Bodal Chemicals Ltd.

"Bodactive" - A New Definition of Dyeing

BODACTIVE C RANGE

Common Still UNIQUE

Bodal Chemicals Ltd.
Plot No. 123-124, Phase - 1, G.I.D.C.,
Vatva, Ahmedabad- 382 445. Gujarat, India.
Tel : +91-79-2583 5437, 2583 4223, 2583 1684
Fax : +91-79-2583 5245, 2583 6052
E-mail : Dyestuff Division : bodal@bodal.com
Dye Intermediates Division : export@bodal.com
Other Chemicals Division : ankitpatel@bodal.com
Technical Support : techbodal@bodal.com

Dyestuff Division

Nainan Mehta
Mobile : +91 99254 55544

Hardik Shah
Mobile : +91 99254 88688

Dipak Shah
Mobile : +91 98250 35271

www.bodal.com

Bodal Chemicals Ltd.

BODACTIVE C RANGE	2%	4%	General Properties: Solubility g/l 30°C Water	Fixation Temperature (Exhaust Dyeing)	Dischargeability	Suitability For Process: Exhaust	Suitability For Process: CPB
Bodactive Yellow C4GL			100	60°C	LD	S	NS
Bodactive Yellow CG			100	60°C	D	MS	S
Bodactive Yellow C			100	60°C	ND	S	S
Bodactive Yellow CRN H/C			100	60°C	D	NS	S
Bodactive Yellow CW			100	60°C	ND	S	S
Bodactive Golden Yellow CR			100	60°C	D	S	S
Bodactive Orange CGR			100	60°C	D	S	S
Bodactive Orange C2RL			40	60°C	ND	S	NS
Bodactive Orange C2R			100	60°C	LD	S	LS
Bodactive Orange C3R			80	60°C	D	S	S
Bodactive Red C2B			50	60°C	ND	S	NS
Bodactive Red C5B			100	60°C	D	LS	S
Bodactive Red CRB			100	60°C	ND	S	S
Bodactive Red C			150	60°C	ND	S	S

Fastness Properties: Light ISO BO2 1/25	1/1	2/1	Washing CO3 Effect	CO3 Stain	CO4 Effect	CO4 Stain	C4A Effect	C4A Stain	Perspiration EO4 Acidic Effect	Acidic Stain	Alkaline Effect	Alkaline Stain	Chlorinated Water 20 mg/l Cl2 (EO3)	Rubbing Dry	Rubbing Wet	Hot Pressing Dry Effect Immediately	Hot Pressing Dry Effect After 4 Hours
4-5	5	5-6	4-5	4-5	4-5	4-5	4-5	4-5	4	4-5	4	4-5	3	4-5	4	4-5	4-5
4	5	5	4-5	4-5	4-5	4	4-5	4-5	4-5	4-5	4-5	4-5	1	5	4-5	4-5	5
5	5-6	6	4-5	4-5	4	4-5	4	4-5	4-5	4-5	4-5	4-5	3-4	4-5	4	4R	4R
4-5	5	5-6	5	5	4	4-5	4-5	4-5	5	4-5	5	4-5	2-3	4-5	4-5	4-5	4-5
5	5-6	6	4-5	4-5	4	4-5	4	4-5	4-5	4-5	4-5	4-5	3-4	4-5	4	4R	4R
4	5-6	6	5	4-5	3	4-5	4	5	4-5	4-5	4-5	4-5	1	5	4	4R	5
4	5	5	5	5	4-5	4-5	4-5	4-5	4-5	4-5	5	4-5	1-2	5	4-5	4-5R	5
3	4-5	4-5	4-5	4-5	4	4	4	4	3-4	4	4	4-5	3-4	4-5	3-4	3R	3-4R
3	4	4	4	4-5	4	4-5	4	4-5	3-4	4	4	4-5	2	4	3-4	3	5
5	5-6	5-6	4-5	4-5	4	4	4	4	4-5	4-5	4-5	4-5	4	4	4	3-4G	4-5
3	4	4	4-5	4-5	4	4	4	4	4	4-5	4	4	3-4	4-5	3-4	3-4BL	5
3	3-4	4	5	5	3-4	5	4-5	5	5	5	5	5	4	4-5	4	3-4B	4-5
4	4-5	4-5	5	5	5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	2-3	4-5	4	4-5	4-5
3-4	4	4	4	4-5	4	4	4-5	4-5	3-4	4	4	4-5	4	4-5	3-4	3BL	4-5BL

Bodal Chemicals Ltd.

