LCI

LUCKY CORE INDUSTRIES

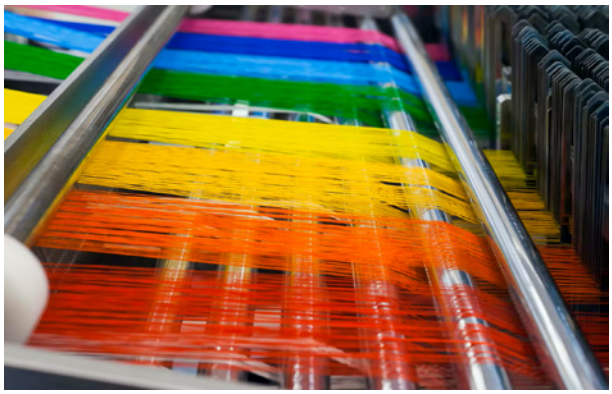
Cultivating Growth

TEXTILE CHEMICALS

YBG

Textile

LCI Chemicals' Textiles sub-segment caters to the largest industry in Pakistan and provides an array of manufactured and traded products to the local and export-oriented Textiles companies. The product ranges offered have a unique set of properties that ensure high-quality results combined with improved environmental acceptability. Focus is on innovation and making processes and products more sustainable. These include dyes and inks for printing, and various textile chemicals.



The product offering includes:

1. Textiles PVAs
2. Printing Auxiliaries
3. Reactive Dyes
4. Disperse Dyes
5. VAT Dyes
6. Pretreatment Chemicals
   - Optical Brightening Agents
   - Wetting Agents
   - Buffers
   - Catalysts
   - Bleaching Stabilizers
   - Mercerizing Agent
   - Enzymes
   - Neutralizer
   - Desizing Agents
   - Peroxide Killers
   - Biopolishing
7. Dyeing Auxiliaries
   - Antifoam
   - Buffers
   - Carriers
   - Dispersing Agents
   - Levelling Agents
   - Sequestering Agents
   - Washing Off
   - Anti-migrating Agents
   - Fixing Agents
   - Mild Oxidizing Agents
   - Denim Auxiliaries
8. Finishing Chemicals
   - Cationic Softeners
   - Nonionic Softeners

   - Silicones (Micro/Macro & Nano Emulsions)
9. Special/Functional Finish
   - Antimicrobial
   - Flame Retardants
   - Soil Repellents
   - Soil Release
   - Moisture Management

Metacron Dyes

The Shades for Cellulose by LCI

Dyes for Dyeing & Printing

LCI

LUCKY CORE INDUSTRIES

Metacron S Dyes

	GENERAL PROPERTY					FASTNESS TO								
	Solubility g/l at 30°C	Suitability				Light Fastness	Washing ISO3		Perspiration		Bleaching		Rubbing	
	Straight	Substitutability	Exhaust	Pad-Batch Silicate	Dischargeability	ISO Method	Effect	Stain	Acidic	Alkaline	Chlorine - Pool Water	Hydrogen Per-oxide	Dry	Wet
Metacron Brill Yellow S-4GL	100	L	NS	S	G	4	4-5	4-5	5	5	1-2	3 - 4	4 - 5	4
Metacron Yellow S-3R	>100	LM	S	S	G	3	3-5	3-4	4	4	2	3	4	3-4
Metacron Yellow 2GR	>100	M	S	LS	P	3	3 - 4	3 - 4	4	4	2	3	4	3 - 4
Metacron Brill Orange SE	60	M	S	S	S	5	4 - 5	4 - 5	5	5	3	4 - 5	4 - 5	4
Metacron Red S-6BN	50	M	S	S	G	4 - 5	4 - 5	4	4	4	4	4	4	4
Metacron Blue S-B	100	L	S	NS	P	5 - 6	5	4 - 5	5	5	3 - 4	4	4 - 5	4
Metacron Turquoise G 133% / 266%	>100	L	S	NS	P	5 - 6	5	4 - 5	5	5	3 - 4	4	4 - 5	4
Metacron Black B 150%	>100	L	S	S	G	5	4 - 5	4 - 5	4 - 5	4 - 5	4 - 5	4 - 5	4 - 5	3
Metacron Navy SG	100	M	S	S	G	4	4 - 5	4 - 5	4	4	4	4 - 5	4 - 5	3 - 4
Metacron Ultra Black NN	>100	M	S	S	G	5 - 6	4 - 5	4 - 5	4 - 5	4 - 5	4 - 5	4 - 5	4 - 5	3
Metacron Super Black R	>100	M	S	S	G	5 - 6	4 - 5	4 - 5	4 - 5	4 - 5	4 - 5	4 - 5	4 - 5	3
Metacron Super Black G	>100	M	S	S	G	5 - 6	4 - 5	4 - 5	4 - 5	4 - 5	4 - 5	4 - 5	4 - 5	3

