

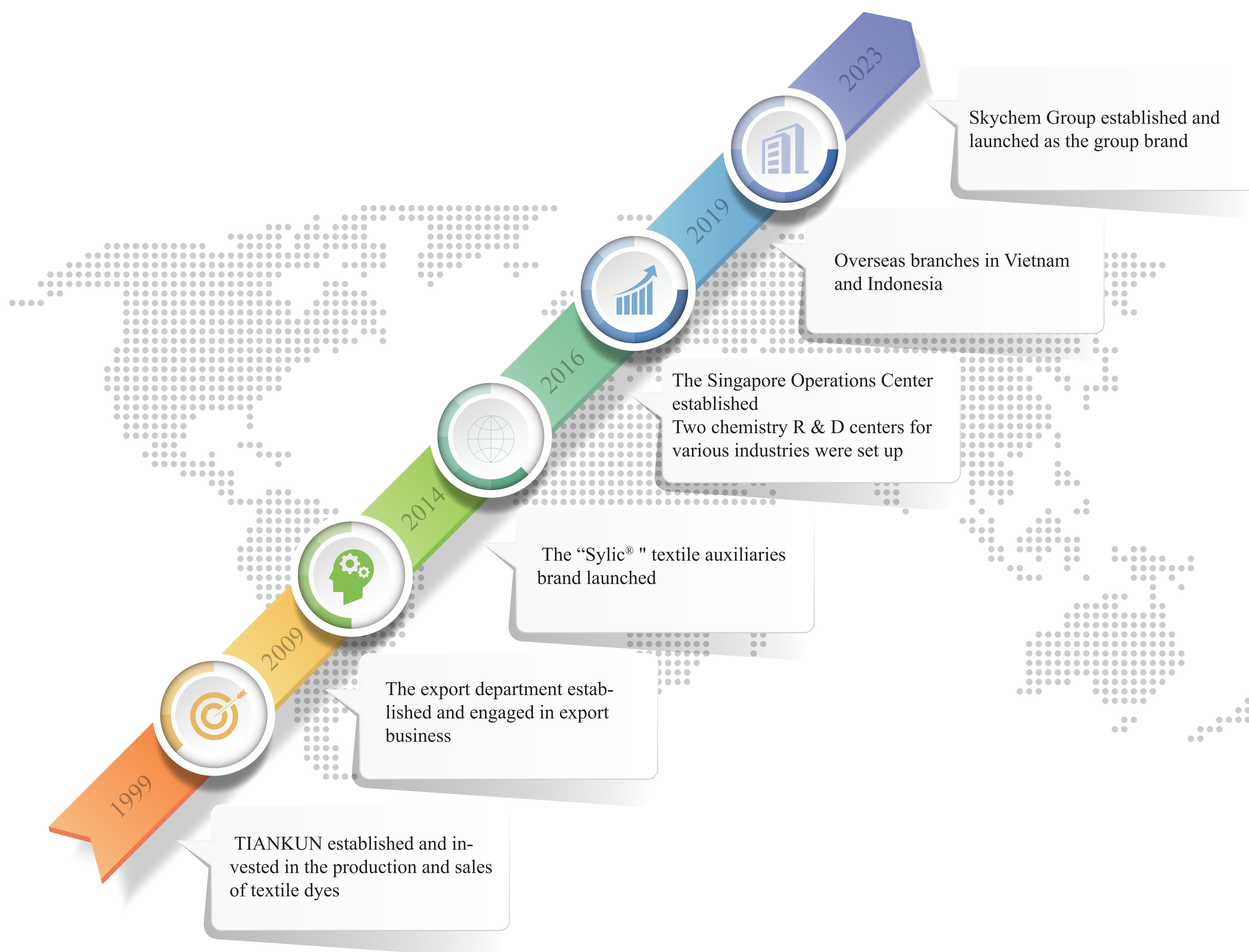


SKYCRON[®]
DISPERSE DYESTUFF
CATALOGUE

杭州天昆化工有限公司
HANGZHOU TIANKUN CHEM CO.,LTD

COMPANY INTRODUCTION

UP to now, Tiankun's products have been exported to nearly 70 countries and regions around the world.



