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ISO 9001
ISO 14001
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Ø ZDHC MRSL v3.1 Conformance Level 3
Chemical to Zero(CtZ) - Progressive Level

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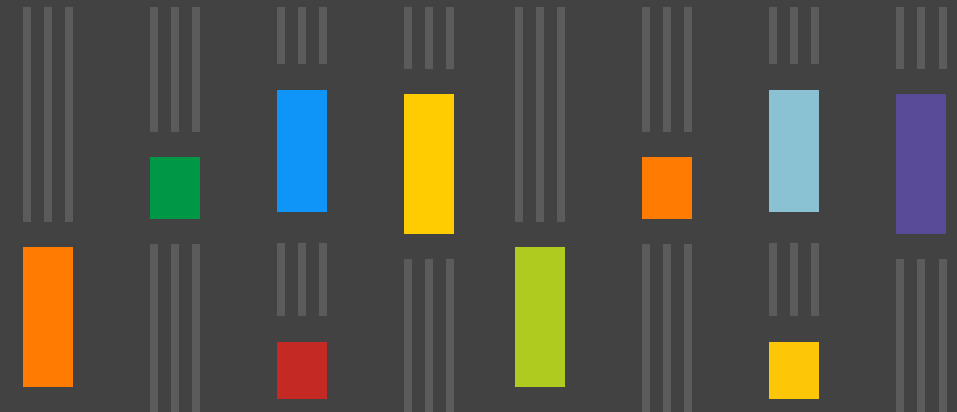
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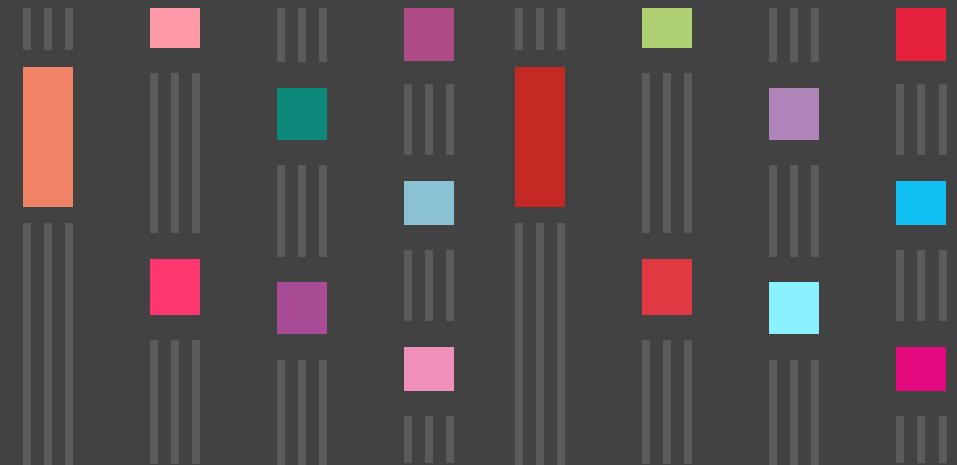
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🌐 www.colorzindia.com

SPECTRON[®]
Reactive Dyes



Vibrance That Lasts, **Colors That Speak**



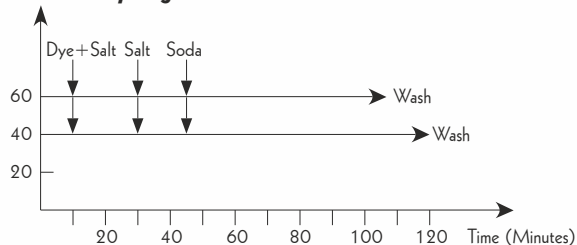
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Palette Powering Progress

Spectron 'VS' Dyes

Features:

- Moderate reactivity with low dyeings temperature 40-60°C.
- Good dyeing and printing performance.
- Excellent wet fastness properties.
- Good dischargeability of dyed ground.
- Wide range of application methods.

Exhaust Dyeing: Standard Method



Minutes
Load Machine - Run Liquor and /or fabric/yarn.
Set the bath to required temp (40°C or 60°C)
Adjust PH with acetic acid, if necessary.

10 Add predissolved dye and Half of salt solution.
20 Continue at 40°C or 60°C Add Remainder of Salt.
15 Continue at 40°C or 60°C. Add Soda ash Solution.
90 or 60 Continue at 40°C or 60°C. Wash.

