° Be)	Amount of Oberon™ 'C' Reactive Dyes			
	<20 gpl	20gpl - 40 gpl	40 gpl - 70 gpl	>70 gpl
	Amount of Caustic Soda Solution 35.5% w/w (38° Be) in cc/l required in addition to Sodium Silicate			
100 gpl	15 cc/l	20 cc/l	25 cc/l	30 cc/l

Notes:

- Only necessary amount of boiling water is used for dissolution of dyestuff. Further dilution is done by cold water.
- Urea is sprinkled in solid form into the cooled liquor and dissolved by stirring. Temperature of dye solution should not be above 40°C at the time of adding urea.
- A/B ratio should be 4:1 in the padding bath and to be added through dosage pump.

Padding

- Uniformly cooled fabric is padded at about 25-30°C.
- Padding trough should be of smaller capacity of 15-25 litres due to high fabric speed and frequent replenishment.
- Fabric pick-up should be about 60-70% for cotton and 90-100% for viscose fabrics.
- Quantity of ready-to-pad fabric and speed of the Padding Mangle to be kept at a higher speed, so that the Reactive Dye Solution is used up within 15-20 minutes.

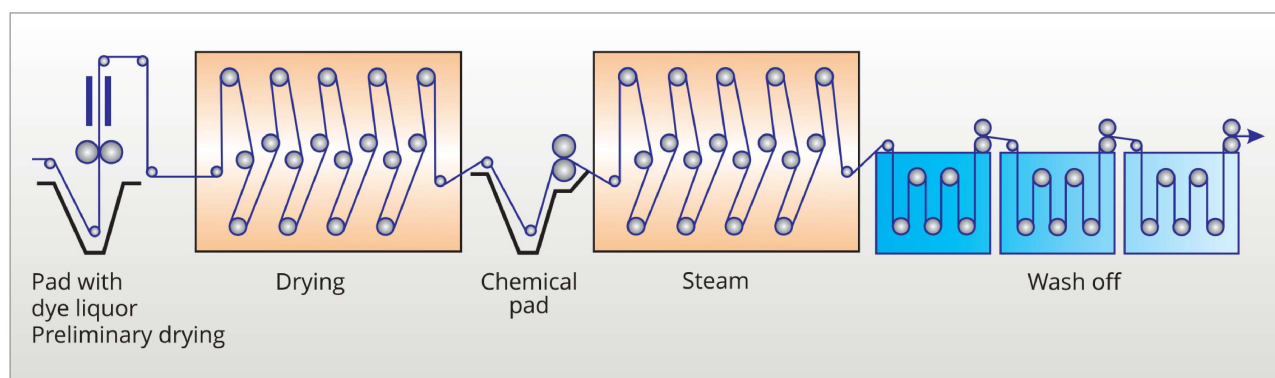
Fixation

- On padding, fabric roll is covered with plastic sheet to protect the padded goods from partial drying and is made to rotate at around 5-10 rpm.
- Fixation time is 8-10 hours, however, for shades like-Turquoise the recommended time is 16-18 hours.

Washing-Off

- Can be carried out on any suitable machine, say, Jigger, Winch or Open-width Soaper.
- For efficient washing off of dyed fabric, 7-8 chamber washing tank is suggestive. In the first 2-3 chambers, excess amount of water is used, to remove Silicate and to drop pH to 8.0-8.5. Temperature in these tanks should not be above 50°C.
- From 4th to 6th chamber, temperature is maintained at 98°C with soaping agent being added in 4th chamber.
- Temperature can be dropped down to 70°C in 7th Chamber and 40°C in the last chamber.

Continuous Dyeing By Pad-Dry-Pad-Steam Process



Dye Liquor Pad

Oberon™ 'C' Dye	x gpl
Wetting-cum-Penetrating Agent	2-3 gpl
Migration Inhibitor	10-15 gpl
Mild Oxidising Agent	5-10 gpl

Liquor Pick-up : 60-80%

Padding Temperature : <35 °C

Intermediate Drying : To be done at 100 - 110 °C

Chemical Pad

Soda Ash	20 gpl
Caustic Soda (38° Be)	10 ml/l
Common Salt	200 gpl

OR

Sodium Silicate (1:2.5) (48-50° Be)	70%
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Liquor Pick-up : 60-80%

Padding Temperature : <35 °C

Steaming :















To be done in Saturated Steam (101 - 105 °C) for 45 – 90 seconds

Washing-Off















Overflow Cold Rinse	30-40 °C
Neutralization	30-40 °C
Warm Rinse	50-60 °C
Hot Rinse	70-80 °C
Soaping(With 1-2 gpl Soaping Agent)	95-98 °C
Warm Rinse	50-60 °C
Cold Rinse	30-40 °C

Important:















The following supersedes the Buyer's documents. This is intended to service as non-binding guidelines. Seller makes no representation or warranty, expressed or implied, including the fitness for a particular purpose. Data and results are based on controlled lab conditions and must be confirmed by Buyer by testing for the intended conditions of use.