The quality of our products has passed various of certification systems, and we select all the product materials on the highest standards.

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Dyeing Procedure of Disperse Dyes

I .High temperature high pressure dyeing

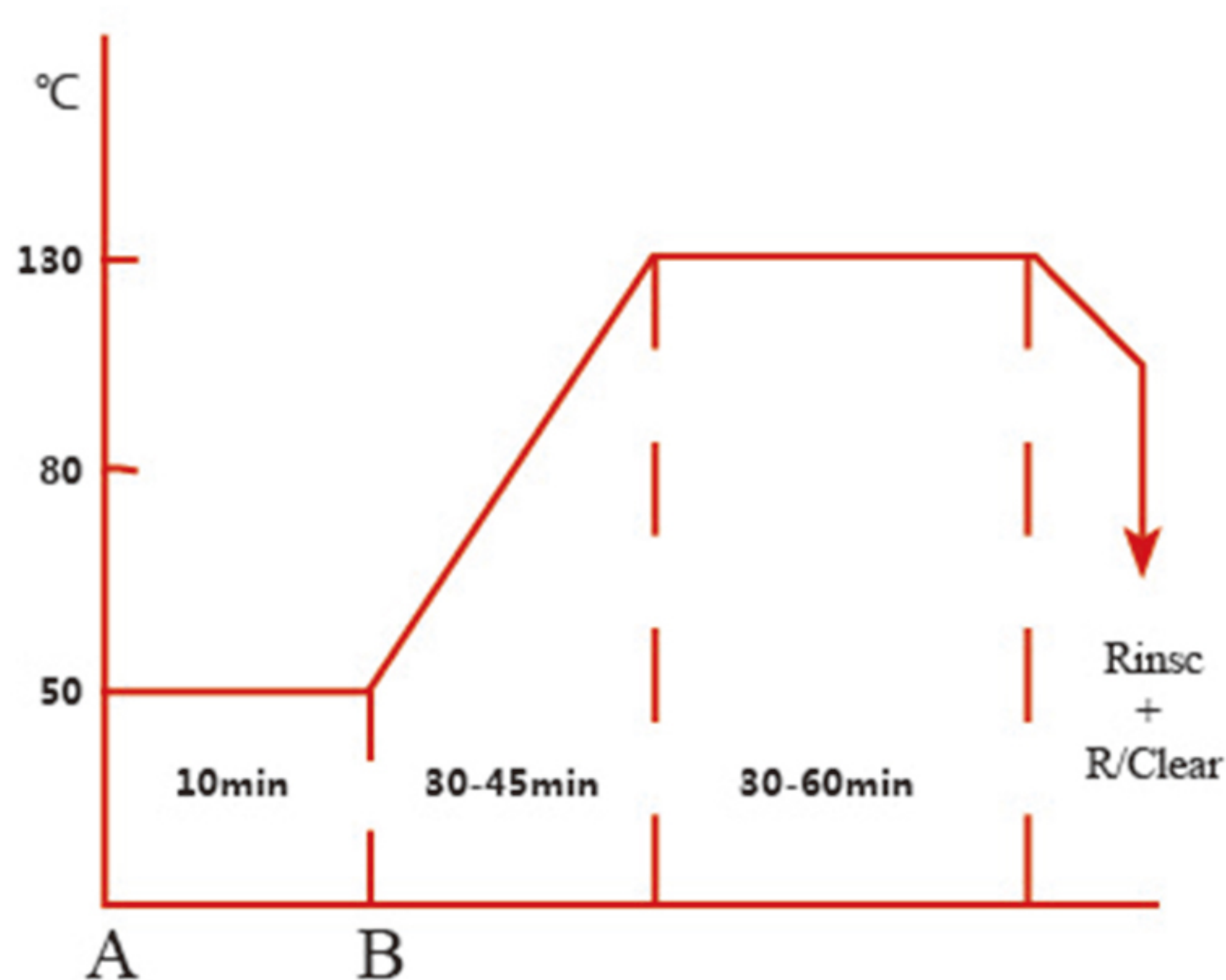
High temperature high pressure dyeing is Carried out using a closed type dyeing machines such as cheese, beam, jet, jig or liquor flow type according to the form of the material.