Dyeing at 40°C – Dyeing time 90 minutes.

Suitable for dyeing of non-mercerised cotton in medium and dark shades. Best tinctorial strength & fixation value.

	JIGGER		SOFT FLOW & WINCH	
Material : Liquor Ratio	1:2 - 1:3	1:4 - 1:6	1:7 - 1:14	1:15 - 1:30
Glauber Salt gm/l	50 - 80	50 - 80	50 - 80	50 - 80
Soda Ash gm/l	5	5	5	5
Caustic Soda gm/l	1.2-2	1-1.5	1-1.5	0.5-1

Dyeing at 60°C – Dyeing time 60 minutes.

Suitable for pale shades on mercerized cotton and rayon fabric. Best levelness and short dyeing cycle.

	JIGGER		SOFT FLOW & WINCH	
Material : Liquor Ratio	1:2 - 1:3	1:4 - 1:6	1:7 - 1:14	1:15 - 1:30
Glauber Salt gm/l	50 - 80	50 - 80	50 - 80	50 - 80
Soda Ash gm/l	5	5	5	5
Caustic Soda gm/l	1-1.5	1-1.5	0.5-1	0.5
Only Soda Ash as Alkali g/l	5 - 25	5 - 20	5 - 20	5 - 20

Dyeing at 80°C – Dyeing time 60 minutes.

Suitable for Turquoise and combination with other dyes. Best possible colour yield.

	JIGGER		SOFT FLOW & WINCH	
Material : Liquor Ratio	1:2 - 1:3	1:4 - 1:6	1:7 - 1:14	1:15 - 1:30
Glauber Salt gm/l	50 - 80	50 - 80	50 - 80	50 - 80
Soda Ash gm/l	25	15 - 20	10 - 15	5 - 10

At the end of dyeing final pH of dye bath should be pH 10.6 to 11 at room temperature 35°C.

One Bath PAD Process - Cold PAD batch using Sodium Silicate

Machinery: (A) Good padding mangle with small trough
(B) Batching equipment

Pad Liquor: The ratio of dye solution & alkali mixture is kept as 4:1 and accordingly solutions are prepared.

Dye Solution: X g/l Spectron Dye
400 m/l Boiling Water, Cool
50-100 g/l Urea if required for solubility (to be added after cooling to 40°C).
3-5 g/l Wetting Agent
800 ml Dye solution made with water

Alkali Solution: 100 g/l Sodium Silicate 102°TW
5-10 ml/l Ratio Na₂O : SiO₂; 1:2.6
200 ml/l Caustic Soda 72°TW
Alkali solution made with cold water

Procedure:

Prepare the dye solution and alkali solution in the ratio 4:1 separately and cool it to 25-30°, Mix the two solution just before padding manually or using dye alkali mixer & feed to the padder bath of small capacity. Pad the cold fabric at 25°C with 60 – 70% pick up on cotton at constant speed and batch the fabric on roller taking care to aligned the selvages. The roller is completely covered with polythene sheet and tied firmly close to the selvage. Dwell the batch for 16 to 24 hrs at 35°C. Rotating the fabric roll during dwelling period will help easy unwinding during washing and also avoiding collection of liquor at the bottom of roll in case of high pick up of liquor.

After Treatment:

- Rinsing in warm water with overflow
- Rinsing in hot water at 75 - 85°C.
- Soaping at boil in neutral detergent & Sod H.M.P.
- Rins Hot and Cold
- Finally take out fabric through 0.2 – 0.3 ml/l acetic acid.
- Use of 1g/l Sodium Hexa Meta Phosphate from the beginning in each rinsing bath helps easy removal of silicate at early stage.

Printing : 'VS' Dyes

These Dyes react with cellulosic fibre in presence of alkali & heat. The direct chemical linkage which result thereby accounts for excellent fastness. The reaction between cellulosic fibre and “Spectron” range of dyes can be achieved any of the following methods:

1) One Phase Method

- Steaming Process
- Dry Heat Process

2) Two Phase Method

- Sodium Silicate
- Alkaline electrolyte Solution

Printing Paste Recipe

	One Phase Method		Two Phase Method	
Dyestuff	10-60	Parts	10-60	Parts
Hot Water	300	Parts	300	Parts
Urea	50-100	Parts	---	Parts
Thickener (4% Sodium Alginate)	350-400	Parts	350-400	Parts
Resist Salt	10	Parts	10	Parts
Sodium Bi Carbonate	10-30	Parts	---	Parts
Water / Thickener	X	Parts	X	Parts
TOTAL	1000	PARTS	1000	PARTS

1) One Phase Method

Steaming Process : Print Z Dry Z Steam in saturated steam at102°C for 5-10 minutes Z Wash.
Dry Heat Process : Print Z Dry Z Bake at 140-150°C for 5-3 minutes Z Wash.