OBERON™ 'C' SERIES REACTIVE DYES			Solubility at 50°C		Application Suitability				
			Salt-Free Neutral Water	30 gpl Common Salt	Exhaust	Cold Pad Batch	Pad-Dry-Pad-Steam	Dischargeability(Neutral Discharge)	
1%	3%	SHADE							
		OBERON LEMON C2D	120	85	R	R	NR	R	
		OBERON YELLOW C2D	120	95	R	R	R	R	
		OBERON CANARY C2D	100	70	R	R	R	R	
		OBERON ORANGE C2D	110	75	R	R	NR	R	
		OBERON AMBER C2D	120	80	R	R	NR	R	
		OBERON RED C2D	120	85	R	R	R	NR	
		OBERON RUBY C2D	120	85	R	R	R	NR	








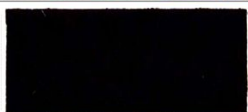
Fixation Temperature (°C) (Exhaust)	FASTNESS PROPERTIES												
	ISO 105-B02		Chlorinated Water (20 ppm Active Chlorine)	WASHING				CROCKING		PERSPIRATION (ISO 105-E04)			
	Light, 1/1 S/D	Light, 1/3 S/D		ISO 105-E03	ISO 105-C06-C2S, @ 60 °C		AATCC TM 61-3A, @ 70 °C		ISO 105-X12		Acidic		Alkaline
			Shade Change	Shade Change	Staining Cotton	Shade Change	Staining Cotton	Dry	Wet	Shade Change	Staining Cotton	Shade Change	Staining Cotton
60	5	4-5	3-4	4-5	4-5	4-5	4-5	4-5	4	4-5	4-5	4-5	4-5
60	5	4-5	3-4	4-5	4-5	4-5	4-5	4-5	3-4	4-5	4-5	4-5	4-5
60	4-5	4	2-3	5	5	4-5	4-5	4-5	3-4	4-5	4-5	4-5	4-5
60	5	4-5	3-4	4-5	4-5	4	4	4-5	4	4-5	4-5	4-5	4-5
60	4	--	3	4-5	5	4	4-5	4-5	3-4	4-5	4-5	4-5	4-5
60	4	3-4	3	4-5	4	4	4	4-5	3	4-5	4-5	4-5	4-5
60	4	4	2-3	4-5	4-5	4	4	4-5	3	5	4	4-5	4

OBERON™ SERIES REACTIVE DYES			Solubility at 50°C		Application Suitability				
			Salt-Free Neutral Water	30 gpl Common Salt	Exhaust	Cold Pad Batch	Pad-Dry-Pad-Steam	Dischargeability(Neutral Discharge)	
1%	3%	SHADE							
		OBERON BORDEAUX C2D	120	85	R	R	R	NR	
		OBERON BLOOD C2D	110	80	R	R	R	NR	
		OBERON CARDINAL C2D	110	70	R	R	NR	NR	
		OBERON RUBINE C2D	120	80	R	R	R	NR	
		OBERON SCARLET C2D	120	75	R	R	NR	R	
		OBERON CARMINE C2D	100	70	R	R	R	R	
		OBERON CRIMSON C2D	100	70	R	R	R	R	

Fixation Temperature (°C) (Exhaust)	FASTNESS PROPERTIES												
	ISO 105-B02		Chlorinated Water (20 ppm Active Chlorine)	WASHING				CROCKING		PERSPIRATION (ISO 105-E04)			
	Light, 1/1 S/D	Light, 1/3 S/D		ISO 105-E03 Shade Change	ISO 105-C06-C2S, @ 60 °C Shade Change	Staining Cotton	AATCC TM 61-3A, @ 70 °C		ISO 105-X12		Acidic		Alkaline
			Shade Change				Staining Cotton	Dry	Wet	Shade Change	Staining Cotton	Shade Change	Staining Cotton
60	4	3-4	3	4-5	4	4	4	4-5	3	4-5	4-5	4-5	4-5
60	3-4	3-4	3	4	4	4	4	4	3	4-5	4-5	4-5	4-5
60	3-4	3	2-3	4-5	4-5	4	4	4-5	3	4-5	4-5	4-5	4-5
60	4	3	3-4	4-5	4	4	4	4-5	3	4-5	4	4-5	4
60	4	--	3	4-5	5	4	4-5	4-5	3-4	4-5	4-5	4-5	4-5
60	4-5	4	4-5	4-5	4-5	4-5	4-5	4-5	4	4-5	4-5	4-5	4-5
60	4-5	4	4-5	4-5	5	4-5	4-5	4-5	4	4-5	4-5	4-5	4-5

