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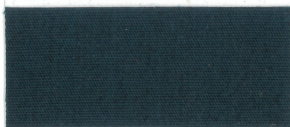
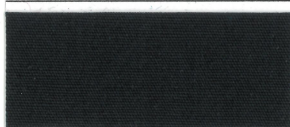
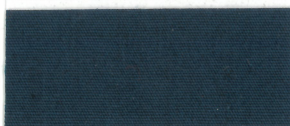
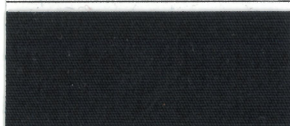
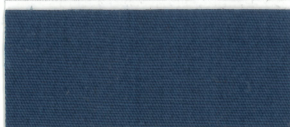
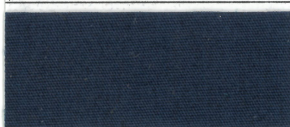
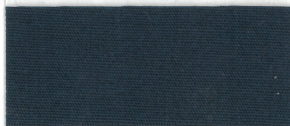
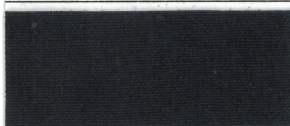
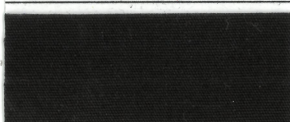
BNC A NEW DEFINITION OF COLOUR

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## **BODACTIVE BNC & BNC SPECIAL RANGE REACTIVE DYES**



**EXCELLENT STRENGTH AND ECONOMICAL**

| BODACTIVE BNC RANGE                  |                     |                                                                                     |                                                                                      | General Properties |       |             |                                          |
|--------------------------------------|---------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------|-------|-------------|------------------------------------------|
|                                      |                     |                                                                                     |                                                                                      | Solubility<br>g/l  |       |             | Fixation Temperature<br>(Exhaust Dyeing) |
|                                      |                     |                                                                                     |                                                                                      | 30°C               | 60°C  |             |                                          |
|                                      |                     |                                                                                     |                                                                                      | Water              | Water | 50 g/l Salt |                                          |
| Exhaust Dyeing                       |                     |                                                                                     |                                                                                      |                    |       |             |                                          |
|                                      | STD<br>Depth<br>1/1 | 2.0%                                                                                | 4.0%                                                                                 |                    |       |             |                                          |
| Bodactive Yellow<br>BNC-GL           | 0.78%               |    |    | 100                | 120   | 50          | 60°C                                     |
| Bodactive Yellow<br>BNC              | 0.75%               |    |    | 180                | 200   | 100         | 60°C                                     |
| Bodactive Orange<br>BNC-RL           | 1.10%               |    |    | 60                 | 100   | 50          | 60°C                                     |
| Bodactive Red<br>BNC                 | 1.50%               |    |    | 200                | 200   | 100         | 60°C                                     |
| Bodactive Red<br>BNC-BS              | 0.98%               |   |   | 200                | 200   | 100         | 60°C                                     |
| Bodactive<br>Turquoise Blue<br>BNC   | 1.72%               |  |  | 100                | 100   | 80          | 60°C<br>80°C                             |
| Bodactive<br>Brilliant Blue<br>BNC-R | 1.26%               |  |  | 100                | 100   | 50          | 60°C                                     |
| Bodactive Blue<br>BNC                | 1.22%               |  |  | 100                | 100   | 50          | 60°C                                     |
| Bodactive<br>Navy Blue<br>BNC 2G     | 4.10%               |  |  | 100                | 125   | 100         | 60°C                                     |
| Bodactive<br>Navy Blue<br>BNC-GB     | 3.10%               |  |  | 200                | 200   | 100         | 60°C                                     |
| Bodactive Navy<br>BNC                | 1.00%               |  |  | 200                | 200   | 150         | 60°C                                     |
| Bodactive Black<br>BNC               | 3.10%               |  |  | 200                | 200   | 100         | 60°C                                     |
| Bodactive<br>Deep Black<br>BNC       | 2.70%               |  |  | 100                | 100   | 50          | 60°C                                     |