2) Two Phase Method

Print Z Dry Z Pad through Sodium Silicate 100-106°TW.
OR Alkaline electrolyte solution Z dwell for 16-24 hrs Z Wash.

Note:

1) Instead of Pure Sodium Silicate of 100-106°TW following Soln. Helps in easy working.

800	Parts	Sodium Silicate 126°TW
100	Parts	Caustic Soda 72°TW
100	Parts	Water
1000	Parts	Total

2) Alkaline Electrolyte Solution	500	Parts	Water Cold
	200	Parts	Glauber Salt
	200	Parts	Soda Ash
	100	Parts	Sodium Silicate 106°TW
	1000	Parts	Total

Discharge Printing

V. S. based dyes are most suitable for discharge printing. Discharge effect is better on cotton fabric than Spun Viscose. Ground shades are prepared by any of the dyeing method and treated with resist salt, 10gm/l on paddler & dried prior to discharge printing. This is to protect the dyed ground shade from reducing effect in the steamers.

Printing Paste Recipe

I	II	III	
100-120	100-200	100-200	g Rongatile C
100	100	100	g Totanium Dioxide 1:1
500	500	500	g Thickening
-	60	-	g Soda Ash
-	-	50-150	g Caustic Soda 72°TW
X	X	X	g Water / Thickening
1000	1000	1000	TOTAL

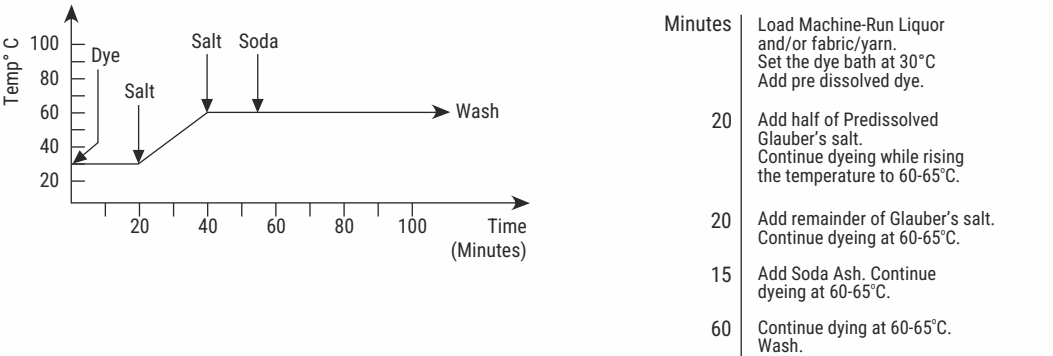
Print and dry at maximum temperature of 90°C. The fabric is steamed for 5-10 minutes in saturated steam in continuous steamer or for 10-15 minutes in star ager. Wash cold & hot, then soap. Again hot wash, cold wash & dry.

Spectron Bifunctional Dyes

Features:

- Good dyeing performance.
- Excellent wet fastness properties.
- Ease of washing off. Suitable for exhaust dyeing, padding & printing.
- Excellent leveling, better reproducibility, high exhaustion and high fixation.
- Suitable for piece & yarn in all type of dyeing equipments.

Exhaust Dyeing: Standard Method



Salt & Alkali Requirement

	% Shade	<0.5%	0.5-1.0%	1.0-2.0%	2.0-4.0%	>4.0%	Dark Black
	Glauber's Salt (gpl)	20	20-40	50	60	80	80-100
Single alkali method	Soda Ash (gpl)	5-10	10-15	15-20	20	25	25
Mixed alkali method	Soda Ash (gpl)	-	5	5	5	5	6
	Caustic Soda (gpl)	-	0.1-0.3	0.5	0.50-1.00	1.5	1.50-2.00

1. These dyes are applicable to cellulosic goods by dyeing as well as printing method

A) Printing Method

- Print with alkali, dry, steam wash
- Print without alkali, dry-pad sodium silicate batch & wash
- Details as per VS Dyes

B) Dyeing method

- Exhaust as well as pad batch method
- Dyeing & printing procedure & after treatment, as per given under 'VS' Dyes.