General dyeing conditions are as follows:

-About 1-2g/L dispersing agent is added to dyeing liquor and then PH value of the liquor is adjusted to 5-6 with acetic acid or buffer solution (acetic acid and sodium acetate). The dyeing liquor is then gradually raised from 40-60 °C to 125-135 °C, and cot this temperature the dyeing is continued for 39-90min.

-And also dyeing temperature and dyeing time differ with the form of the material, the dye concentration and dyeing apparatus. Therefore, it is important to select the suitable dyeing condition.

Dyeing process for nylon, triacetate, polyester and acrylic fibers.



At A set bath at 50 °

1 gl Add Neutrasol NST (Buffer)

At B add Duracet Dyes (pre-dispersed)

In heavy depths a mild reduction clear is advisable to ensure good wet fastness levels

-After dyeing by various methods, reduction cleaning is carried out generally, unfixed dye on the fiber surface is removed by this treatment.

-Color of the dye itself as well as good rubbing and wet fastness are obtained.

-The condition of reduction cleaning is generally as follows:

2g/L Hydrosulphite

3ml/L caustic soda 38 ° Be

Temperature:70°C Time:10-15min

II .Carrier dyeing

Carrier dyeing is carried out under atmosphere pressure by an addition of carrier to the dyeing liquor.

Methylnaphthalene or chlorobenzene type carrier is usedgenerally,which is added in concentration of 2-7 g/L to the dyeing liquor.

Other conditions of the dyeing liquor are the same as those for high temperature dyeing. The temperature is raised gradually from 40-60 °C and continued for 90-120 min at 100°C .

In carrier dyeing, in some case the troubles such as tarring of dye or carrier spot are taken from the no stability of emulsifier in the carrier under high temperature or some other conditions. Therefore, it is necessary to select the carrier so as to prevent the troubles.

Reduction cleaning as stated in high temperature high pressure dyeing.

III .Thermosol dyeing

Thermosol dyeing is a continuous dyeing method which is applied mainly for the polyester/ cotton blended materials. General dyeing condition is as follows.

Dye and 0.5-2g/L of migration inhibitor (for example, sodium alginate) and also wetting agent if necessary are added to the padding liquor.

Squeezing is carried out 1 dip 1 nip at room temperature, pick up 65-70%. Drying at 70-90.

After padding and intermediate drying, thermosol fixation is carried out by dry heating for 60-120 sec. at 180-210 °C depending on the form of the material and type of disperse dyes.

-Etype:180-190°C X60-120 sec

-SE type:180-200°C X60-1120 sec

-S type:200-210°C X60-120 sec

Reduction cleaning as stated in high temperature high pressure dyeing.

IV .Printing

Printing methods are roughly divided into the following classification:

By printing style	Direct printing
	Discharge printing
	Resist printing
	Hand printing
By printing apparatus	Screen printing
	Roller printing

1.Direct Printing

[1]High pressure steaming method (HP steaming)

Recipe of color paste:

Disperse dyes	xg
Water (50-60℃)	yg
Thickning paste	500-600g
Tartaric acid	3g
Sodium chlorate	5g

Total 1000g

After printing and drying , steamed for 30 min, at 130 ℃, then washed with cold and warm water, and reduction cleaning.

[2]High temperature Steaming method (HT steaming)

Disperse dyes	xg
Water (50-60℃)	yg
Thickning paste	500-600g
Dyeing accelerant	20-40g
Tartaric acid	3g
Sodium chlorate	5g

Total 1000g

After printing and drying, steamed with super heat steam for 6-8 min,at180-185 ℃, then washed with cold and warm water, and reduction cleaning.