BODACTIVE C RANGE	2%	4%	General Properties: Solubility g/l 30°C Water	Fixation Temperature (Exhaust Dyeing)	Dischargeability	Suitability For Process: Exhaust	Suitability For Process: CPB
Bodactive Red CBS			100	60°C	ND	S	S
Bodactive Red CRBL			80	60°C	ND	S	NS
Bodactive Red C6BL			50	60°C	ND	S	NS
Bodactive Violet C5R			100	60°C	D	S	S
Bodactive Turq. Blue CG			100	80°C	ND	S	S
Bodactive Turq. Blue C2GP			100	80°C	ND	S	S
Bodactive Blue CBB			100	60°C	D	S	S
Bodactive Blue CR			100	60°C	LD	S	NS
Bodactive Blue C3R			100	60°C	D	S	S
Bodactive Navy Blue C2RL			70	60°C	ND	S	S
Bodactive Navy C			100	60°C	D	S	S
Bodactive Black CB 133%*			100	60°C	D	S	S
Bodactive Black CB 150%*			100	60°C	D	S	S
Bodactive Black CRL*			100	60°C	D	S	S

* Shades are in 4% & 8%

Fastness Properties																	
Light			Washing						Perspiration EO4				Chlorinated Water	Rubbing		Hot Pressing Dry	
ISO B02			CO3		CO4		C4A		Acidic		Alkaline					Effect	
1/25	1/1	2/1	Effect	Stain	Effect	Stain	Effect	Stain	Effect	Stain	Effect	Stain	20 mg/l Cl2 (EO3)	Dry	Wet	Immediately	After 4 Hours
3-4	4	4	4	4-5	4	4	4-5	4-5	4	4	4	4-5	3-4	4	3-4	3BL	4BL
3	4	4	4	4-5	4	4	4-5	4-5	3-4	4	4	4-5	4	4	3-4	3-4	4-5
3-4	4	4	4	4-5	4	4	4	4	3-4	4	4	4	4	4	3	3BL	4-5
5	6	6-7	5	5	4-5	5	5	5	4-5	5	3-4	4-5	4-5	4-5	4	3BL	5
4-5	5	6	4-5	4	4	3	4-5	3-4	4-5	4-5	4-5	4-5	4	4	3-4	4-5Y	4-5
4-5	5	6	4-5	4	4	3	4-5	3-4	4-5	4-5	4-5	4-5	4	4	3-4	4-5Y	4-5
5	5-6	6	4-5	5	4-5	4-5	4-5	4-5	3-4G	5	4-5	5	4-5	4-5	4	4-5	4-5
6	6-7	7	5	5	4	3-4	4	4	4-5	4-5	4-5	4-5	4	4-5	4	3-4R	4
5-6	6	6-7	5	5	3-4	5	4-5	5	4	4-5	3-4	4-5	3-4	5	4	4	5
3	4-5	5-6	4-5	4	4	3	4-5	3-4	4-5	4	4-5	4	2-3	4-5	3-4	4-5	5
3-4	3-4	4	4-5	4-5	4	4-5	4-5	4-5	4	4	4	4	4	4-5	4	4-5R	4-5
–	3-4	5	4-5	5	4	4-5	4-5	4-5	5	4	4-5	4	2-3	4-5	3-4	4R	5
–	3-4	5	4-5	5	4	4-5	4-5	4-5	5	4	4-5	4	2-3	4-5	3-4	4R	5
5-6	6	6-7	5	5	4-5	5	5	5	5	5	5	5	2	4-5	4	3R	5

Bodal Chemicals Ltd.