2. For cold pad batch using Sodium Silicate, Printing and Discharge printing on dyed ground. Please refer 'VS' Dyes section.

3. Trichromatic Spectron dye suitable for Medium to Dark shades

- Spectron HFBR Dyes, Spectron RR Dyes, Spectron RFD Dyes

Product Name	Shade	1/1 SD	Light Fastness ISO 105 B02 (Upto 6)	Water ISO 105 E01		Perspiration Iso 105 E04 Acidic				Wash ISO 105 C10 : C (60°C)		Wash ISO 105 C06 C2S (60°C)		Crocking ISO 105 X12		Chlorinated Water ISO 105 E03 (20 PPM)	Dischargeability	Solubility Grams/Litre	
																		Neutral Solubility	Salt Solubility
																		CoS	Co

VINYL SULPHONE

YELLOW H7GL		6.00%	5-6	6	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4	4-5	4	4-5	4	2-3	MD	100	40
YELLOW FG		6.00%	5	6	4-5	4-5	4-5	4-5	4-5	4-5	4	4-5	4	4-5	4-5	3-4	2-3	D	100	80
YELLOW GR		3.50%	5	6	4-5	4-5	4-5	4-5	4-5	4-5	4	4-5	4	4-5	4	3	2	D	100	80
G.YELLOW R		4.50%	2-3	3-4	4-5	4-5	4-5	4-5	4-5	4-5	4	4-5	4	4-5	4	3	2-3	D	100	80
G.YELLOW RNL 150%		3.50%	5	5-6	4-5	4	4-5	4-5	4-5	4-5	4	4	4	4	4-5	3-4	3-4	D	100	80
ORANGE 2R		3.50%	5	5-6	4-5	4-5	4-5	4-5	4-5	4-5	4	4-5	4	4-5	4	3-4	3	D	100	60
ORANGE 3R		5.00%	4	5	4-5	4	4-5	4	4-5	4	4	4-5	4	4-5	4-5	3	3-4	D	80	50
RED 5B		6.00%	3	3-4	4-5	4	4-5	4	4-5	4	4	4-5	4	4	4-5	3-4	4	D	80	50
VIOLET 5R		6.00%	4	5-6	4-5	4-5	4-5	4-5	4-5	4-5	4	4-5	4	4-5	4-5	3-4	4	D	100	60
T.BLUE G 133%		7.00%	5-6	6	4-5	3-4	4-5	4	4-5	3-4	4-5	2-3	4	2-3	4	2	3-4	MD	100	40

Product Name	Shade	1/1 SD	Light Fastness ISO 105 B02 (Upto 6)	Water ISO 105 E01		Perspiration Iso 105 E04 Acidic			Wash ISO 105 C10 : C (60°C)		Wash ISO 105 C06 C2S (60°C)		Crocking ISO 105 X12		Chlorinated Water ISO 105 E03 (20 PPM)	Dischargeability	Solubility Grams/Litre	
																	Neutral Solubility	Salt Solubility
																	CoS	Co

VINYL SULPHONE

T.BLUE F2GN		5.00%	5-6	6	4-5	3-4	4-5	4	4-5	3-4	4-5	2-3	4	2-3	4	2	3-4	MD	100	80
BLUE BBID		6.00%	5	5-6	4	4	4-5	4-5	4-5	4-5	4	4-5	4	4	4-5	3	3-4	D	100	80
BLUE R SPL		4.50%	5-6	6	4-5	4	4-5	4-5	4-5	4	4	4-5	4	4-5	4	3-4	3-4	MD	100	80
BLUE VRN		4.50%	5-6	6	4-5	4	4-5	4-5	4-5	4	4	4-5	4	4-5	4	3-4	3-4	MD	100	80
BLUE 3R		6.00%	5	6	4	4	4	4	4	4	4	4	4	4	4-5	3	4	MD	100	20
NAVY WBN 150%		1.50%	1-2	3-4	4-5	4-5	4-5	4-5	4-5	4-5	4	4-5	4	4-5	4-5	3-4	2	D	200	100
NAVY CLBC		2.00%	1-2	3-4	4-5	4-5	4-5	4-5	4-5	4-5	4	4-5	4	4-5	4-5	3-4	2	D	200	100
BROWN GR		4.50%	4-5	5-6	4-5	4-5	4-5	4-5	4-5	4-5	4	4	4	4	4-5	3-4	2	D	100	80
BLACK RL		6.00%	4	5-6	4-5	4	4-5	4	4-5	4-5	4	4	4	3-4	4-5	4-5	2-3	MD	200	150