2.Discharge printing

The material dyed with dischargeable disperse dye by carrier or high temperature dyeing methods is discharged by following methods:

By use of stannous chloride as a dischargeing agent.

[1]White discharge

Stannous chloride	80-120g
Tartaric acid	15-25g
Urea	25g
Water	115-165g
Thickning paste	750-665g
Fluorescent brightening agent DT	15g

Total 1000g

[2]Colored discharge

Undischargeable disperse dye	xg
Stannous chloride	50-80g
Urea	50g
Auxiliaries for discharge	50g
Water	yg

Total 100g

After printing and drying, steamed for 20-30min, at 120-130 ℃ then washed with cold and warm water, and reduction cleaning.

3.Resist printing

Recipe of resist paste:

Undischargeable disperse dye	xg
Thickning paste	500-600g
Wetting agent	0-20g
Warm water	yg
Stannous chloride	40-60g
Tartaric acid	3-5g

Total 1000g

Recipe of over paste:

Dischargeable disperse dye	xg
Thickning paste	500-600g
Warm water	yg
Tartaric acid	3-5g
Sodium chlorate	2g

Total 1000g

After printing of resist paste, moreover printed a over paste, instantaneously or after drying, and dried, then steamed for 20-30min, at 120-130 ℃, and washed with cold and warm water, finally reduction cleaning.

V .Fastnesses

Light fastness (xen on) GB/T 8427-1998 (EQV.ISO 105 B02: 1994)

Washing fastness GB/T 3921.3-1997 (EQV/ISO 105 C03:1989)

Rubbing fastness GB/T 3920-1997 (EQV. ISO 105X12: 1993)

Sublimation fastness GB/T 5718-1997 (EQV.ISO 105 p01:1993)

VI .NOTE

○ Very suitable

◎ Suitable

● Unsuitable



Skycron® General series



Note: ○ = VERY SUITABLE ◎ = SUITABLE ● = UNSUITABLE

No.	Color Sample	Brand Skycron®	C.I.NO.	Specification	O.W.F(%)	Light Fastness	Washing		Sublimation	Dyeing Property			
							Pes	Co		High Temp	Thermosol	PH Value	Cotton Fabric Color Stain
1		Yellow E-3G	54	200%	1.0	7	3	4	3	○	●	4-8	2-3
2		Yellow 3GE	64	200%	1.0	7	4	4	4	○	◎	3-9	3
3		Yellow 6GS	114	200%	1.0	6	5	5	5	○	○	4-6	4-5
4		Yellow 5G	119	200%	1.0	6-7	4	4-5	4	○	○	4-6	4
5		Yellow 4G	211	200%	1.0	6	3-4	4	3-4	○	○	4-6	4
6		Yellow 5GL	241	200%	1.0	6-7	4	4-5	4	○	◎	3-7	4
7		Orange E-RL	25	200%	1.5	5	3	4	3	○	●	4-8	4
8		Orange SE-RBL	29	200%	1.5	6	3-4	4	4-5	○	◎	4-8	4
9		Orange S-2GFL	30	100%	1.6	6	4	4-5	4-5	○	○	4-7	4
10		Orange S-2GFL	30	150%	1.6	6	4	4-5	4-5	○	○	4-7	4
11		Orange 2G-FS	44	200%	1.3	6	4	5	5	○	○	4-8	4
12		Orange SE-3RLN	61	200%	1.6	6	4	4-5	4	○	◎	3-9	4
13		Orange SE	73	200%	1.3	6	4	4-5	4-5	○	○	4-7	1-2
14		Red B	1	200%	1.4	5-6	3	4	3	○	●	4-7	4
15		Red BD	13	200%	1.3	4-5	3-4	4	4	○	◎	4-6	3
16		Red E-2GFL	50	200%	1.2	5	3-4	4	3-4	○	●	3-9	2-3
17		Red SE-3GFL	54	200%	1.2	6-7	4	4	4	○	◎	4-8	3-4
18		Red FB	60	200%	2.0	7	3	4	3	○	●	4-8	3-4