Metacron RGB Dyes

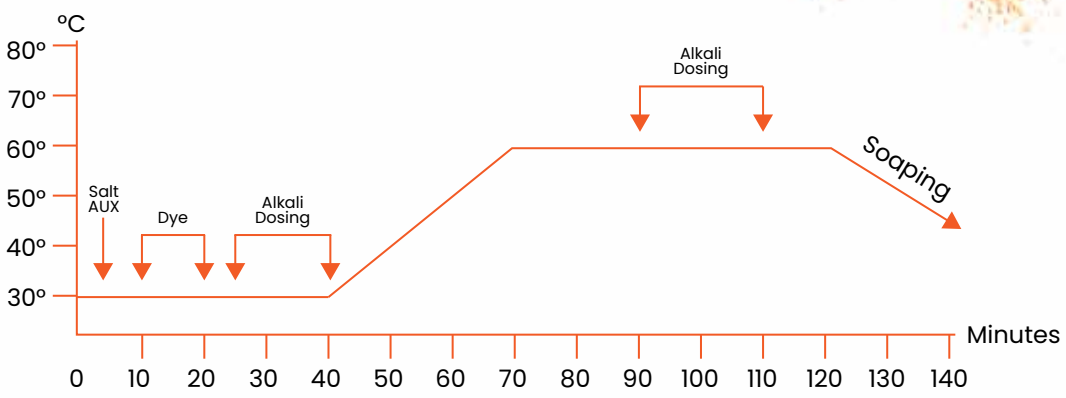
	GENERAL PROPERTY	FASTNESS TO								
	Solubility g/l at 30°C	Light Fastness	Washing ISO3		Perspiration		Bleaching		Rubbing		
	Straight	ISO Method	Effect	Stain	Acidic	Alkaline	Chlorine - Pool Water	Hydrogen Peroxide	Dry	Wet	Notes
Metacron G. Yellow RGB	>100	4 - 5	4 - 5	4 - 5	5	5	4 - 5	4 - 5	4 - 5	4	Versatile golden yellow, very good reproducibility
Metacron Red RGB	100	4 - 5	4 - 5	4 - 5	5	4 - 5	4	4 - 5	4 - 5	4	Bright red with less tailing
Metacron Blue RGB	>100	3 - 4	4 - 5	4 - 5	4 - 5	4 - 5	4	4 - 5	4 - 5	3 - 4	Good reproducibility
Metacron Brill Blue RGB	80	5 - 6	4 - 5	4 - 5	4 - 5	4 - 5	3 - 4	4	4 - 5	4	
Metacron Ultra Yellow RGB	100	4	4 - 5	4 - 5	4 - 5	4 - 5	4	4 - 5	4 - 5	4	High saturation yellow
Metacron Ultra Red RGB	80	4 - 5	4 - 5	4 - 5	4 - 5	4 - 5	4	4 - 5	4 - 5	4	High saturation red
Metacron Ultra Carmine RGB	100	4	4 - 5	4 - 5	4 - 5	4 - 5	4	4 - 5	4 - 5	3 - 4	For tricky shades like burgendy, coffee etc.
Metacron Navy RGB	>100	4	4 - 5	4 - 5	4 - 5	4 - 5	4	4 - 5	4 - 5	3 - 4	For dark navy type of shades
Metacron Black RGB	100	5 - 6	4 - 5	4 - 5	4 - 5	4 - 5	4 - 5	4 - 5	4 - 5	3	
Metacron Deep Black RGB	100	5 - 6	4 - 5	4 - 5	4 - 5	4 - 5	4 - 5	4 - 5	4 - 5	3	