Product Name	Shade	1/1 SD	Light Fastness ISO 105 B02 (Upto 6)	Water ISO 105 E01		Perspiration Iso 105 E04 Acidic				Wash ISO 105 C10 : C (60°C)		Wash ISO 105 C06 C2S (60°C)		Crocking ISO 105 X12		Chlorinated Water ISO 105 E03 (20 PPM)	Dischargeability	Solubility Grams/Litre	
																		Neutral Solubility	Salt Solubility
																		CoS	Co

BI-FUNCTIONAL

YELLOW F2GN		1.50%	5	6	4-5	4	4-5	4-5	4-5	4-5	4	4-5	4	4	4	3	3-4	D	100	80
YELLOW F3RN		4.20%	6	6	4-5	4	4-5	4-5	4-5	4-5	4	4	4	4	4-5	3-4	4	D	100	80
YELLOW F3GS		3.00%	5-6	6	4-5	4	4-5	4-5	4-5	4-5	4	4	4	4	4-5	3-4	4	D	100	80
YELLOW F3R		3.50%	5-6	6	4-5	4	4-5	4-5	4-5	4-5	4	4	4	4	4-5	3-4	4	D	100	80
ORANGE CL3R		3.00%	2	5	4-5	3-4	4-5	4	4-5	4	4	3-4	4	3-4	4-5	3	4	MD	60	20
RED F3BN		4.00%	3	3	4-5	4	4-5	4	4-5	4	4	4	4	4	4-5	3	4	MD	100	80
RED F3BS		3.50%	4	5-6	4-5	4	4-5	4	4-5	4	4	4-5	4	4	4-5	3	4	MD	100	80
RED F3B		3.60%	4	5-6	4-5	4	4-5	4	4-5	4	4	4-5	4	4	4-5	3	4	MD	100	80
RED F2G		6.00%	4	5-6	4-5	4	4-5	4	4-5	4	4	4	4	4	4-5	3	4	ND	40	10
RED FBN		5.50%	3	4	4-5	4	4-5	4	4-5	4	4	4	4	4	4-5	3	4	D	100	80

Product Name	Shade	1/1 SD	Light Fastness ISO 105 B02 (Upto 6)	Water ISO 105 E01		Perspiration Iso 105 E04 Acidic			Wash ISO 105 C10 : C (60°C)		Wash ISO 105 C06 C2S (60°C)		Crocking ISO 105 X12		Chlorinated Water ISO 105 E03 (20 PPM)	Dischargeability	Solubility Grams/Litre	
																	Neutral Solubility	Salt Solubility
																	CoS	Co

BI-FUNCTIONAL

COSMOS RED SSR		1.00%	3	4	4-5	4	4-5	4-5	4-5	4-5	4	4	4	4	4-5	3-4	4	D	80	60
BLUE FGN		3.90%	5-6	6	4-5	4-5	4-5	4	4-5	4	4	4	4	4	4-5	3	2	ND	100	80
BLUE F2RL		4.60%	3	3-4	4-5	4	4-5	4	4-5	4	4	3-4	3-4	3-4	4	3	1-2	MD	100	80
BLUE FRL		4.50%	6	6	4-5	3-4	4-5	4	4-5	4	4-5	3-4	4	3-4	4	2-3	4	D	100	80
BLUE FB		4.00%	3-4	3-4	4-5	4	4-5	4-5	4-5	4-5	4	4	4	4-5	4-5	4-5	4	D	100	80
BLUE FBN		3.00%	3-4	3-4	4-5	4	4-5	4-5	4-5	4-5	4	4	4	4-5	4-5	4-5	4	D	100	80
BLUE F2G		2.00%	2	3	4-5	4	4-5	4-5	4-5	4-5	4	4	4	4-5	4-5	3	4	D	100	80