BODACTIVE C RANGE	2%	4%	General Properties: Solubility g/l 30°C Water	Fixation Temperature (Exhaust Dyeing)	Dischargeability	Suitability For Process: Exhaust	Suitability For Process: CPB
Bodactive Black CFL*			100	60°C	D	S	S
Bodactive Black CNN*			150	60°C	D	S	S
Bodactive Black CGDN*			150	60°C	D	S	S
Bodactive Yellow GB			100	60°C	ND	S	S
Bodactive Yellow CF-RGB			100	60°C	ND	S	S
Bodactive Orange GB			100	60°C	D	S	S
Bodactive RED GB			100	60°C	ND	S	S
Bodactive Blue GB			100	60°C	D	S	S
Bodactive Navy Blue GB			100	60°C	D	S	S
Bodactive Deep Black GB*			100	60°C	D	S	S
Bodactive Yellow BR			100	60°C	ND	S	S
Bodactive Orange BR			100	60°C	ND	S	S
Bodactive Red BR			100	60°C	ND	S	S
Bodactive Blue BR			100	60°C	D	S	S

* Shades are in 4% & 8%

Fastness Properties: Light ISO B02 1/25	Light ISO B02 1/1	Light ISO B02 2/1	Washing C03 Effect	Washing C03 Stain	Washing C04 Effect	Washing C04 Stain	Washing C4A Effect	Washing C4A Stain	Perspiration E04 Acidic Effect	Perspiration E04 Acidic Stain	Perspiration E04 Alkaline Effect	Perspiration E04 Alkaline Stain	Chlorinated Water 20 mg/l Cl2 (E03)	Rubbing Dry	Rubbing Wet	Hot Pressing Dry Effect Immediately	Hot Pressing Dry Effect After 4 Hours
–	3-4	4-5	5	4-5	4	4	4-5	4	4-5	4	4-5	4	2-3	4-5	3	3R	5
–	3-4	5	4-5	5	4	4-5	4	5	4-5	4	4-5	4	2-3	4-5	3-4	4	4-5
–	3-4	5	4-5	5	4	4-5	4	5	4-5	4	4-5	4	2-3	4-5	3-4	4	4-5
4-5	5	6	5	5	5	5	5	5	5	4-5	4-5	5	3	4-5	4	4R	4R
5	5-6	6	4-5	4-5	4	4	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4RD	4-5R
3	4	4	4-5	5	5	4-5	5	5	5	4-5	5	4-5	3R	4-5	4	4R	5
4	4-5	5	5	4-5	6	5	4-5	5	4-5	5	5	4-5	4	4-5	3-4	3BL	4-5BL
4	4	5	5	5	5	4-5	5	5	5	5	5	5	4	5	4	4R	4-5
3	3-4	4	4	4-5	4	3-4	4-5	4-5	4-5	4-5	4-5	4-5	3-4	4-5R	3-4	4-5R	4-5
–	3-4	5	4-5	5	4	4-5	4	5	4-5	4	4-5	4	2-3	4-5	3-4	4	4-5
3	3-4	4	4-5	4-5	5	4-5	5	5	5	5	5	4-5	5	2	5	3-4	4R	5
3-4	4-5	5	5	4-5	4-5	4-5	5	4-5	5	5	5	4-5	4-5	5	3-4	3-4	5
3-4	4-5	5	4-5	5	4-5	4-5	4-5	5	5	5	5	5	3	4-5	3	3B	5
3-4	5	5	4-5	5	4-5	4-5	4-5	4-5	5	5	4-5	5	4	5	3-4	4R	5

Bodal Chemicals Ltd.

- DYEING AT 60°C
- WIDE RANGE OF SHADES
- LOW ENERGY DYEING RANGE
- VERY COST EFFECTIVE RANGE
- SUITABLE FOR EXHAUST DYEING COLD PAD BATCH & PRINTING
- BODACTIVE C RANGE IS COMBINATION OF VS & BIFUNCTIONAL DYES

Quantity of Glauber's Salt

%Shade	Glauber's Salt Anhyd.(gpl)
Upto 0.10	10
0.11-0.5	20
0.51-1.0	30
1.01-2.0	50
2.01-4.00	60
Above 4.00	70