Black shades are in 4.0 %, 8.0 %

| Fastness Properties |       |                         |     |                  |             |     |     |             |       |             |       |             |       |              |       |        |       |                   |             |                         |             |     |              |        |             |
|---------------------|-------|-------------------------|-----|------------------|-------------|-----|-----|-------------|-------|-------------|-------|-------------|-------|--------------|-------|--------|-------|-------------------|-------------|-------------------------|-------------|-----|--------------|--------|-------------|
| Effect of metals    |       | Suitability for process |     | Dischargeability | Light       |     |     | Washing     |       |             |       | Water       |       | Perspiration |       |        |       | Chlorinated water | Rubbing     |                         | Mercerising |     | Hot Pressing |        |             |
|                     |       |                         |     |                  | ISO-105-B02 |     |     | ISO-105-C03 |       | ISO-105-C04 |       | ISO-105-E01 |       | ISO-105-E04  |       |        |       | ISO-105-E03       | ISO-105-X12 |                         |             |     | ISO-105-X11  |        |             |
|                     |       |                         |     |                  |             |     |     |             |       |             |       |             |       | Dry          |       |        |       |                   |             |                         |             |     |              |        |             |
| Copper              | Iron  | Exhaust                 | CPB |                  | 1/25        | 1/1 | 2/1 | Effect      | Stain | Effect      | Stain | Effect      | Stain | Effect       | Stain | Effect | Stain | Effect            | Stain       | 20 mg/l Cl <sub>2</sub> | Dry         | Wet | Effect       | Stain  | Immediately |
| 4-5                 | 4-5   | S                       | NS  | ND               | 4-5         | 5   | 5-6 | 4-5         | 4-5   | 4           | 4     | 4-5         | 4-5   | 4            | 4-5   | 4      | 4-5   | 3                 | 4-5         |                         | 4           | 4R  | 4-5          | 4-5    | 4-5         |
| 4 BL,D              | 4-5   | S                       | S   | ND               | 5           | 5-6 | 6   | 4-5         | 4-5   | 4           | 4     | 4-5         | 4-5   | 4-5          | 4-5   | 4-5    | 4-5   | 3-4               | 4-5         | 4                       | 4 R         | 3-4 | 4 R,D        | 4-5 R  |             |
| 4                   | 4     | S                       | S   | ND               | 3           | 4   | 4   | 4-5         | 4-5   | 4           | 4     | 4           | 4     | 4            | 4-5   | 4      | 4-5   | 3 R               | 4-5         | 4                       | 3-4         | 4-5 | 4 R          | 4-5    |             |
| 2-3 BL              | 4-5   | S                       | S   | ND               | 3-4         | 4   | 4   | 4           | 4-5   | 4           | 4     | 4-5         | 4-5   | 4            | 4     | 4      | 4-5   | 4                 | 4-5         | 4-5                     | 3-4         | 4-5 | 3 B,R        | 4-5 BL |             |
| 2-3                 | 4     | S                       | S   | ND               | 4           | 4-5 | 5   | 4           | 4-5   | 4           | 4     | 4           | 3-4   | 4            | 4     | 4      | 4-5   | 3-4               | 4           | 3-4                     | 4           | 3-4 | 3 BL         | 4 BL   |             |
| 4 R                 | 4 G   | S                       | S   | ND               | 4-5         | 5   | 6   | 4-5         | 4     | 4           | 3     | 4           | 4     | 4            | 4     | 4      | 4     | 3G                | 4           | 3-4                     | 1 G         | 3   | 4-5 Y        | 4-5    |             |
| 4-5                 | 4-5   | S                       | NS  | ND               | 6           | 6-7 | 7   | 5           | 4-5   | 4           | 3-4   | 4           | 4     | 4-5          | 4-5   | 4-5    | 4-5   | 3-4               | 4-5         | 4                       | 3 R         | 3   | 3-4 R        | 4      |             |
| 4-5                 | 4-5   | S                       | S   | D                | 5           | 5-6 | 6   | 4-5         | 4-5   | 4-5         | 4-5   | 4           | 4     | 4            | 4-5   | 4-5    | 4-5   | 3-4               | 4-5         | 4                       | 4 R         | 4-5 | 4-5          | 4-5    |             |
| 2 R                 | 4     | S                       | S   | D                | 4           | 4-5 | 4-5 | 5           | 4-5   | 4-5         | 4     | 4           | 4     | 4-5          | 4     | 5      | 4     | 3-4 G             | 4           | 3-4                     | 3-4         | 3-4 | 4-5          | 4-5    |             |
| 1 R                 | 4-5   | S                       | S   | D                | 3           | 3-4 | 4   | 4           | 4-5   | 4           | 3-4   | 4           | 4-5   | 4-5          | 4-5   | 4-5    | 4-5   | 3-4               | 4-5 R       | 3-4                     | 4-5 R       | 3-4 | 4-5 R        | 4-5    |             |
| 1-2 WG              | 4-5 G | S                       | S   | ND               | 3-4         | 3-4 | 4   | 4-5         | 4-5   | 4           | 4-5   | 4           | 4     | 4            | 4     | 4      | 4     | 3-4               | 4-5         | 4                       | 4 R         | 4-5 | 4-5 R        | 4-5    |             |
| 3 R                 | 4     | S                       | S   | D                | -           | 3-4 | 5   | 4-5         | 4-5   | 4           | 4-5   | 4           | 4     | 4-5          | 4     | 4-5    | 4     | 2-3               | 4-5         | 3-4                     | 4 R         | 2-3 | 4 R          | 5      |             |
| 3-4                 | 4     | S                       | S   | D                | -           | 3-4 | 4   | 4-5         | 4-5   | 4           | 4-5   | 4           | 4     | 4-5          | 4     | 4-5    | 4     | 2-3               | 4-5         | 3-4                     | 4           | 3   | 4            | 4-5    |             |