Metacron Printing Dyes

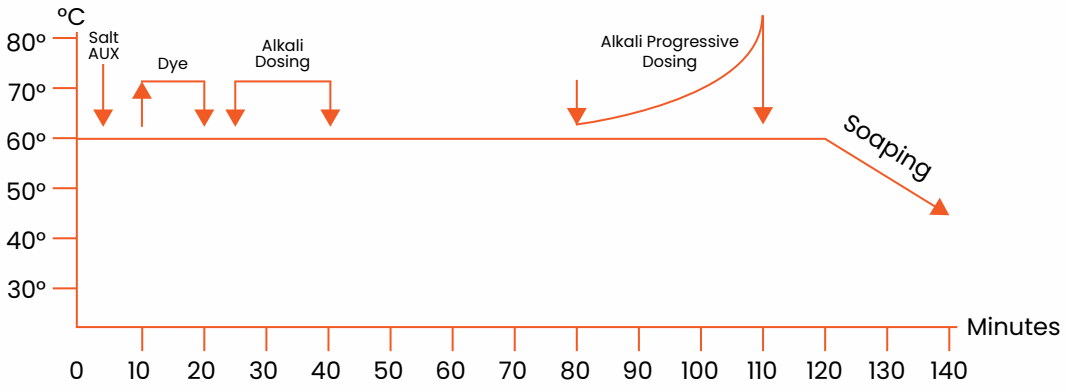
	GENERAL PROPERTY	FASTNESS TO								
	Solubility g/l at 30°C	Light Fastness	Washing ISO3		Perspiration		Bleaching		Rubbing		
	Straight	ISO Method	Effect	Stain	Acidic	Alkaline	Chlorine - Pool Water	Hydrogen Peroxide	Dry	Wet	Notes
Metacron Yellow P-6G	>100	6	4 - 5	4 - 5	4 - 5	4 - 5	4 - 5	4 - 5	4 - 5	4	Bright lemon yellow
Metacron G. Yellow P-2RN	>100	6	4 - 5	4 - 5	4 - 5	4 - 5	4 - 5	4 - 5	4 - 5	4	High level fastness
Metacron Orange P-2R	100	4	4 - 5	4 - 5	4 - 5	4 - 5	4	4 - 5	4 - 5	3 - 4	Bright orange with very good fastness.
Metacron Red P-4B	>100	4 - 5	4 - 5	4 - 5	4 - 5	4	4	4 - 5	4 - 5	3 - 4	Very good fastness, bright yellowish red
Metacron Blue P-3R	80	5	4 - 5	4 - 5	4 - 5	4 - 5	3	4 - 5	4 - 5	3 - 4	Bright dark blue shade
Metacron Turquoise PGR	100	5	4 - 5	4	4 - 5	4 - 5	4	4 - 5	4 - 5	3 - 4	For better fastness compared to con-ventional turq.
Metacron Blue P-5R	80	5	4 - 5	4 - 5	4 - 5	4 - 5	3	4 - 5	4 - 5	3 - 4	Bright dark blue shade
Metacron Red P-6B	100	4 - 5	4 - 5	4	4 - 5	4 - 5	4	4	4	4	Good fastness in red
Metacron Red PBN	>100	4 - 5	4 - 5	4 - 5	4 - 5	4	4	4 - 5	4 - 5	3 - 4	Very good fastness. bright bluish red
Metacron Black PGR	100	5	4 - 5	4 - 5	4 - 5	4 - 5	4 - 5	4 - 5	4 - 5	3	For jade black shade, with very good fastness
Metacron Black PSG	100	4 - 5	4 - 5	4 - 5	4 - 5	4 - 5	4	4 - 5	4 - 5	3 - 4	For medium shades

1. Exhaust Dyeing Process

Temperature Rise Process



Isothermal Process



Reactive dyes for cellutosic fiber, textile, dyeing & printing.

- Metacron S Dyes: Having moderate reactivity and are popularly used for printing and dyeing by silicate pad batch method and are mostly dischargeable. Most of the dyes are also suitable for exhaust dyeing.
- Metacron RGB Dyes: Recommended for medium, deep & extra deep shades by exhaust or cold pad batch method.

Depth of Shade% (O.W.F)	Salt (g/l)	Soda Ash (g/l)	Mixed Alkali	
			Soda Ash (g/l)	Caustic (50%) (g/l)
Up to 0.5	20	10	–	–
0.5-1.0	40	10	5	0.7-1.0
1.0-2.0	50	15	5	1.0-1.5
2.0-4.0	60	20	5	1.5-2.0
4.0-5.0	70	–	5	2.0-2.3
Above 5.0	80	–	5	2.3-3.0

L = Low
H = High
S = Suitable
Ls = Less Suitable
Ns= Not Suitable
Br = Brighter
D = Doller

Y = Yellow
O = Orange
R = Red
Gr = Green
B = Blue
Bl = Black
V = Violet

Washing and other : 1 to 5 in increasing order
Dischargeability : G-Good; F-Fair; P-poor
Light (AATCC16E) : 1 to 5 in increasing order
Day Light : 1 to 8 in increasing order

Shades: 0.5% / 2.0% / 4.0%

2. Padding Process

a) Cold Pad-Batch Dyeing Method

Any conventional padding equipment could be used for dyeing with.
The well prepared fabric is padded at 60-70% expression for cotton and 80-90% expression for staple viscose fabric at 20-25°C. The lower temperature is preferred on grounds of dye liquor stability.