Quantity of Alkali

%Shade System	Soda Ash (gpl)	Mixed Alkali System	
		Caustic (700 Tw) ml/L	Soda Ash (gpl)
<0.5	10.0	0.2	5.0
0.5-1.0	15.0	0.5-1.0	5.0
1.0-3.0	20.0	1.0-1.50	5.0
3.0-5.0	20.0	1.50-2.0	5.0
>5.00	20.0	2.0	5.0

Key to Abbreviations

The following abbreviations have been used:

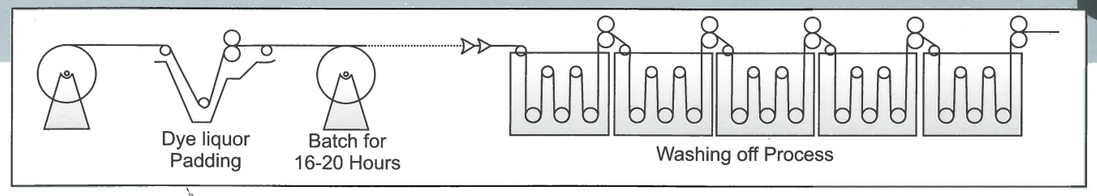
BL	= bluer	D	= dischargeable
D	= duller	ND	= not dischargeable
G	= greener	S	= suitable
R	= redder	LS	= less suitable
W	= weaker	NS	= not suitable

Lab To Bulk Reproducibility

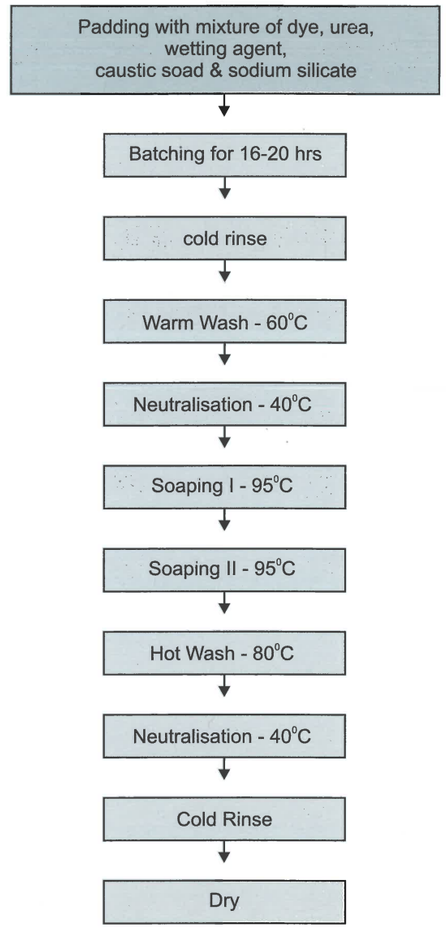
Lab Check Points

- Fabric Quality Used In Lab Should Be Same As That Used In Bulk.
- Dye Solution To Be Prepared As Per Standard Method. Use Dilute Solutions For Pastel Shades.
- Weigh Fabric With Least Error (± 0.005).
- Quality Of Salt & Soda To Be Same As In Bulk.
- Preferable To Use Salt & Soda In Solution Form.
- Check pH Of Water, Fabric & pH During Fixation. Fabric pH Should Be Around 6-6.5. Water Should Be Soft & pH Of Water Should Be Around 6.5-7.0. pH After Adding Soda Ash Should Be Within 10.8-11.2
- Consider Scouring Loss & Water Uptake Of Fabric During Wetting.
- Wash Off In Lab To Be Correlated To Bulk. The Better The Results If Hot Wash Given Initially After Dyeing.
- For Coloured Solutions Upper Meniscus Of Pipette To Be Considered & For Transparent Solutions Lower Meniscus To Be Considered While Pipetting.
- Dyeing Method Should Be Nearly Same As That Followed In Bulk.