Product Name	Shade		Light Fastness ISO 105 B02 (Upto 6)		Water ISO 105 E01		Perspiration Iso 105 E04 Acidic				Wash ISO 105 C10 : C (60°C)				Crocking ISO 105 X12		Chlorinated Water ISO 105 E03 (20 PPM)	Dischargeability	Solubility Grams/Litre	
			1/6 SD	1/1 SD	CoS	Co	CoS	Co	CoS	Co	CoS	Co	CoS	Co	DRY	WET	CoS		Neutral Solubility	Salt Solubility

SPECTRON RR0..1%0.5%

YELLOW RR			5-6	6	4-5	4	4-5	4-5	4-5	4	4	4	4	4	4-5	3	3-4	D	100	80
ORANGE RR			4-5	4-5	4-5	3-4	4-5	3-4	4-5	3-4	4	4	4	4	4-5	3-4	4	D	100	80
RED RR			3	4	4-5	4	4-5	4	4-5	4	4	4	4	4	4	3	3-4	MD	100	80
BLUE RR			2	3-4	4-5	4-5	4-5	4-5	4-5	4-5	4	4-5	4	4-5	4-5	3-4	2-3	D	100	80

SPECTRON RFD0.5%1.00%

YELLOW RFD			5-6	6	4-5	4	4-5	4-5	4-5	4-5	4	4	4	4	4-5	3	4	D	100	80
GO.YELLOW RFD			5	5-6	4-5	4-5	4-5	4-5	4-5	4-5	4	4-5	4	4-5	4-5	3-4	3-4	D	100	80
ORANGE RFD			3	4	4-5	4-5	4-5	4-5	4-5	4-5	4	4	4	4-5	4-5	3-4	3-4	D	100	80
RED RFD			3	4	4-5	4	4-5	4	4-5	4	4	4	4	4	4	3	3-4	MD	100	80
BLUE RFD			2	3-4	4-5	4-5	4-5	4-5	4-5	4-5	4	4-5	4	4-5	4-5	3-4	2-3	D	100	80
NAVY RFD			1-2	3	4-5	4-5	4-5	4-5	4-5	4-5	4	4-5	4	4-5	4-5	3	3-4	D	200	150

Product Name	Shade		1/1 SD	Light Fastness ISO 105 B02 (Upto 6)		Water ISO 105 E01		Perspiration Iso 105 E04 Acidic				Wash ISO 105 C10 : C (60°C)				Crocking ISO 105 X12		Chlorinated Water ISO 105 E03 (20 PPM)	Dischargeability	Solubility Grams/Litre	
			1/6 SD	1/1 SD	CoS	Co	CoS	Co	CoS	Co	CoS	Co	CoS	Co	DRY	WET	CoS			Neutral Solubility	Salt Solubility

SPECTRON SF

YELLOW SF3R		1.75%	5-6	6	4-5	4-5	4-5	4-5	4-5	4-5	4	4-5	4	4-5	4-5	3-4	3	D	100	80
SAFFRON SF3G		1.30%	3	4	4-5	4-5	4-5	4-5	4-5	4-5	4	4	4	4-5	4-5	3-4	3-4	D	100	80
RED SF3R		1.30%	3	5-6	4-5	4	4-5	4-5	4-5	4-5	4	4	4	4	4-5	3	3	D	100	80
ORCHID SF2G		2.20%	2	3	4	4	4	4	4	4	4	3-4	4	3-4	4	3-4	3	MD	80	40
BLUE SFNR		4.50%	6	6	4-5	3-4	4-5	4	4-5	3-4	4	3-4	4	3-4	4-5	2-3	4	D	100	80

SPECTRON BLACKS

BLACK NN		8.00%	2	5	4-5	4	4-5	4-5	4-5	4-5	4	4	4	4	4	2-3	3-4	D	200	150
BLACK GBN		7.00%	2	5	4-5	4	4-5	4-5	4-5	4-5	4	4	4	4	4	2-3	3-4	D	200	150
BLACK XLN		9.00%	2	5	4-5	4	4-5	4-5	4-5	4-5	4	4	4	4	4	2-3	3-4	D	200	150
BLACK SDN		6.00%	2	5	4-5	4	4-5	4-5	4-5	4-5	4	4	4	4	4	2-3	3-4	D	200	150
BLACK SDNN		7.00%	2	5	4-5	4	4-5	4-5	4-5	4-5	4	4	4	4	4	2-3	3-4	D	200	150

Abbreviation: Cos = Change of Shade, CO = Cotton staining D = Dischargeable, MD = Moderate Discharge