

DISPERSE DYESTUFFS

Jihua STARCRO[®]N Dyesfor Polyester

Notes on the pattern section

STARCRO[®] dyes were applied on 100% polyester by the methods described HT at 130°C and printing.

Energy levels

L	= low
M	= medium
H	= high

Performance

✓	= suitable
○	= moderate
✗	= unsuitable

Chemical class

Ma	= mono azo
Antq	= anthraquinone
Qn	= quinoline
Cum	= coumarin

Fastness properties were tested in accordance with SN-ISO 105 or international standards. Where multifiber strip is specified as adjacent fabric such as in wash test ISO C03, adjacent fabric not mentioned in the table attained rating for 5 for staining. Light fastness was tested at the 1/25, 1/1 and 2/1 standard depth (SD).

Key to fastness table

ISO 105 C03:1989	Washing fastness
AATCC 49°C 11A	American Association of Textile Chemists and Colorists, Washing fastness
ISO 105 X11:1994	Hot pressing fastness
ISO 105 X12:1994	Rubbing fastness
ISO 105 E04:1994	Perspiration fastness
ISO 105 B02:1994	Light fastness (Xenon arc fading lamp)
ISO 105 P01:1993	Sublimation fastness
ISO 105 E03:1994	Swimming pool fastness (fastness to chlorinated water)

CH	= shade change
ACE	= staining on acetate
CO	= staining on cotton
PA	= staining on polyamide 66
PES	= staining on polyester
AES	= staining on polyamide/elastane
WO	= staining on wool

Jihua STARCRO[®] General Series

- Excellent dispersion property
- Excellent compatibility and reproducibility
- Good fastness
- Various color of combination

STARCRO [®] General Series					
Shade	Product Name	SD	C.I. Disperse	Chemical class	Energy level
	Yellow 3G (200%)		Yellow 54	Quinoline	L
	Yellow 8GFF (200%)		Yellow 82	Coumarine	M
	Yellow 6GSL (200%)		Yellow 114	Mono azo	H
	Yellow 5GLH (200%)		Yellow 119	Mono azo	M
	Yellow 4G (200%)		Yellow 211	Mono azo	M
	Orange S-4RL (150%)		Orange 30	Mono azo	H
	Orange S-3RFL (200%)		Orange 44	Mono azo	H
	Orange S3RS (%200)		Orange 80	Mono azo	
	Red S3GL (100%)		Red 54	Mono azo	H
	Red FB (200%)		Red 60	Antraquinone	L
	Red GS (200%)		Red 153	Mono azo	L
	Red SE-B (200%)		Red 82	Mono azo	M
	Red S-5BL (100%)		Red 167	Mono azo	H
	Red PRB (200%)		Red 177	Mono azo	
	Red S-2BLS		Red 74	Mono azo	H
	Red 2BLS		Red 145	Mono azo	H
	Red B-EL		Red 92	Mono azo	H
	Red G (200%)		Red 277	Benzopyran	M
	Red SE-3B (150%)		Red 343	Mono azo	M

	Red BG (200%)		Red 362	Benzopyran	M
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STARCROn General Series					
Shade	Product Name	SD	C.I. Disperse	Chemical class	Energy level
	Blue SGLS (200%)		Blue 60	Antraquinone	H
	Blue KFBL		mix	—	M
	Blue S3LSN (200%)		Blue 79	Mono azo	H
	Blue 3RT (200%)		Blue 148	Mono azo	M
	Blue SE-5RLS (200%)		Blue 183	Mono azo	M
	Navy ECO-N (300%)		mix	—	M
	Black EX-SF (300%)		mix	—	
	Black ECO-R		mix	—	
	Black S4BL (200%)		mix	—	
	Rubine RB-LS (200%)		Violet 33	Mono azo	H
	Violet RL (200%)		Violet 63	Mono azo	H
	Blue E-4RL (150%)		Blue 56	Anthraquinone	L

Jihua STARCron® High Washing Fastness (HXF & HW) series

- Have an excellent fastness to dry heat and contact fastness (perspiration and water)
- Cover the important shade ranges of blues, navies and blacks
- Suitable for dyeing PES and PES blends by exhaust an continuous method

STARCron HXF					
Shade	Product Name	SD	C.I. Disperse	Chemical class	Energy level
	Orange HXF		mix	—	High
	Scarlet HXF		mix	—	High
	Rubine HXF		mix	—	High
	Blue HXF		mix	—	High
	Navy Blue HXF		mix	—	High
	Black HXF		mix	—	High

STARCron HW					
	Yellow HW		mix	—	High
	Golden Yellow HW		mix	—	High
	Scarlet HW		mix	—	High
	Red HW-3BS		mix	—	High
	Rubine HW		mix	—	High
	Turquoise Blue HW		mix	—	High
	Blue HW-TGS		mix	—	High
	Navy Blue HW-GS		mix	—	High
	Black HW-KSN		mix	—	High
	Black HW		mix	—	High

Jihua STARCron® Rapid Dyeing (HRD & NN) series

- Medium temperature dyes
- Excellent deep dyeing performance; suits medium and dark color
- Excellent compatibility among varieties in this series; superb success rate
- Suitable for dyeing of super fine fiber, exhaust dyeing and pad dyeing both polyester and PES/Cell blended fabrics.
- Excellent color fastness values.

STARCron HRD					
Shade	Product Name	SD	C.I. Disperse	Chemical class	Energy level
	Yellow HRD-4GN		mix	—	Medium
	Red HRD-2R		mix	—	Medium
	Red HRD-GFL		mix	—	Medium
	Orange HRD-2RL		mix	—	Medium
	Blue HRD-RFL		mix	—	Medium
	N. Blue HRD-2RE		mix	—	Medium
	Black HRD-SE		mix	—	Medium

STARCron NN					
	Yellow NN		mix	—	Medium
	Yellow Brown NN		mix	—	Medium
	Red NN		mix	—	Medium
	Scarlet NN		mix	—	Medium
	Rubine NN		mix	—	Medium
	Blue NN		mix	—	Medium
	Navy NN		mix	—	Medium
	Black NN		mix	—	Medium

Jihua STARCron® Micro Fabric Dyeing series

- Outstanding compatibility and reproducibility in dyeing of micro fabrics
- Excellent dispersion stability
- High build-up and good leveling
- Good light fastness at pale shade

STARCron HRD					
Shade	Product Name	SD	C.I. Disperse	Chemical class	Energy level
	Yellow HACE		mix	—	Low
	Red HACE		mix	—	Low
	Blue HACE		mix	—	Low
	Red SE-3B		mix	—	Low
	Yellow S-RL		mix	—	Low
	Blue S-2GL		mix	—	Low
	Black S-BX		mix	—	Low

Jihua STARCron® Printing (Powder) series

- High sublimation fastness and excellent dispersion property
- High built-up even as having very deep strength
- Various color for combination

STARCron Printing					
Shade	Product Name	SD	C.I. Disperse	Chemical class	Energy level
	Yellow S-6G (200%)		mix	—	Medium
	Yellow S-3RL (200%)		mix	—	Medium
	Red S-EL (200%)		mix	—	Medium
	Scarlet S-4GL (200%)		mix	—	Medium
	Red S-2RL (200%)		mix	—	Medium
	Orange S-RFL (200%)		mix	—	Medium
	Orange S-RL (200%)		mix	—	Medium
	Violet S-RL (200%)		mix	—	Medium
	Blue S-GGL (200%)		mix	—	Medium
	Blue S-BGL (200%)		mix	—	Medium
	Navy Blue S-2GL (200%)		mix	—	Medium
	Black S-PX (200%)		mix	—	Medium
	Black GI (200%)		mix	—	Medium