Cold pad batch dyeing process



Process sequence



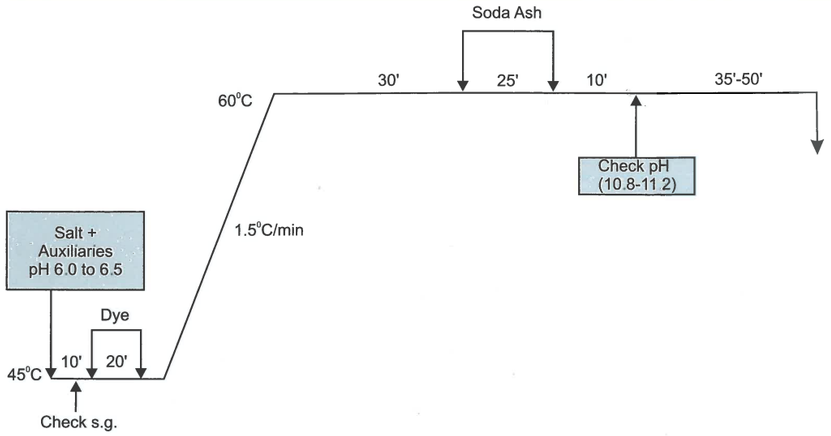
Sodium Silicate, Alkali & Urea Requirement

Dye g/l	Upto 20 G/L	Upto 30 G/L	Upto 40 G/L	Upto 50 G/L	Upto 60 G/L	Upto 70-100 G/L
Urea g/l	50	50	50	50	50	50
Caustic soda (32.5%) Ml/lit/72° T.W	15	20	20	25	25	30
Sodium silicate (100-106° T.W) cc/lit.	65	65	65	65	65	65

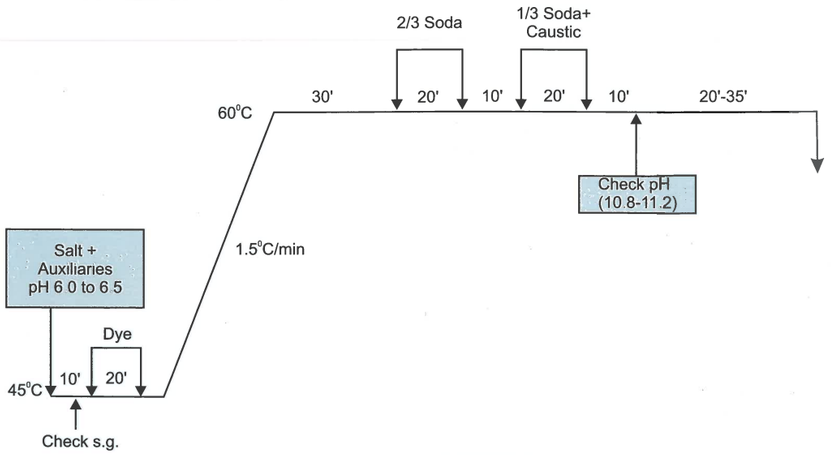
Bodal Chemicals Ltd.

Exhaust Dyeing

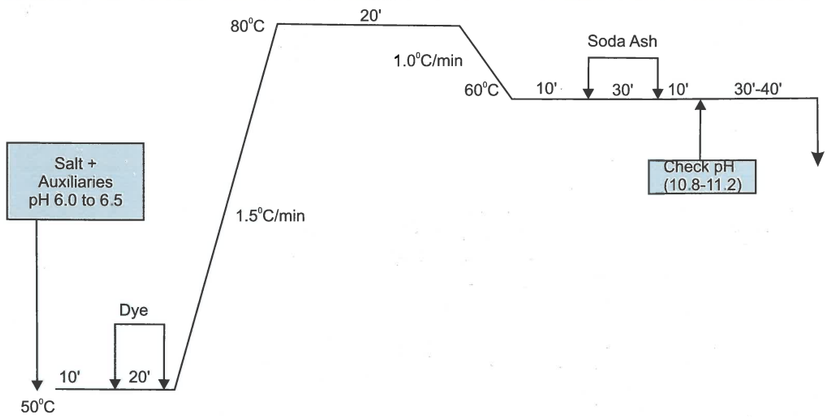
Salt at Start Standard Method - Isothermal.