## BODACTIVE BNC SPECIAL

Bodactive BNC Special is a range of excellent high strength with different chromophore of Reactive dyes. Special range for all types of shades, compatible with Bodactive BNC range.

[illegible]

## NANO TECHNOLOGY DIFFERENT CHROMOPHORE

[illegible]

## Features

BODACTIVE BNC & BODACTIVE BNC Special are range of novel nano technology of Reactive Dyestuffs developed to meet demands of high production with economy recipes. BODACTIVE BNC stands for high strength dyes with all types of hue. BODACTIVE BNC Special is our own development with special hue. Recommended for all type of shades including light shades and especially for medium to dark shades for cellulose fibers & fabrics for exhaust, semi continuous and continuous dyeing.

### Excellent Range

### Exhaust dyeing. Semi continuous and continuous dyeing

#### High Productivity

Low energy consumption.  
Shorter dyeing cycle.  
High tinctorial value.  
Excellent fixation profile.  
New chromophore with high strength complete range.  
Very high solubility.  
Stable to acid.

#### Excellent Reproducibility

High exhaustion profile.  
Robust to process variables.

#### Excellent Level Dyeing

Low rate of strike.  
Superior migration properties.

#### Eco friendly

High fixation leaves less color residue in effluent.  
Easy wash off saves valuable water.  
Warm dyeing at 60°C consumes less energy.

#### Excellent Compatibility

Bodactive BNC range is Excellent compatible with Bodactive BNC special range.  
Uniform reproducibility & reliable fastness.

## 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 (70° Tw) ml/l | Soda Ash (gpl) |
| <0.5           | 10.0           | 0.5                   | 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            |
| >5.0           | 20.0           | 2.0                   | 5.0            |

### Recommended Bodax Auxiliaries

#### Dye bath Auxiliaries in Exhaust Method

| Name of products        | Product description                                                                              | Dosage          |
|-------------------------|--------------------------------------------------------------------------------------------------|-----------------|
| Bodax PFE               | Dye bath conditioner and iron chelator                                                           | 0.25 to 0.5 gpl |
| Bodax VDBC              | Specially high temperature stable conditioner cum sequestrant                                    | 0.25 to 0.5 gpl |
| Bodax DRDL              | Economical Levelling agent                                                                       | 0.5 to 0.75 gpl |
| <b>Wash-off Agent</b>   |                                                                                                  |                 |
| Bodax DXCW              | Universal after soaping agent for the removal of hydrolysed Reactive dyes or unfixed Direct dyes | 0.5 - 1.0 gpl   |
| <b>Dye fixing Agent</b> |                                                                                                  |                 |
| Bodax DNF               | Economical non-formaldehyde dye fixing agent                                                     | 0.5 to 1.0 gpl  |
| <b>CPB method</b>       |                                                                                                  |                 |
| <b>Wetting Agent</b>    |                                                                                                  |                 |
| Bodax VNF               | Wetting cum deaerating agent for continuous and semi-continuous process                          | 0.25 to 0.5 gpl |