Jihua STARCron® Class I Baby Textile (EHB) series

- Meets Oeko-Tex Class I requirements.
- Outstanding compatibility, reproducibility in dyeing of micro fabrics
- Excellent dispersion stability
- High build-up and good leveling
- Good fastness

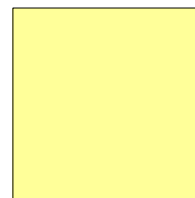
STARCron EHB					
Shade	Product Name	SD	C.I. Disperse	Chemical class	Energy level
	Yellow EHB		mix	—	Medium
	Golden Yellow EHB		mix	—	Medium
	Yellow Brown EHB		mix	—	Medium
	Red EHB		mix	—	Medium
	Rubine EHB		mix	—	Medium
	Royal Blue EHB		mix	—	Medium
	Blue EHB		mix	—	Medium
	Navy Blue EHB		mix	—	Medium
	Black EHB		mix	—	Medium

Jihua STARCron® General series

Starcron Yellow 3G (200%)

Identification

C.I. Disperse	Yellow 54
Energy Level	Low
Chemical Class	Quinoline

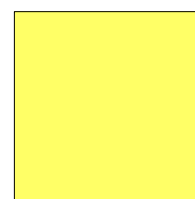


OWF 0.70 %

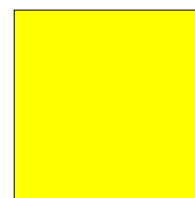
Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	X	✓	X	✓
Medium	✓	✓	X	✓
Dark	✓	✓	X	✓

- ✓ = suitable
 ○ = moderate
 X = unsuitable



OWF 1.1 %



OWF 2.2 %

Characteristic

- Excellent light fastness, coverage and dye-uptake
- As one of the low temperature tricolor
- Suitable for transfer printing

Properties

pH dependency	4-8
Liquid ratio dependency	1: (20-30)
Temperature dependency	130-135°C
HT color absorption	91.60%
Levelling	99.82%
Dischargeability	X
Build up: HT dyeing	B
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties**Xenon light fastness (blue scale), ISO 105-B02**

1/25 SD	CH	6
1/1 SD	CH	6-7
2/1 SD	CH	6-7

Sublimation fastness, ISO 105-P01

°C	150	4-5
	180	3
	200	2

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4-5	4

Rubbing fastness, ISO 105-X12

	dry	wet
	4-5	5

Hot pressing fastness, ISO 105-X11

200°C	instant	4 hours
	4-5	4-5

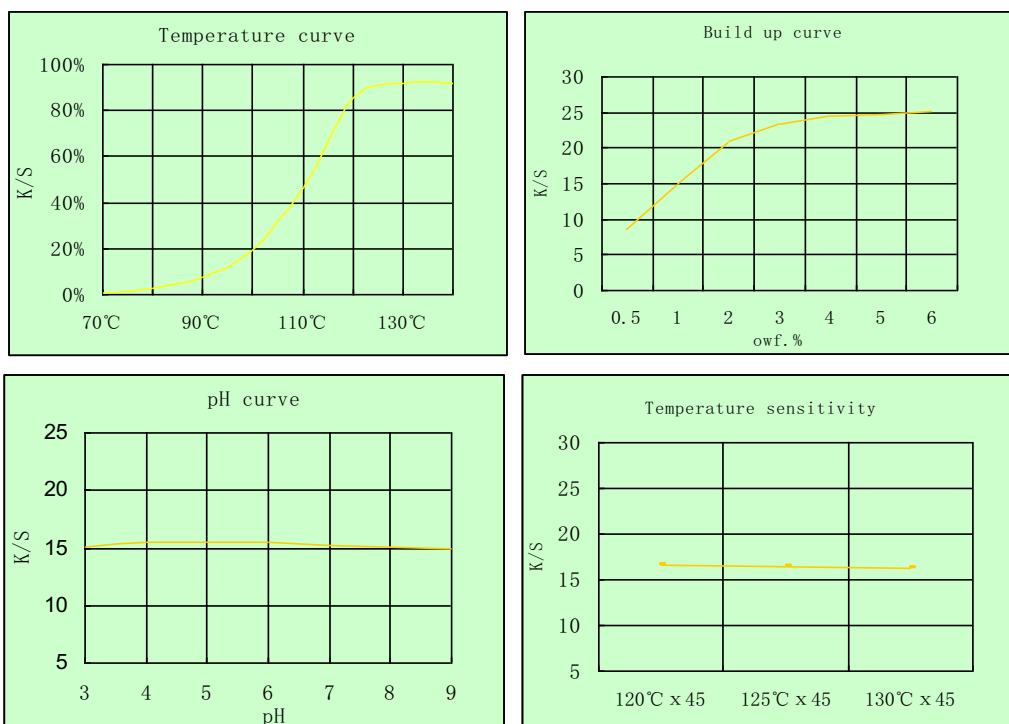
Wet fastness properties

<i>Washing</i>	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		5	3-4	5	3	5	4-5	4
AATCC 11A, 49°C		5	3-4	5	3	5	4-5	4

Perspiration

ISO 105 E04, Alkaline		4	4-5	4-5	4-5	4	4-5	4-5
ISO 105 E04, Acid		4-5	4-5	4-5	4	4-5	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

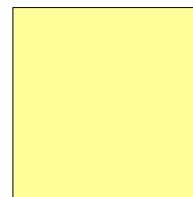
Dye application performance

Jihua STARCRO[®] General series

Starcron Yellow 8GFF (200%)

Identification

C.I. Disperse	Yellow 82
Energy Level	Medium
Chemical Class	Coumarin

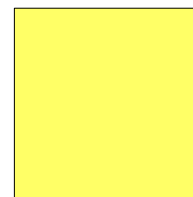


OWF 0.70 %

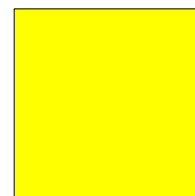
Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✓	✓	✗	✓
Medium	✓	✓	✗	✓
Dark	✓	✗	✗	✗

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable



OWF 1.1 %



OWF 2.2 %

Characteristic

- Medium temperature dyes
- Excellent washing fastness and levelling dyeing
- Fluorescence bright yellow and matches with all kinds of bright color

Properties

pH dependency	4-6
Liquid ratio dependency	1: (20-30)
Temperature dependency	130-135°C
HT color absorption	95.71%
Levelling	98.66%
Dischargeability	✗
Build up: HT dyeing	A
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties

Xenon light fastness (blue scale), ISO 105-B02

1/25 SD	CH	3
1/1 SD	CH	3-4
2/1 SD	CH	4+

Sublimation fastness, ISO 105-P01

°C	150	5
	180	4
	200	3

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4-5	4

Rubbing fastness, ISO 105-X12

	dry	wet
	5	5

Hot pressing fastness, ISO 105-X11

200°C	instant	4 hours
	4	4

Wet fastness properties

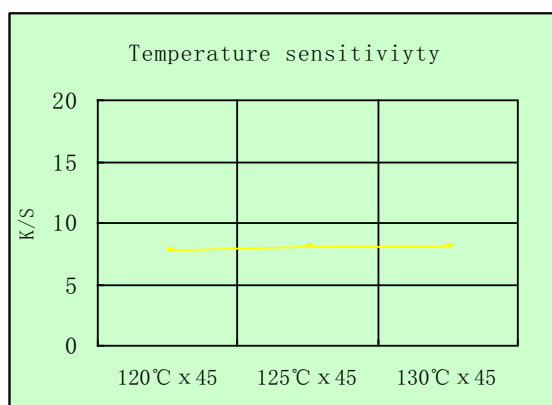
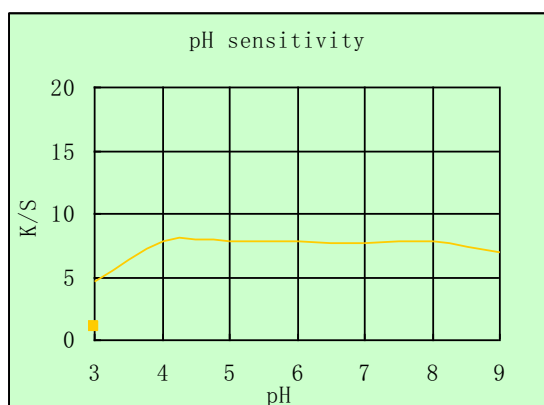
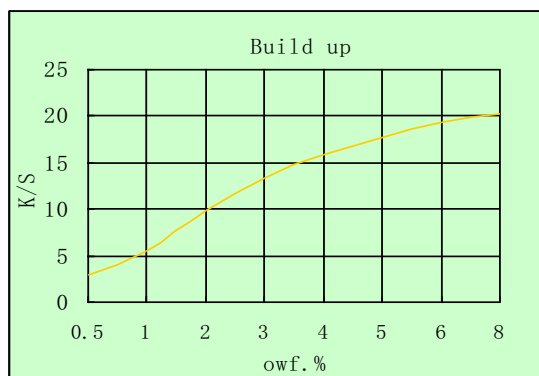
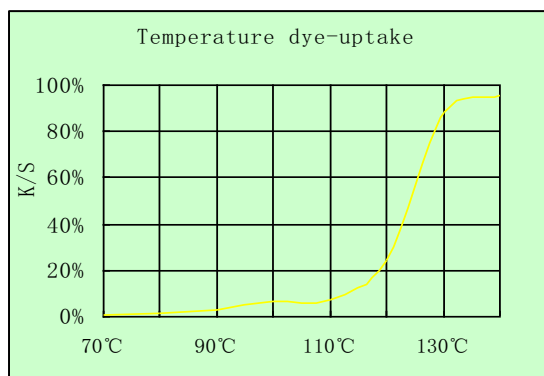
Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4-5	4-5	5	3-4	4-5	5-4	4
AATCC 11A, 49°C		4-5	4-5	5	3-4	4-5	5-4	4

Perspiration

ISO 105 E04, Alkaline		3	3-4	3-4	3	3-4	3-4	3-4
ISO 105 E04, Acid		4	3-4	4	3-4	4	3-4	3-4

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance

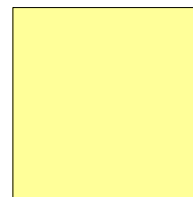


Jihua STARCron® General series

Starcron Yellow 6GSL (200%)

Identification

C.I. Disperse	Yellow 114
Energy Level	High
Chemical Class	Mono azo

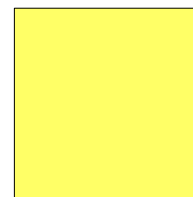


OWF 0.70 %

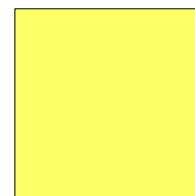
Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✓	✓	✗	✓
Medium	✓	✓	✗	✓
Dark	✓	✓	✗	✓

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable



OWF 1.1 %



OWF 2.2 %

Characteristic

- Excellent light fastness, washing fastness and migration dyeing
- Suits for color matching with high temperature and medium temperature dyes
- Main variety of exhaust dyeing, thermal melting pad dyeing and printing

Properties

pH dependency	4-7
Liquid ratio dependency	1: (20-30)
Temperature dependency	130-135°C
HT color absorption	95.92%
Levelling	96.68%
Dischargeability	○
Build up: HT dyeing	B
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties**Xenon light fastness** (blue scale), ISO 105-B02

1/25 SD	CH	7
1/1 SD	CH	7
2/1 SD	CH	7

Sublimation fastness, ISO 105-P01

°C	150	5
	180	4-5
	200	3-4

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4-5	4+

Rubbing fastness, ISO 105-X12

	dry	wet
	4-5	4-5

Hot pressing fastness, ISO 105-X11

200°C	instant	4 hours
	4-5	4-5

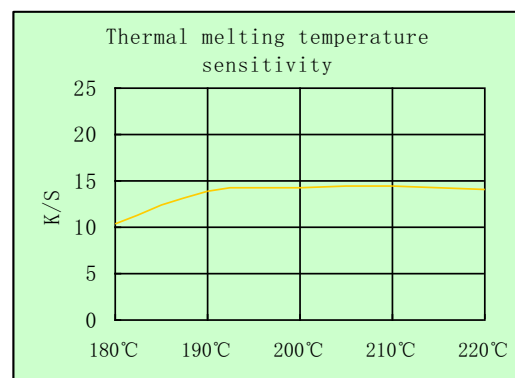
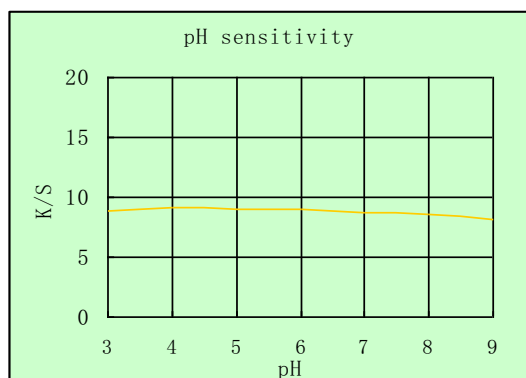
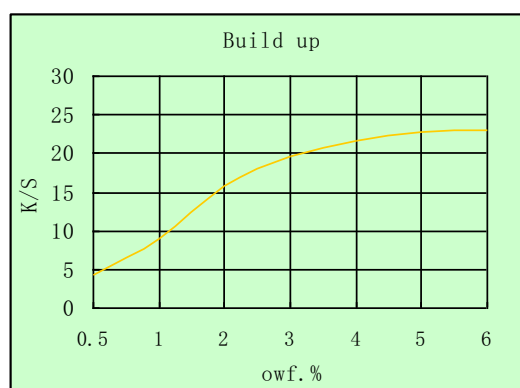
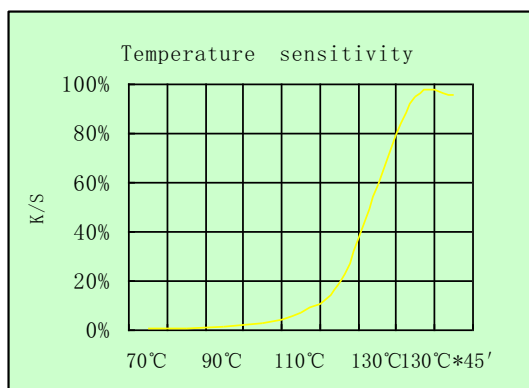
Wet fastness properties

<i>Washing</i>	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		5	4	5	4	5	5	4
AATCC 11A, 49°C		5	4	5	4	5	5	4

Perspiration

ISO 105 E04, Alkaline		4-5	3-4	4-5	3-4+	4	4-5	4
ISO 105 E04, Acid		3-4	3-4+	4-5	3-4+	4	4-5	4

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

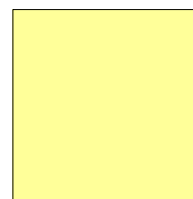
Dye application performance

Jihua STARCron® General series

Starcron Yellow 5GLH (200%)

Identification

C.I. Disperse	Yellow 119
Energy Level	Medium
Chemical Class	Mono azo

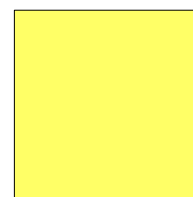


OWF 0.70 %

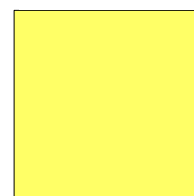
Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✓	✓	✗	✓
Medium	✓	✓	✗	✗
Dark	✓	✗	✗	✗