Fixation : After the padding is complete the batch is covered with polythene film to avoid localized evaporation of water and allowed to dwell for 24 hours.

A.	Metacron Dyes	Xgr/lt
	Penetrating agent	2 gr/lt
	Urea (usually) not recomended	50 gr/lt

b) Concentration of dyestuff

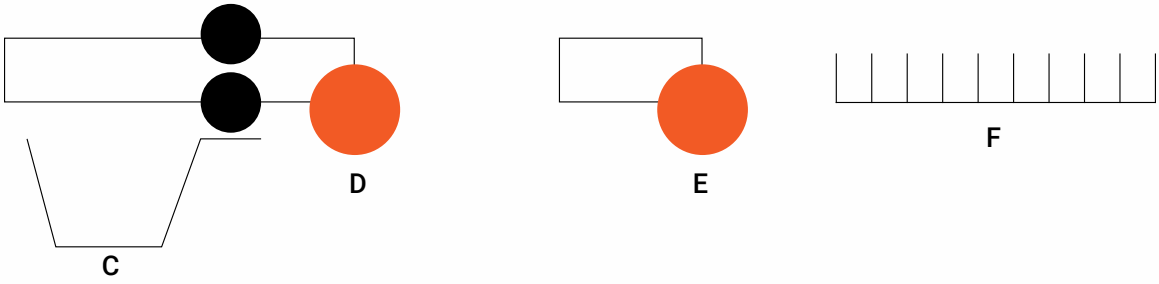
	<10gr/Lt	10 - 30 gr/Lt	30 - 50 gr/Lt	50 - 80 gr/Lt	>80gr/Lt
Sodium Silicate (40Be) ml/Lt	50	50	50	50	50
Costic Soda (36Be) ml/Lt	2.5 - 5	5 - 9	9 - 11	11 - 13	13 - 15

C. Padding

D. Storage 8 - 24 hours at 20 - 25°C

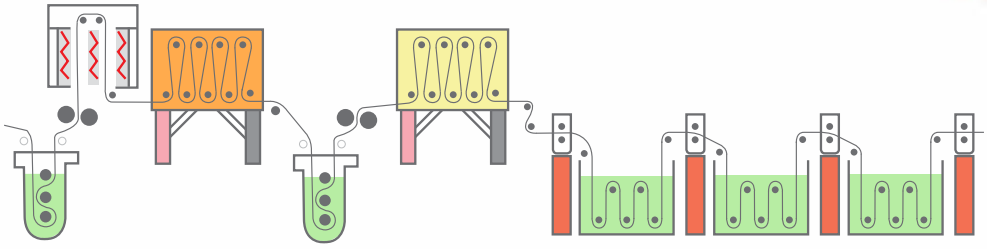
F. Washing Process

Cold Rinsing	1Box	Temp. 20 - 30°C
Hot Rinsing	1 Box	Temp. 50°C
Hot Rinsing	2 Boxes	Temp. 90°C
Soaping 3 gr/Lt	3 Boxes	Temp. 90°C
Hot Rinsing	1 Box	Temp. 70°C
Cold Rinsing	1 Box	Temp. 20- 30 °C



3. Continuous Dyeing Process

Pad-dry-pad-steam process (PDPSt)



Padding the dyes	X	g/l	Metacron Dyes
	1-2	g/l	Licisol Oil HS
	1-3	g/l	MetaPrint RG
	5-10	g/l	Metapad AM

Padding temperature	20–30°C
Liquor pick up	60–70%
IR pre drying	To a residual moisture content of 30–35%
Drying	Dry at 120–140°C. Cool the fabric

Padding the chemicals	15	ml/l	caustic soda 36°Bé (66°Tw)
	20	g/l	soda ash
	200–250	g/l	common salt