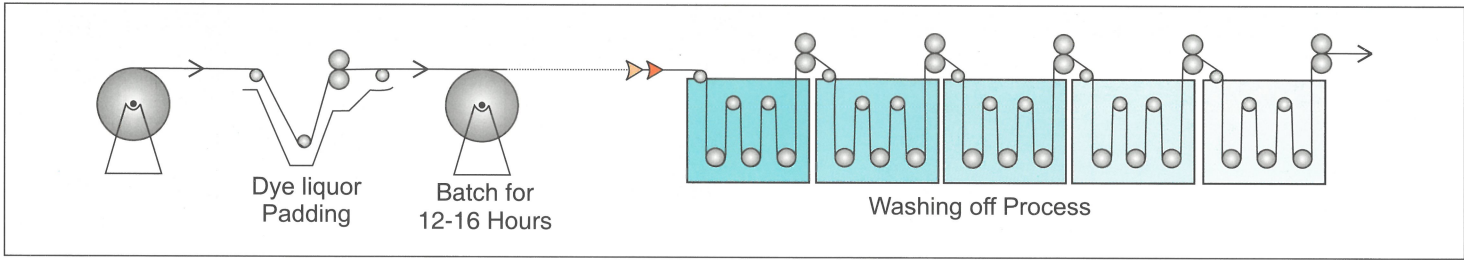
## Key to Abbreviations

The following abbreviations have been used:

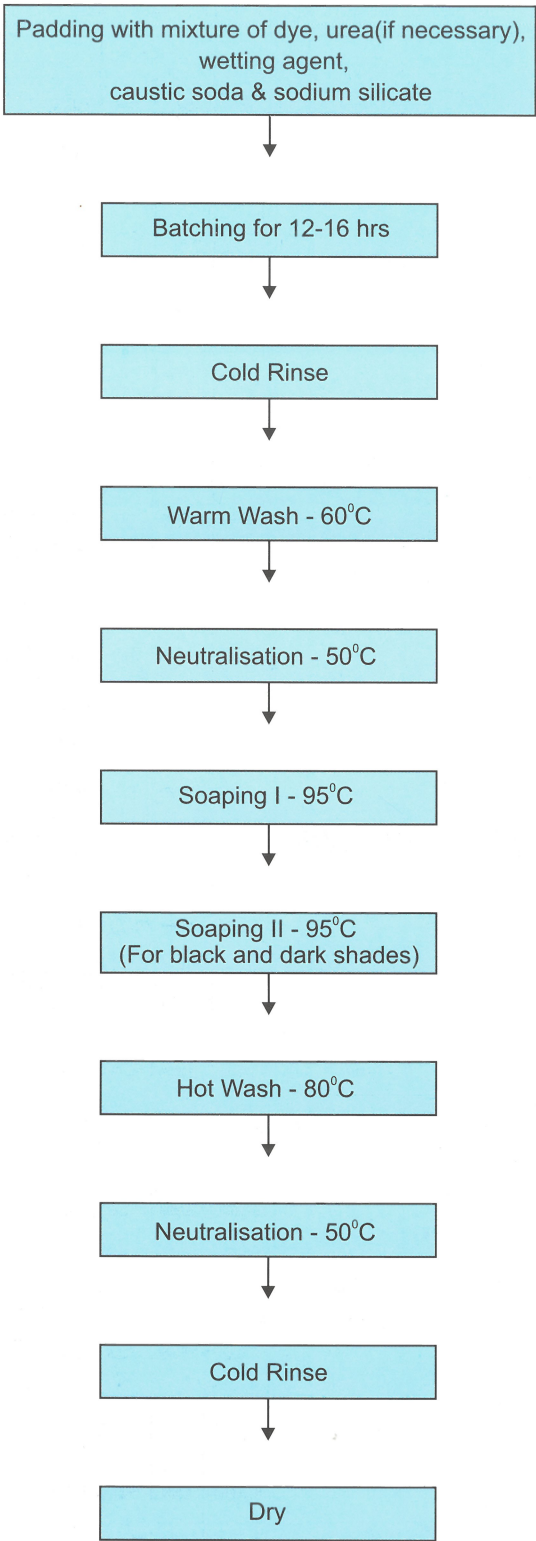
|              |                        |
|--------------|------------------------|
| BL = bluer   | W = weaker             |
| D = duller   | D = dischargeable      |
| Y = yellower | ND = non dischargeable |
| G = greener  | S = suitable           |
| R = redder   | NS = not suitable      |