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable



OWF 1.1 %



OWF 2.2 %

Characteristic

- Medium temperature dye
- Excellent light fastness, levelling and dye up-take
- Pure and bright color, good adaptability for color matching

Properties

pH dependency	4-6
Liquid ratio dependency	1: (20-30)
Temperature dependency	130-135°C
HT color absorption	96.63%
Levelling	95.45%
Dischargeability	○
Build up: HT dyeing	B
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties

Xenon light fastness (blue scale), ISO 105-B02

1/25 SD	CH	7
1/1 SD	CH	7
2/1 SD	CH	7

Sublimation fastness, ISO 105-P01

°C	150	5
	180	4-5
	200	3-4

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4-5	4+

Rubbing fastness, ISO 105-X12

	dry	wet
	4-5	4-5

Hot pressing fastness, ISO 105-X11

200°C	instant	4 hours
	4-5	4+

Wet fastness properties

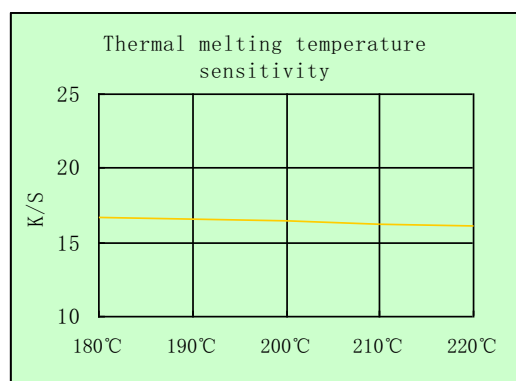
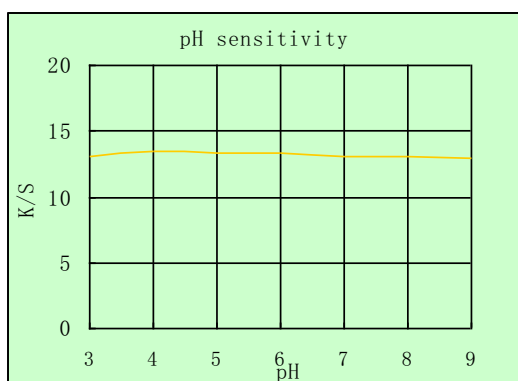
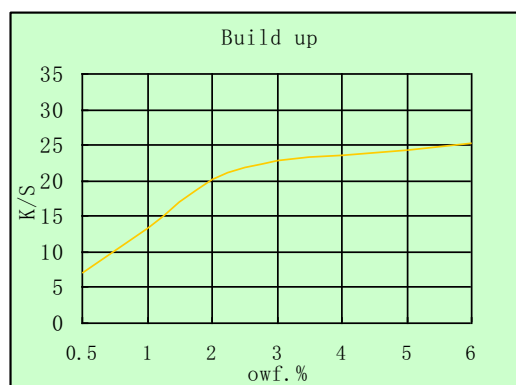
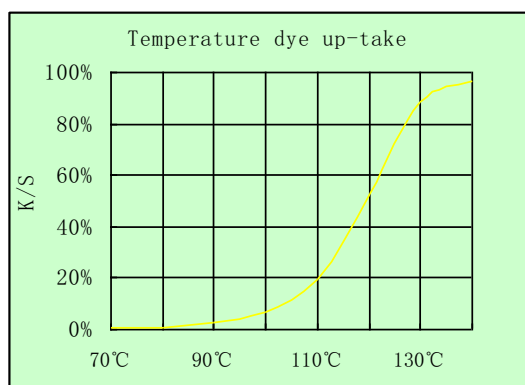
Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		5	4	5	4	5	5	4
AATCC 11A, 49°C		5	4	5	4	5	5	4

Perspiration

ISO 105 E04, Alkaline		4-5	3-4	4-5	3-4+	4	4-5	4
ISO 105 E04, Acid		4	4	4-5	3-4	4-5	4-5	4

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance

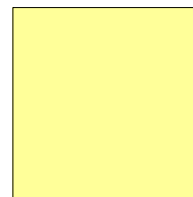


Jihua STARCron® General series

Starcron Yellow 4G (200%)

Identification

C.I. Disperse	Yellow 211
Energy Level	Medium
Chemical Class	Mono azo

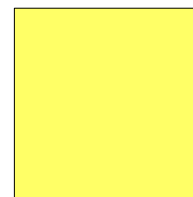


OWF 0.70 %

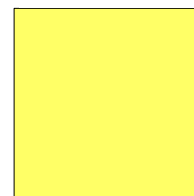
Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✓	✓	✓	✓
Medium	✓	✓	✓	✓
Dark	✓	✗	✓	✗

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable



OWF 1.1 %



OWF 2.2 %

Characteristic

- Medium temperature dyes
- Excellent light fastness and sublimation fastness
- Main variety in bright and yellow types at medium temperature; widely used in color matching

Properties

pH dependency	4-8
Liquid ratio dependency	1: (20-30)
Temperature dependency	130-135°C
HT color absorption	86.10%
Levelling	99.85%
Dischargeability	○
Build up: HT dyeing	B
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties**Xenon light fastness (blue scale), ISO 105-B02**

1/25 SD	CH	6-7
1/1 SD	CH	7
2/1 SD	CH	7

Sublimation fastness, ISO 105-P01

°C	150	5
	180	3-4
	200	2-3

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4-5	4+

Rubbing fastness, ISO 105-X12

	dry	wet
	4-5	4-5

Hot pressing fastness, ISO 105-X11

200°C	instant	4 hours
	4-5	4-5

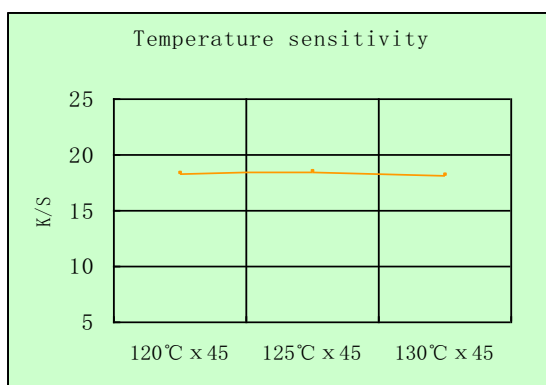
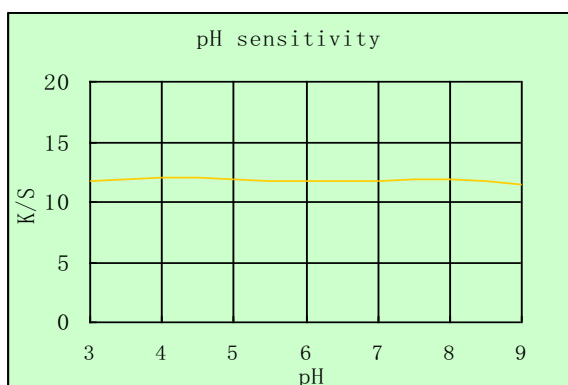
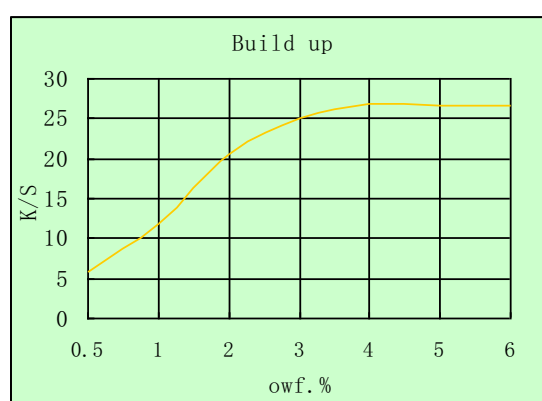
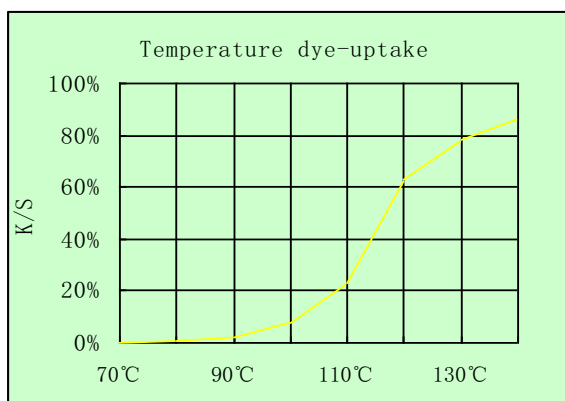
Wet fastness properties