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No.	Color Sample	Brand Skycron®	C.I.NO.	Specification	O.W.F(%)	Light Fastness	Washing		Sublimation	Dyeing Property			
							Pes	Co		High Temp	Thermosol	PH Value	Cotton Fabric Color Stain
19		Red SE-GFL	73	200%	1.5	5	3-4	4-5	4-5	○	○	3-9	4
20		Red S-R	74	100%	1.7	5-6	3-4	4-5	3-4	○	⊙	4-6	2
21		Red S-R	74	150%	1.7	5-6	3-4	4-5	3-4	○	⊙	4-6	2
22		Red BEL	92	200%	1.8	6-7	3-4	4-5	4-5	○	○	3-9	3-4
23		Red BS	152	200%	1.4	5	4	4	4	○	○	4-8	2-3
24		Red GS	153	200%	1.4	6	3-4	4	3-4	○	○	4-8	2
25		Red S-5BL	167	100%	1.8	6-7	4	4	4	○	○	4-6	2
26		Red SE-GF	167	200%	1.2	5	4	4	4	○	○	4-8	3
27		Red FRL	177	200%	1.3	5-6	4	5	5	○	○	4-8	3
28		Red C-2RL	179	200%	1.2	5-6	4	5	5	○	○	4-8	2
29		Red HBBL	82	200%	2.0	6-7	4	4-5	4	○	○	4-6	2
30		Red F-3BS	343	100%	2.0	5-6	4	4-5	4-5	○	○	3-9	4-5
31		Red F-3BS	343	150%	2.0	5-6	4	4-5	4-5	○	○	3-9	4-5
32		Violet 2R	1	100%	1.6	6	4	5	4	○	⊙	4-8	2-3
33		Violet 2R	1	200%	1.6	6	4	5	4	○	⊙	4-8	2-3
34		Violet HFRL	26	150%	2.0	6-7	3-4	4	3-4	○	⊙	4-6	4
35		Violet RB	33	200%	1.8	6	3-4	4	3-4	○	○	4-6	4-5
36		Violet RL	63	200%	1.5	6-7	3-4	4	4-5	○	○	4-6	3-4



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No.	Color Sample	Brand Skycron®	C.I.NO.	Specification	O.W.F(%)	Light Fastness	Washing		Sublimation	Dyeing Property			
							Pes	Co		High Temp	Thermosol	PH Value	Cotton Fabric Color Stain
37		Violet B	93	300%	1.0	6-7	3-4	4	3-4	○	⊙	4-8	4
38		Green C-6B	9	100%	2.0	5	4	4-5	4-5	○	○	4-8	4-5
39		Brown S-2BL	—	100%	2.0	5	4-5	5	4-5	○	○	4-6	4
40		Brown S-BS	—	200%	2.0	5	4-5	5	4-5	○	○	4-6	4
41		Blue FFR	3	100%	1.0	6	4-5	5	4	○	⊙	4-8	2-3
42		Blue FFR	3	120%	1.5	6	4-5	5	4	○	⊙	4-8	2-3
43		Blue 2BLN	56	100%	2.0	7	3	4	3	○	●	3-9	2-3
44		Blue 2BLN	56	150%	2.0	7	3	4	3	○	●	3-9	2-3
45		Blue S-GL	60	200%	2.0	7	4-5	5	5	○	○	4-6	3-4
46		Blue S-BGL	73	200%	1.7	7	4	5	5	○	○	3-9	3-4
47		Blue HGL	79	200%	2.0	5-6	4	4-5	4-5	○	○	3-5	4-5
48		Blue HGL	79	220%	2.0	5-6	4	4-5	4-5	○	○	3-5	4-5
49		Blue 3RT	148	200%	1.5	6	4	4	4-5	○	○	4-6	3
50		Blue BBLS	165	200%	1.5	5-6	3-4	4	4-5	○	○	4-6	4
51		Blue SE-3R	183.0	200%	1.0	5-6	3-4	3-4	4	○	⊙	4-7	4-5
52		Blue CR-E	366	200%	1.0	6	3-4	3-4	3-4	○	⊙	4-6	5
53		Dark Blue 3RN	—	300%	2.0	6	4-5	5	4	○	⊙	4-8	4-5
54		Navy Blue EX-SF ECO	—	300%	2.0	6	3-4	4	3-4	○	⊙	4-8	4-5