Semi-continuous dyeing

Cold pad batch dyeing process



Process Sequence

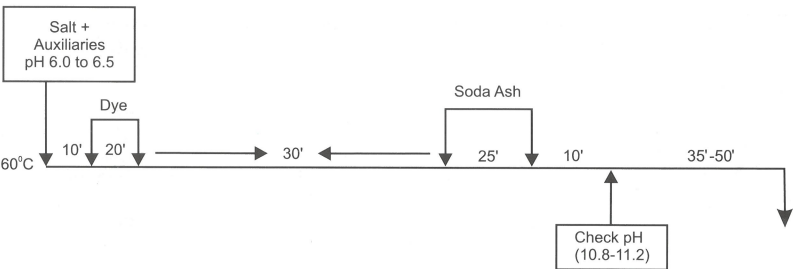


Sodium Silicate, Caustic Soda & Urea Requirement

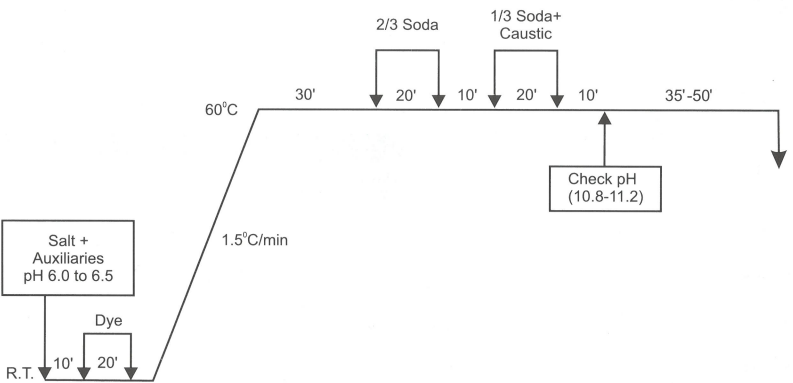
| Dye g/l                                | Upto 20 g/l | Upto 30 g/l | Upto 40 g/l | Upto 50 g/l | Upto 60 g/l | Upto 70-100 g/l |
|----------------------------------------|-------------|-------------|-------------|-------------|-------------|-----------------|
| Urea g/l                               | -           | -           | -           | 50          | 50          | 50              |
| Caustic Soda (ml/l)<br>(32.5% / 72°Tw) | 15          | 20          | 20          | 25          | 25          | 30              |
| Sodium Silicate (ml/l)<br>(100-106°Tw) | 65          | 65          | 65          | 65          | 65          | 65              |

Exhaust Dyeing

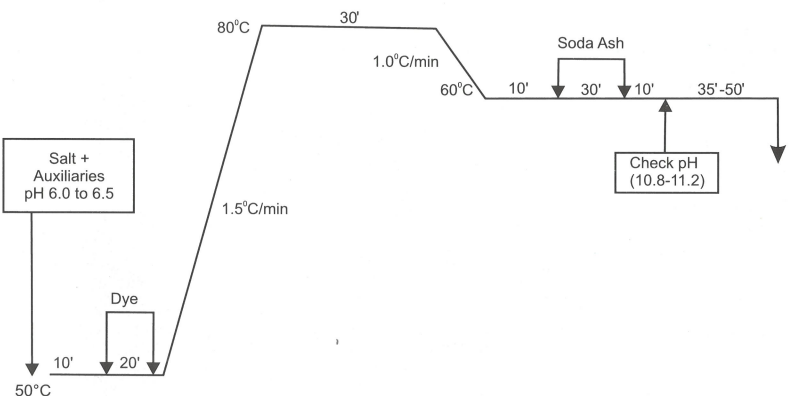
Salt at Start Standard Method-Isothermal.



Salt at Start Standard Method-Temperature Rise



Salt at Start Standard Method-Migration Method





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