OBERON™ SERIES REACTIVE DYES			Solubility at 50°C		Application Suitability			
			Salt-Free Neutral Water	30 gpl Common Salt	Exhaust	Cold Pad Batch	Pad-Dry-Pad-Steam	Dischargeability(Neutral Discharge)
1%	3%	SHADE						
		OBERON WINE C2D	100	80	R	R	R	R
		OBERON BROWN C2D	150	90	R	R	NR	R
		OBERON ADMIRAL C2D	80	50	R	R	R	R
		OBERON AZURE C2D	100	90	R	R	R	NR
		OBERON BLUE C2D	100	80	R	R	R	NR
		OBERON SAPPHIRE C2D	70	25	R	R	R	NR
		OBERON ROYAL C2D	80	30	R	R	R	NR

Fixation Temperature (°C) (Exhaust)	FASTNESS PROPERTIES												
	ISO 105-B02		Chlorinated Water (20 ppm Active Chlorine)	WASHING				CROCKING		PERSPIRATION (ISO 105-E04)			
	Light, 1/1 S/D	Light, 1/3 S/D		ISO 105-E03 Shade Change	ISO 105-C06-C2S, @ 60 °C Shade Change	AATCC TM 61-3A, @ 70 °C Staining Cotton	Shade Change	Staining Cotton	ISO 105-X12 Dry	Wet	Acidic		Alkaline
			Shade Change								Staining Cotton	Shade Change	Staining Cotton
60	5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	3	4-5	4-5	4-5	4-5
60	4	4	3-4	4-5	4-5	4-5	4	4-5	3-4	4-5	4-5	4-5	4-5
60	4-5	4	3-4	4-5	4-5	4-5	4-5	4-5	3-4	4-5	4-5	4-5	4-5
60	4	4	2-3	4-5	4-5	4	4-5	4-5	3	4-5	4-5	4-5	4-5
60	4-5	4-5	3	4-5	4	4-5	4-5	4-5	3	4-5	4-5	4-5	4-5
60	4-5	4-5	1	4-5	4	4-5	4-5	5	2-3	4-5	4-5	5	4-5
60	4-5	4-5	1	4-5	4	4-5	4-5	5	2-3	4-5	4-5	5	4-5

			Solubility at 50°C		Application Suitability			
			Salt-Free Neutral Water	30 gpl Common Salt	Exhaust	Cold Pad Batch	Pad-Dry-Pad-Steam	Dischargeability(Neutral Discharge)
OBERON™ SERIES REACTIVE DYES								
1%	3%	SHADE						
		OBERON NAVY C2D	120	90	R	R	R	R
		OBERON NIGHT C2D	120	90	R	R	R	R
		OBERON TURQUOISE C2D	125	80	R	R	NR	NR
		OBERON BLACK C2D	120	90	R	R	R	R

Abbreviations : R = Recommended NR = Not Recommended

Fixation Temperature (°C) (Exhaust)	FASTNESS PROPERTIES												
	ISO 105-B02		Chlorinated Water (20 ppm Active Chlorine)	WASHING				CROCKING		PERSPIRATION (ISO 105-E04)			
	Light, 1/1 S/D	Light, 1/3 S/D		ISO 105-E03	ISO 105-C06-C2S, @ 60 °C		AATCC TM 61-3A, @ 70 °C		ISO 105-X12		Acidic		Alkaline
			Shade Change	Shade Change	Staining Cotton	Shade Change	Staining Cotton	Dry	Wet	Shade Change	Staining Cotton	Shade Change	Staining Cotton
60	4	3-4	3	4-5	4-5	4-5	4-5	4-5	3	4-5	4-5	4-5	4-5
60	4	3-4	2	4-5	4-5	4-5	4-5	4-5	3	4-5	4-5	4-5	4-5
60	5	4-5	2-3	4-5	3	4-5	3	4-5	3	4-5	4-5	4-5	5
60	4-5 (2/1)	--	4-5	5	4-5	4-5	4-5	4-5	3	4-5	4-5	4-5	4-5

Pattern Illustration : On R.F.D. Cotton by Exhaust Process



NICHEM INDUSTRIES
Plot No.: C-1/265, Phase-II, G.I.D.C.,
Vatva, Ahmedabad - 382445 INDIA.

Ph. : +91 9099970282, +91 9099970283
marketing@nichemind.com
www.nichemind.com