Skycron® General series



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No.	Color Sample	Brand Skycron®	C.I.NO.	Specification	O.W.F(%)	Light Fastness	Washing		Sublimation	Dyeing Property			
							Pes	Co		High Temp	Thermosol	PH Value	Cotton Fabric Color Stain
55		Black EX-SF ECO (G)	—	300%	4.0	6	3-4	4	3-4	○	◎	4-8	4-5
56		Black EXN-SF ECO (R)	—	300%	4.0	6	3-4	4	4	○	◎	4-8	4-5
57		Black ECT	—	300%	4.0	6	3-4	4	4	○	◎	4-8	4-5
58		Black JA	—	200%	5.0	5-6	4	4	4-5	○	○	4-6	4-5

Disperse Dyes-General Series

- Excellent dispersion property.
- Excellent compatibility reproductibility.
- Good fastness.
- Various color.



No.	Color Sample	Brand Skycron®	C.I.NO.	Specification	O.W.F(%)	Light Fastness	Washing		Sublimation	Perspiratopn		PH Value
							CC	SC		Acid	Aikali	
										SC		
1		Yellow CC	—	—	1.5	7	4	4	3-4	4-5	4-5	3-6
2		Orange CC	—	—	1.5	6-7	4	4-5	4	4-5	4-5	3-8
3		Red CC	—	—	2.0	5-6	4	3-4	4	4	4-5	3-9
4		Scarlet CC	—	—	2.0	5-6	4	4	4-5	4-5	5	3-10
5		Rubine CC	—	—	2.0	6-7	4	3-4	4	3-4	3-4	3-9
6		Blue CC	—	—	2.0	6	4	3-4	4	4-5	4-5	3-8
7		Navy Blue CC	—	—	2.0	5-6	4	3	4	5	5	3-9
8		Black CCR	—	—	4.0	5-6	4	3	4	5	5	3-9

Disperse Dyes-CC Series

- Excellent Compatibility.
- Excellent Buildup and Economical Dyes Recipes.
- High Productivity in Exhaust Dyeing through Optimised Rapid Dyeing.
- Good all-round Colour Fastness.



Skycron® Plus Series

Note: ○ = VERY SUITABLE ◎ = SUITABLE ● = UNSUITABLE



No.	Color Sample	Brand Skycron®	C.I.NO.	Specification	O.W.F(%)	Light Fastness	Washing		Sublimation	Dyeing Property			
							Pes	Co		High Temp	Thermosol	pH Value	Cotton Fabric Color Stain
1		Yellow PLUS	—	—	1.0	6-7	4	4-5	3-4	○	●	3-8	3
2		Orange PLUS	—	—	1.2	6	4	4-5	4	○	●	3-9	4
3		Blue PLUS	—	—	2.0	5-6	3-4	4	3-4	○	●	3-9	3
4		Dark Blue PLUS	—	—	1.6	4	3-4	4	4	○	●	3-8	3
5		Red PLUS	—	—	2.0	4	4	4	3-4	○	●	3-9	3
6		Rubine PLUS	—	—	1.8	6	4	4	3-4	○	●	3-10	3
7		Black PLUS	—	—	4.0	5-6	3-4	4	3-4	○	●	3-9	3-4

Disperse Dyes-Plus Series

- Dyestuff compatibility
- State-of-the-art accuracy in standardizing(shade and strength).
- Excellent level dyeing performance on difficult fabrics, e.g. microfiber, weight-reduced polyester, taffeta.
- Lower processing costs through increased productivity and reduced reprocessing.
- High productivity through rapid dyeing, using Optidye P software.
- Good build-up in black shades on microfiber.
- Good all-round color fastness.