Salt at Start Standard Method - Isothermal Mix Alkali Method

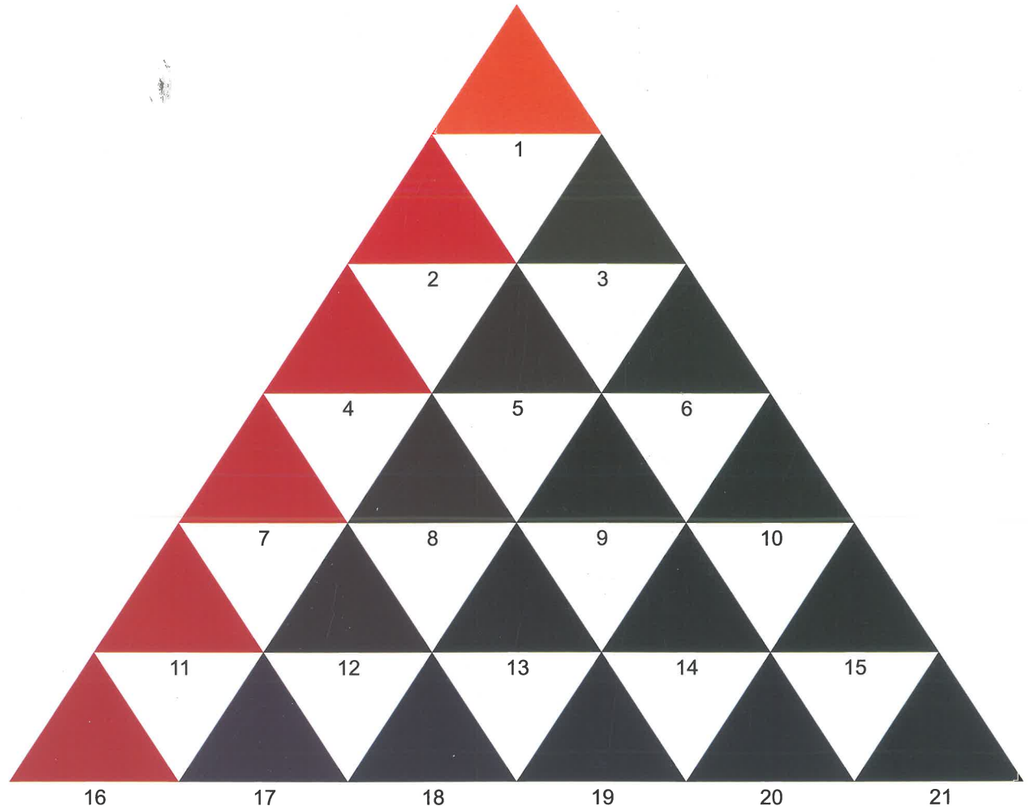


Salt at Start Standard Method - Migration



Trichromatic Shades

BODACTIVE YELLOW C



BODACTIVE RED C

Bodactive Black CB 150%

SHADE NO	YELLOW C	RED C	Black CB 150%	TOTAL
1	4.0	0.0	0.0	4.0
2	3.2	0.8	0.0	4.0
3	3.2	0.0	0.8	4.0
4	2.4	1.6	0.0	4.0
5	2.4	0.8	0.8	4.0
6	2.4	0.0	1.6	4.0
7	1.6	2.4	0.0	4.0
8	1.6	1.6	0.8	4.0
9	1.6	0.8	1.6	4.0
10	1.6	0.0	2.4	4.0
11	0.8	3.2	0.0	4.0
12	0.8	2.4	0.8	4.0
13	0.8	1.6	1.6	4.0
14	0.8	0.8	2.4	4.0
15	0.8	0.0	3.2	4.0
16	0.0	4.0	0.0	4.0
17	0.0	3.2	0.8	4.0
18	0.0	2.4	1.6	4.0
19	0.0	1.6	2.4	4.0
20	0.0	0.8	3.2	4.0
21	0.0	0.0	4.0	4.0

DYEING DEPTH : 4.0 % OWF
SODIUM SULPHATE : 60 g/l
SODA ASH : 20 G/L
M : L RATIO : 1:10
MATERIAL : Woven Cotton Fabric