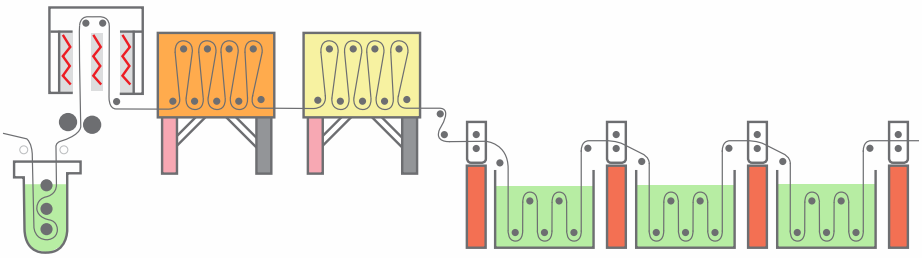
Padding temperature	20–30°C
Liquor pick up	70–80%
Steaming	30–60 seconds with saturated steam

Notes

Infrared pre-drying is advisable to control migration. Reduced pick up, lower drying temperatures and reduced air circulation also help control migration during the pre-drying stage. An addition of THERMACOL® MP dyeing auxiliary is advisable to prevent migration problems.

If the goods are stored, after drying but before fixation, they should be wrapped in an opaque material to protect them from daylight.

Pad-dry-Thermofix Process (PDC)



Licisol Oil HS	X	g/l	Metacron Dyes
	1-2	g/l	Licisol Oil HS
	5-10	g/l	Meta Print RG
	20-100	g/l	Metapad AM
	10-20	g/l	Urea
	5-10	g/l	Soda Ash

Required amount of urea							
Metacron Dyes	g/l	up to 5	10	20	30-40	50	>50
Urea	g/l	20	50	75	100	100	100
Soda Ash	g/l	10	10	10	10	15	20

Padding temperature	20–30°C
Liquor pick up	70–80%

Fixation			
Time	60–90 s	45–60 s	30–45 s
Temperature	140°C	160°C	180°C

4.Printing

These dyes react with cellulosive fibers in presence of alkali & heat. The direct chemical linkage with result there by accounts for excellent fastness. The reaction between cellulosive fibres and Reactive range of dyes can be achieved by any of the following method.

	One phase method	Two phase method
Dyestuf	10 - 60	10 - 60
Urea	50 - 100	50 - 100
Hot Water	300	300
Thickner (Sodium Alginate 4%)	350 - 400	350 - 400
Resist Salt	10	10
Sodium Bicarbonate	15 - 30	–
	Adjust remaining Volume by addition of water	
Total	1000 Parts	1000 Parts

One Phase Method

- Streaming Process: Print--->Dry--->Bake for 10 min. at 101-102°C--->Wash
- Dry Heat Process: Print--->Dry--->Bake for 5 min. at 105°C--->Wash
  (Optionally Bake for 1 min. at 200°C)

Two Phase Method

- Pad Silicate Batch Process: Print (Dyestuff paste without alkali) --->Dry --->Silicate Pad (Sodium. Silicate 100 - 106°CTw.)--->24Hrs. Batch ---> Wash

5.Discharge Printing

Metacron S dyes are suitable for discharge printing. Cotton fabrics discharge is better than spun viscose fabrics. Prior to discharge printing the dyed fabric should br treated with resist salt 1 Ogms/ lit. to protect the dyed ground shade from reducing effect.

Discharge Printing Paste Recipe	
Thickner	500 Parts
Rangonite	150 - 200 Parts
Titanium Dioxide	100 Parts
Caustic Soda	100 - 200 Parts
Water	X
TOTAL	1000 Parts

Salient Features

Metacron S Dyes

1. Multiple applications like Exhaust dyeing, Printing, continuous and semi continuous.
2. Wide range and multiple options for economical Blacks and Navy
3. Range of dischargeble dyes available.

Metacron RGB Dyes

1. Modified hetero Bi-functional dyes.
2. Suitable for Continuous, Semi continuous and Exhaust dyeing.
3. High level of reproducibility and fastness.
4. Minimize face back effect in piece dyeing.

Metacron Printing Dyes

1. Metacron Printing Dyes are for printing and dyeing natural regenerated cellulosic fibers.
2. The dyestuffs are outstanding and highly suitable for direct printing on cellulosic fibers.
3. The may also be applied by the continious pad-thermofix dyeing methods.

Head Office:

Lucky Core Industries
63 Mozang, Lahore, Pakistan

111-100-200
+92 21 3231 3717-22
+92 21 3242 7012

www.luckycore.com