Skycron® Fluorescent Dyes Series



No.	Color Sample	Brand Skycron®	O.W.F(%)	Classification	Washing(pes)	Sublimation	Light Fastness	Alkali	Acid	Environmental Product Class	PH Value
1		Fluorescent Yellow 8GFF	1.0	S	3-4	3-4	3-4	4	4	I	4-6
2		Fluorescent Yellow 10GN	1.0	S	3-4	3-4	3-4	4	4	I	4-6
3		Fluorescent Pink G	1.0	S	3	4-5	3-4	4	4	I	5-7
4		Fluorescent Pink BG	1.0	S	4	4-5	4	4	4	I	4-6
5		Fluorescent Pink FBS	1.0	S	3-4	4-5	4	4	4	I	4-6
6		Fluorescent Pink 5B	1.0	S	4	4-5	3	4	4	I	4-6
7		Fluorescent Violet 3R	1.0	S	3-4	4-5	3	4-5	4	I	4-6
8		Fluorescent Violet BN	1.0	S	3-4	4-5	3	4-5	4-5	I	4-6
9		Fluorescent Cyanine B	1.0	S	3-4	4-5	3	4-5	4-5	I	4-6
10		Fluorescent Blue GG	1.0	SE	3	4-5	3	4-5	4-5	I	4-6
11		Fluorescent Orange 2GFL	1.0	S	3	3-4	4-5	4	4	I	4-6
12		Fluorescent Orange 2RF	1.0	S	3-4	3-4	3-4	4	4	I	4-6
13		Fluorescent Tangerine GG	1.0	S	3-4	3-4	3-4	4	4	I	4-6
14		Fluorescent Pink FE5B	1.0	S	3-4	4-5	4-5	4	4	I	4-6
15		Fluorescent Green 6G	1.0	S	3-4	3-4	3-4	4	4	I	4-6
16		Fluorescent Green 5G	1.0	S	3-4	4	4-5	4	4	I	4-6
17		Fluorescent Red GY	1.0	S	3-4	3-4	3	4	4	I	4-6

Disperse Dyes- Fluorescent Series

- Give the fabric super bright color and very visual impact feeling
- Meet the requirements of fashion, durability and sustainability in fabrics



Skycron® High Light Fastness Series



Suitability: ○ = Very suitable ◎ = Suitable ● = Limited suitable

No.	Color Sample	Product Name	O.W.F(%)	Dyeing Property				Dyeing Fastness			PH Range
				High Temp	Thermosol	Printing	Yarn Dyeing	Light (Xenon)	Sublimayion(CH)	Washing(PES)	
1		Yellow SE-HLF	1.0	◎	○	○	○	7	3-4	3-4	4-7
2		Yellow S-HLF	1.0	◎	◎	◎	◎	7-8	4	3-4	4-8
3		Yellow S-HLF 02	1.0	◎	◎	◎	○	6-7	4-5	4-5	4-6
4		Orange HLF	1.0	○	◎	○	●	6	3-4	3-4	4-8
5		Red SE-HLF	1.0	◎	○	○	○	7-8	3-4	3-4	4-8
6		Red HLF	1.0	◎	○	○	○	6-7	5	3-4	4-7
7		Blue SE-HLF	1.0	◎	○	○	●	7-8	3-4	3-4	4-8
8		Blue S-HLF	1.0	◎	○	○	●	7	4	3-4	4-7
9		Violet S-HLF	1.0	◎	○	○	●	7	3-4	3-4	4-8

Disperse Dyes-High Light Fastness Series

HLF series products have excellent light fastness, which not only meets the requirements of different fabrics for light fastness but also accurately reduces dyeing costs; light fastness reaches the 4th level of the American standard of 60,120,200 hours.

Applications: Home textile fabrics such as curtains, luggage fabric, beach fabric, umbrella fabric, tent fabric, and other outdoor products fabric, car interiors.