<i>Washing</i>	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		5	4-5	5	4-5	5	5	4-5
AATCC 11A, 49°C		5	4-5	5	4-5	5	5	4-5

Perspiration

ISO 105 E04, Alkaline		4-5	4-5	4-5	4-5	4	4-5	4-5
ISO 105 E04, Acid		4-5	4	4-5	4	4-5	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

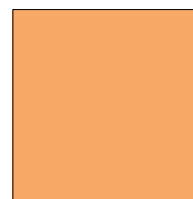
Dye application performance

Jihua STARCron® General series

Starcron Orange S-4RL (150%)

Identification

C.I. Disperse	Orange 30
Energy Level	High
Chemical Class	Mono azo

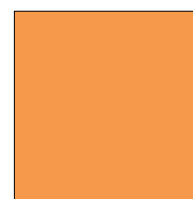


OWF 0.70 %

Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✓	✓	✗	✓
Medium	✓	✓	✗	✓
Dark	✓	✓	✗	✓

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable



OWF 1.1 %



OWF 2.2 %

Characteristic

- As one of the high temperature tricolor.
- Excellent light fastness, washing fastness, sublimation fastness
- Main variety of exhaust dyeing , thermal melting pad dyeing and printing
- Light color, low liquor ratio; using with the high temperature levelling agent

Properties

pH dependency	4-8
Liquid ratio dependency	1: (20-30)
Temperature dependency	130-135°C
HT color absorption	83.20%
Levelling	92.56%
Dischargeability	○
Build up: HT dyeing	A
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties

Xenon light fastness (blue scale), ISO 105-B02

1/25 SD	CH	6-7
1/1 SD	CH	7
2/1 SD	CH	7

Sublimation fastness, ISO 105-P01

°C	150	5
	180	4
	200	3

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4-5	4

Rubbing fastness, ISO 105-X12

	dry	wet
	4-5	5

Hot pressing fastness, ISO 105-X11

200°C	instant	4 hours
	4-5	4-5

Wet fastness properties

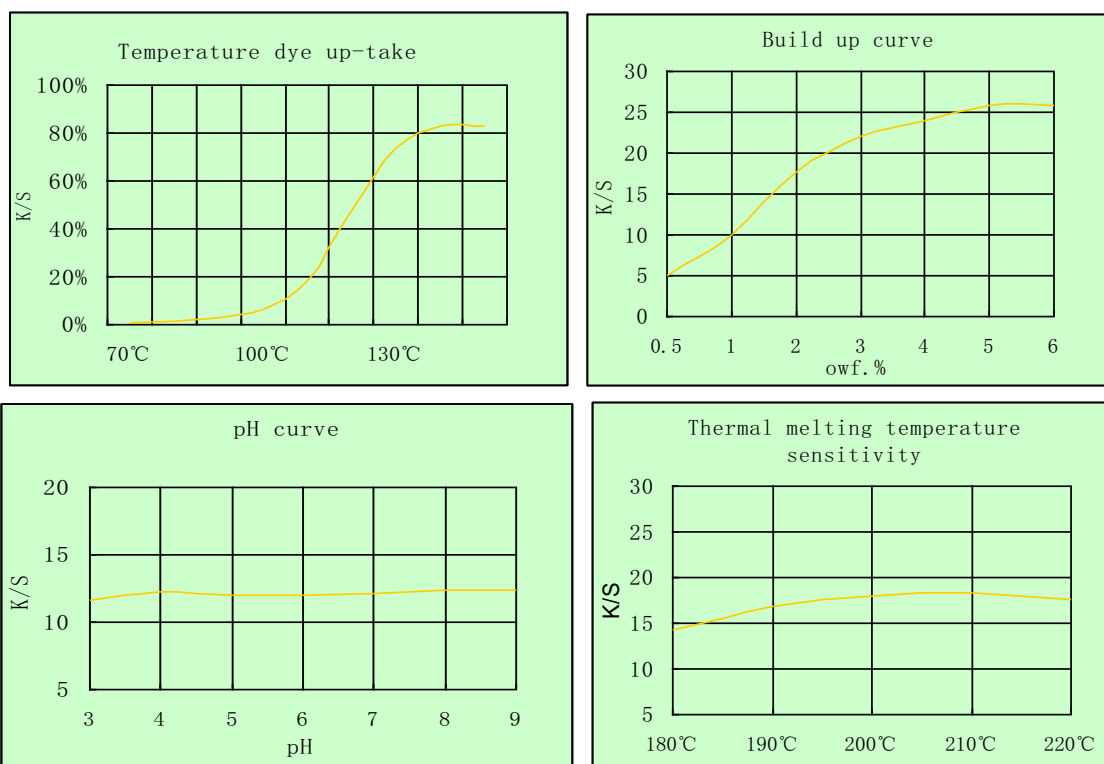
Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		5	4-5	5	4-5	5	4-5	4
AATCC 11A, 49°C		5	4-5	5	4-5	5	4-5	4

Perspiration

ISO 105 E04, Alkaline		4	3-4	4-5	4	4	4-5	4-5
ISO 105 E04, Acid		4	4-5	4-5	4-5	4-5	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance

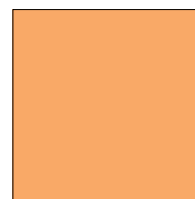


Jihua STARCRO[®] General series

Starcron Orange S-3RFL (200%)

Identification

C.I. Disperse	Orange 44
Energy Level	High level
Chemical Class	Mono azo

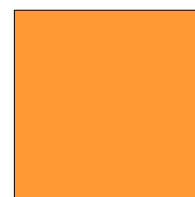


OWF 0.70 %

Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✗	✓	✗	✓
Medium	✓	✓	✗	✓
Dark	✓	✓	✗	✓

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable



OWF 1.1 %



OWF 2.2 %

Characteristic

- High temperature dyes
- Excellent light fastness, washing fastness, sublimation fastness
- Can be used for polyester fabric and its blends
- Bright and vivid color; suitable for direct printing on polyester fabric

Properties

pH dependency	4-8
Liquid ratio dependency	1: (20-30)
Temperature dependency	130-135°C
HT color absorption	86.24%
Levelling	96.50%
Dischargeability	○
Build up: HT dyeing	B
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties

Xenon light fastness (blue scale), ISO 105-B02

1/25 SD	CH	5-6
1/1 SD	CH	6
2/1 SD	CH	6-7

Sublimation fastness, ISO 105-P01

°C	150	5
	180	4-5
	200	3-4

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4-5	4

Rubbing fastness, ISO 105-X12

	dry	wet
	4-5	4-5

Hot pressing fastness, ISO 105-X11

200°C	instant	4 hours
	4	4

Wet fastness properties

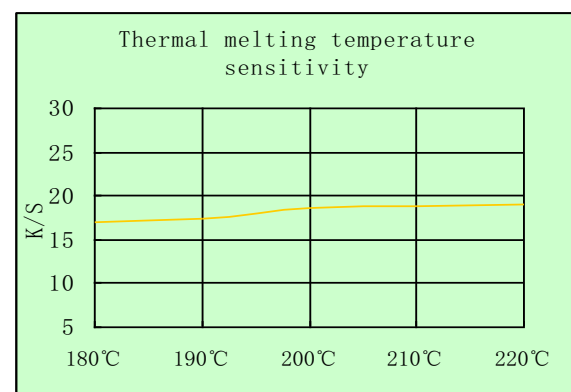
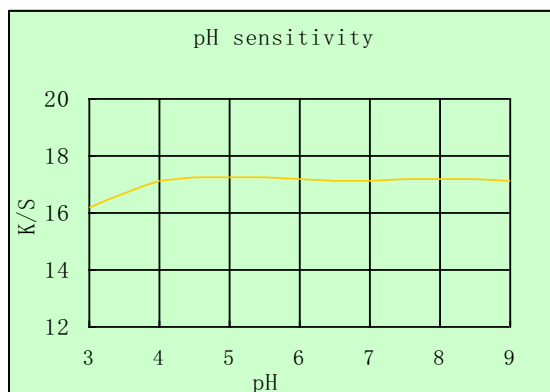
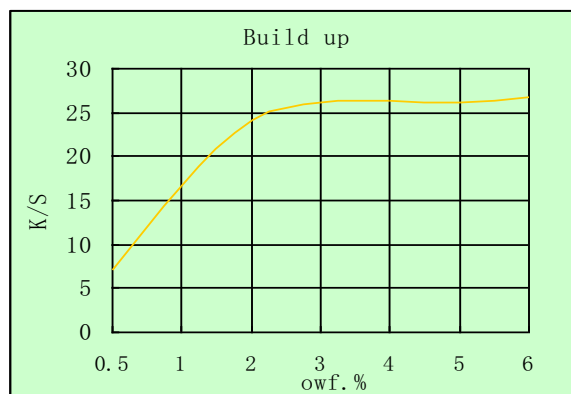
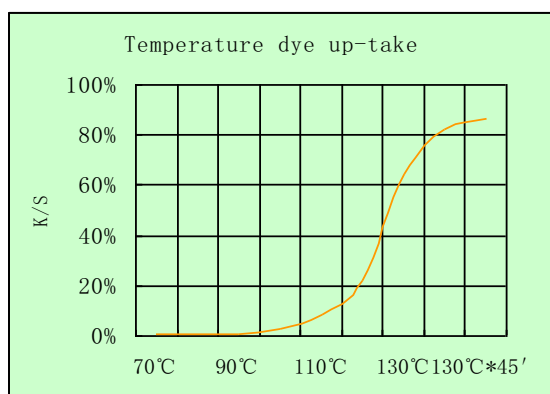
Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4-5	4	4	4	5	4-5	4
AATCC 11A, 49°C		4-5	4	4-5	4	5	4-5	4

Perspiration

ISO 105 E04, Alkaline		3-4	4	4-5	4	4	4-5	4-5
ISO 105 E04, Acid		4-5	4-5	4-5	4-5	4-5	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance

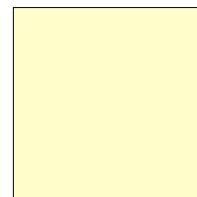


Jihua STARCron® General series

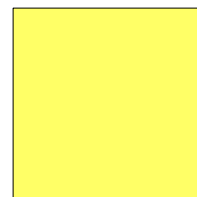
Starcron Orange S3RS (200%)

Identification

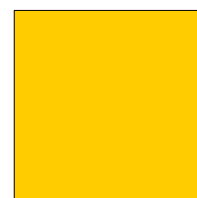
C.I. Disperse	Orange 80
Energy Level	High
Chemical Class	Mono azo



OWF 0.70 %



OWF 1.1 %



OWF 2.2 %

Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✓	✓	✗	✓
Medium	✓	✓	✗	✓
Dark	✓	✓	✗	✓

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable

Characteristic

- As one of the high temperature tricolor, high temperature dyes
- Excellent light fastness, washing fastness, sublimation fastness
- Main variety of exhaust dyeing , thermal melting pad dyeing and printing
- Light color, low liquor ratio; using with the high temperature levelling agent

Properties

pH dependency	4-8
Liquid ratio dependency	1: (20-30)
Temperature dependency	130-135°C
HT color absorption	83.20%
Levelling	92.56%
Dischargeability	○
Build up: HT dyeing	A

Metal-ion sensitivity

Fe⁺⁺≤12 ppm Mg⁺⁺≤50 ppm
Cu⁺⁺≤10 ppm Ca⁺⁺≤50 ppm

Fastness Properties

Xenon light fastness (blue scale), ISO 105-B02

1/25 SD	CH	6-7
1/1 SD	CH	7
2/1 SD	CH	7

Sublimation fastness, ISO 105-P01

°C	150	5
	180	4
	200	3

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4-5	4

Rubbing fastness, ISO 105-X12

	dry	wet
	4-5	5

Hot pressing fastness, ISO 105-X11

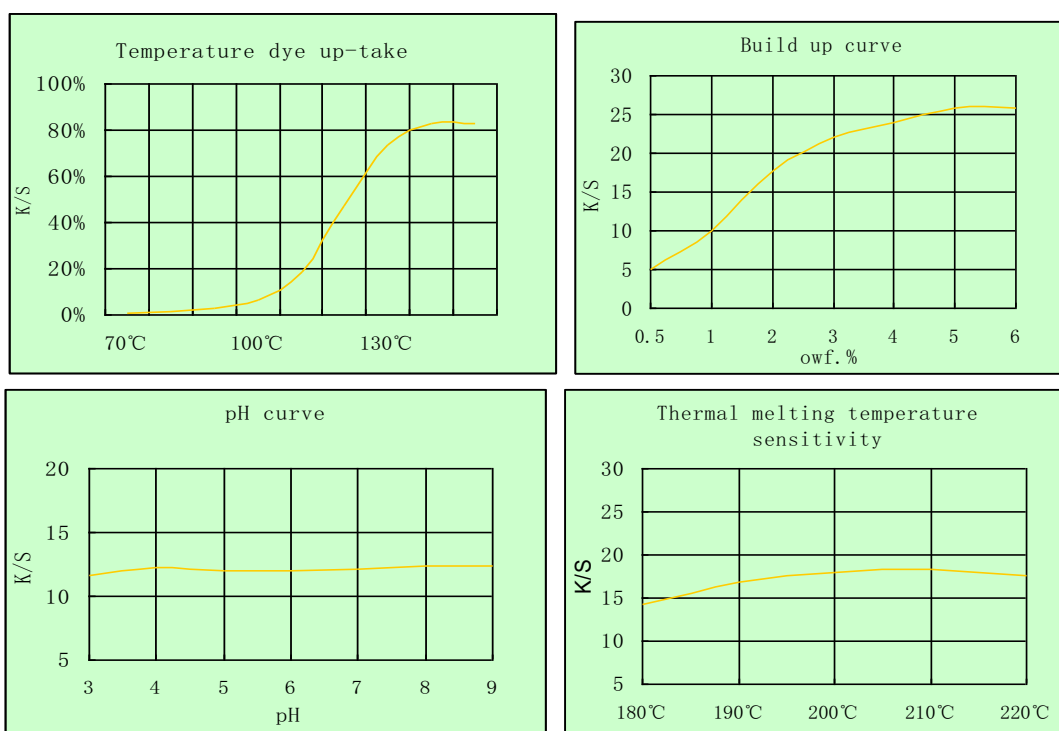
200°C	instant	4 hours
	4-5	4-5

Wet fastness properties

Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		5	4-5	5	4-5	5	4-5	4
AATCC 11A, 49°C		5	4-5	5	4-5	5	4-5	4
Perspiration								
ISO 105 E04, Alkaline		4	3-4	4-5	4	4	4-5	4-5
ISO 105 E04, Acid		4	4-5	4-5	4-5	4-5	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance

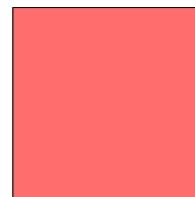


Jihua STARCRO[®] General series

Starcron Red S-3GL (100%)

Identification

C.I. Disperse	Red 54
Energy Level	High
Chemical Class	Mono azo

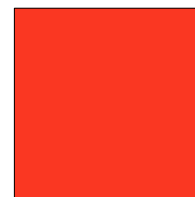


OWF 0.70 %

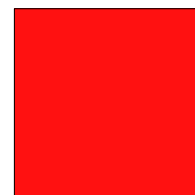
Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✗	✓	✗	✓
Medium	✓	✓	✗	✓
Dark	✓	✓	✗	✓

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable



OWF 1.1 %



OWF 2.2 %

Characteristic

- High temperature dyes
- Excellent dyeing fastness and sublimation fastness
- Suitable for direct printing on polyester

Properties

pH dependency	4-8
Liquid ratio dependency	1: (20-30)
Temperature dependency	130-135°C
HT color absorption	96.00%
Levelling	94.78%
Dischargeability	○
Build up: HT dyeing	A
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties**Xenon light fastness (blue scale), ISO 105-B02**

1/25 SD	CH	5
1/1 SD	CH	5-6
2/1 SD	CH	6

Sublimation fastness, ISO 105-P01

°C	150	5
	180	4
	200	3-4

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4	3-4

Rubbing fastness, ISO 105-X12

	dry	wet
	4	3-4

Hot pressing fastness, ISO 105-X11

200°C	instant	4 hours
	4-5	4-4

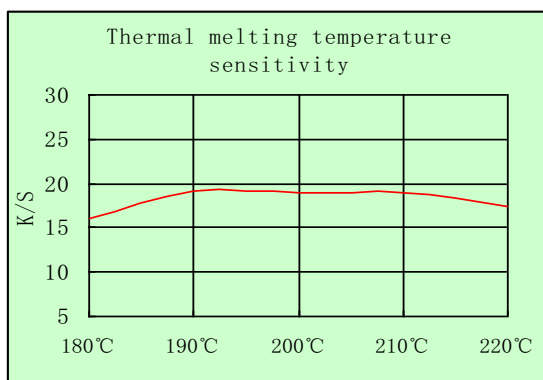
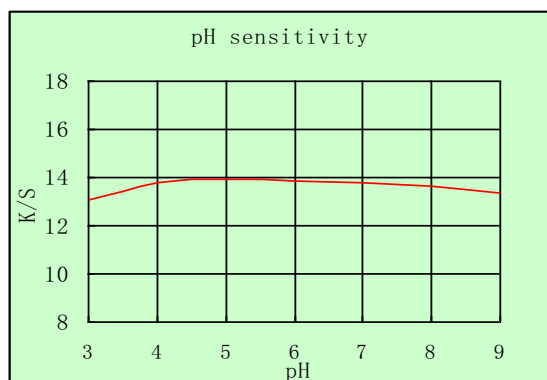
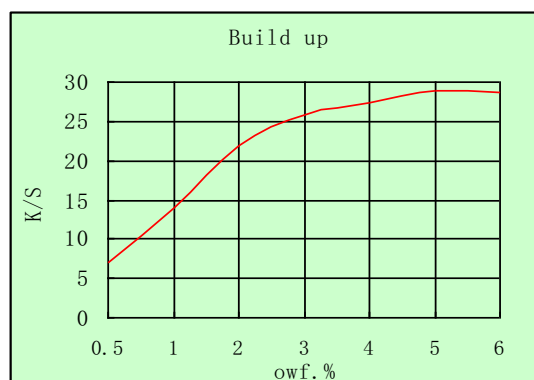
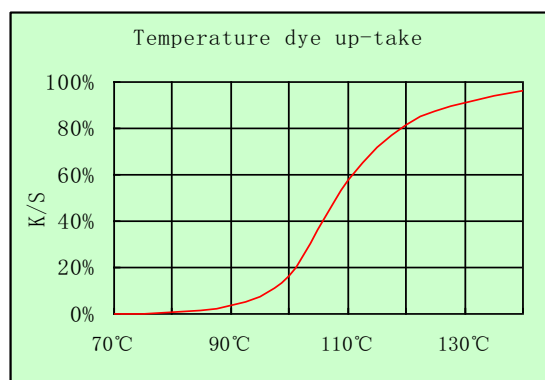
Wet fastness properties

Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4-5	4	4-5	4	4-5	5	4
AATCC 11A, 49°C		4-5	4	4-5	4	4-5	5	4

Perspiration

ISO 105 E04, Alkaline		4-5	4+	4-5	4-5	4-5	4-5	4-5
ISO 105 E04, Acid		4-5	4+	4-5	4	4	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

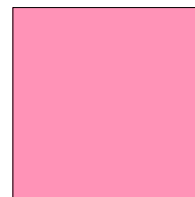
Dye application performance

Jihua STARCRO[®] General series

Starcron Red FB (200%)

Identification

C.I. Disperse	Red 60
Energy Level	Low
Chemical Class	Antraquinone

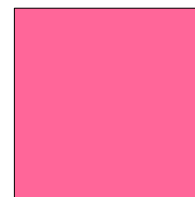


OWF 0.70 %

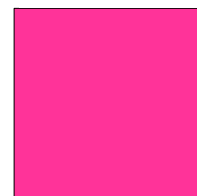
Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✓	✓	✓	✓
Medium	✓	✗	✓	✗
Dark	✗	✗	✓	✗

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable



OWF 1.1 %



OWF 2.2 %

Characteristic

- Low temperature dyes
- Excellent light fastness and levelling dyeing
- As one of low temperature tricolor
- Suitable for transfer printing

Properties

pH dependency	3-9
Liquid ratio dependency	1: (20-30)
Temperature dependency	130-135°C
HT color absorption	95.10%
Levelling	99.29%
Dischargeability	○
Build up: HT dyeing	A
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties

Xenon light fastness (blue scale), ISO 105-B02

1/25 SD	CH	5-6
1/1 SD	CH	6
2/1 SD	CH	6-7

Sublimation fastness, ISO 105-P01

°C	150	4-5
	180	3
	200	2

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4-5	4

Rubbing fastness, ISO 105-X12

	dry	wet
	5	5

Hot pressing fastness, ISO 105-X11

200°C	instant	4 hours
	4-5	4-5

Wet fastness properties

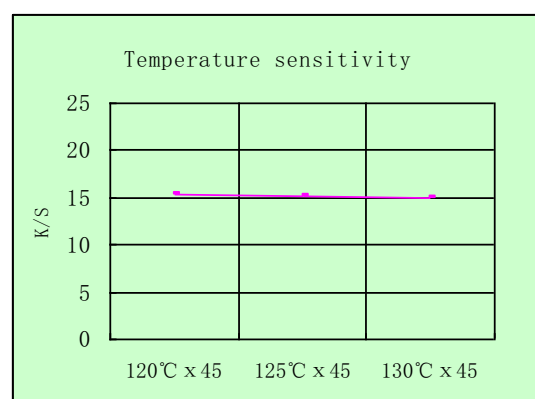
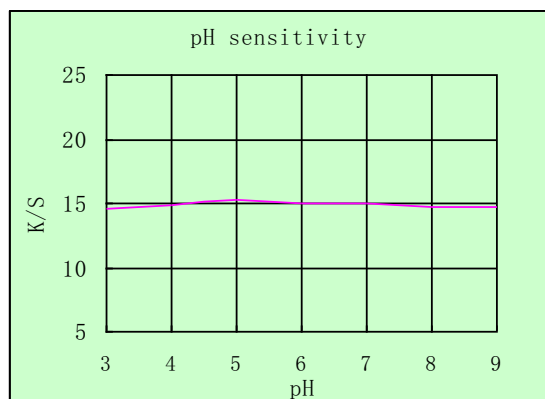
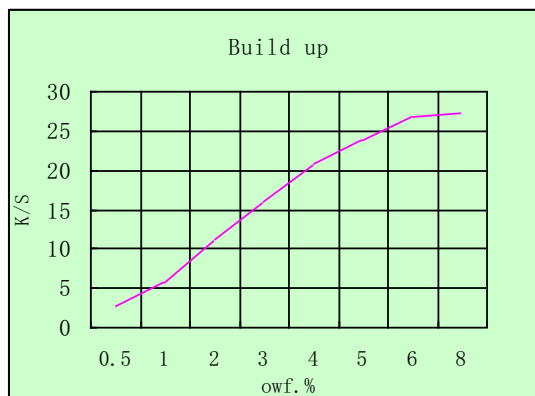
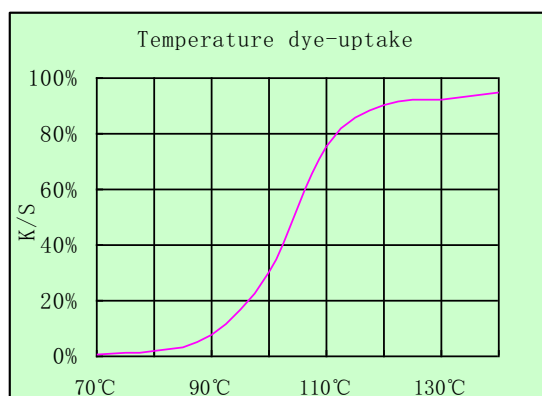
Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4-5	4	5	3-4	4	4-5	4
AATCC 11A, 49°C		4-5	4+	4-5	3-4	4	4-5	4

Perspiration

ISO 105 E04, Alkaline		4-5	4-5	4-5	4-5	4-5	4-5	4-5
ISO 105 E04, Acid		4-5	4-5	4-5	4-5	4-5	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance

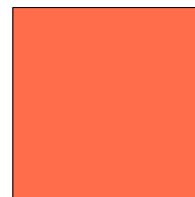


Jihua STARCRO[®] General series

Starcron Red GS (200%)

Identification

C.I. Disperse	Red 153
Energy Level	High
Chemical Class	Mono azo

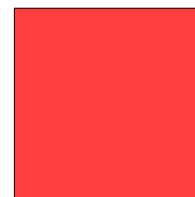


OWF 0.70 %

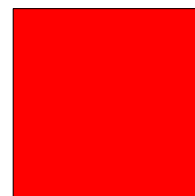
Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✗	✓	✓	✓
Medium	✓	✓	✓	✓
Dark	✓	✓	✓	✓

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable



OWF 1.1 %



OWF 2.2 %

Characteristic

- High temperature dyes
- Excellent light fastness, washing fastness and sublimation fastness
- Good color staining fastness on cotton in polyester/cotton blended fabric
- Main variety of exhaust dyeing, thermal melting and printing

Properties

pH dependency	4-8
Liquid ratio dependency	1: (20-30)
Temperature dependency	130-135°C
HT color absorption	94.50%
Levelling	82.45%
Dischargeability	○
Build up: HT dyeing	A
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties**Xenon light fastness (blue scale), ISO 105-B02**

1/25 SD	CH	4
1/1 SD	CH	4-5
2/1 SD	CH	5

Sublimation fastness, ISO 105-P01

°C	150	5
	180	4
	200	3-4

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4-5	4

Rubbing fastness, ISO 105-X12

	dry	wet
	4-5	4-5

Hot pressing fastness, ISO 105-X11

200°C	instant	4 hours
	4-5	4-5

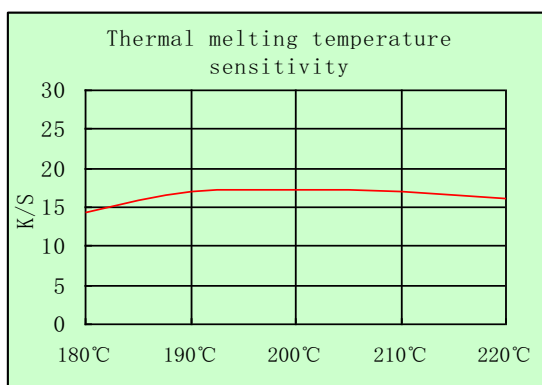
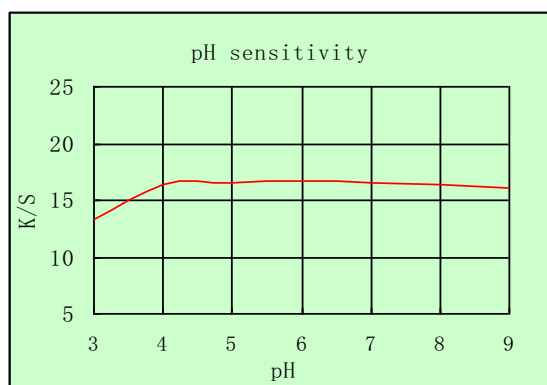
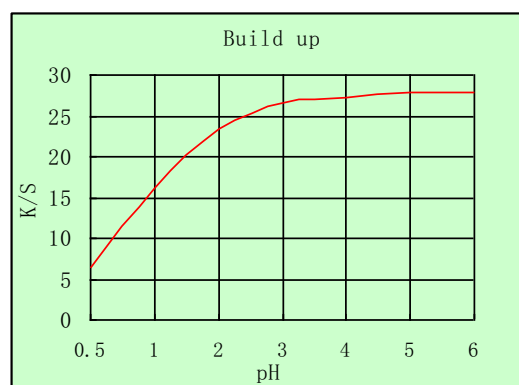
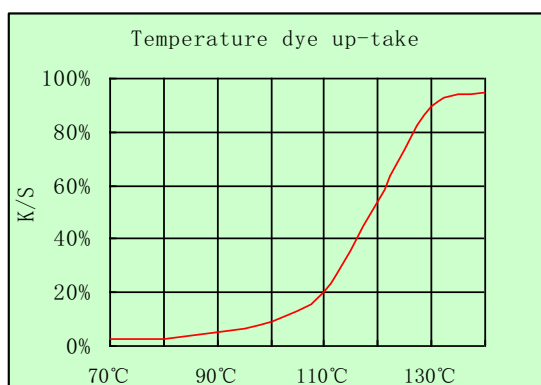
Wet fastness properties

Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4-5	4	4-5	3-4	4-5	4-5	4
AATCC 11A, 49°C		4-5	4	4-5	3-4	4-5	4-5	4

Perspiration

ISO 105 E04, Alkaline		4-5	4-5	4-5	4-5	4-5	4-5	4-5
ISO 105 E04, Acid		4	4-5	4-5	4-5	4+	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

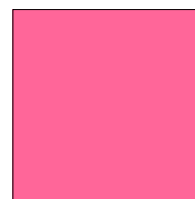
Dye application performance

Jihua STARCron® General series

Starcron Red SE-B (200%)

Identification

C.I. Disperse	Red 82
Energy Level	Medium
Chemical Class	Mono azo

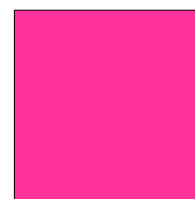


OWF 0.70 %

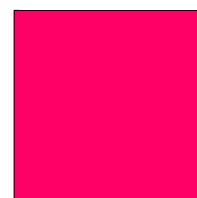
Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✓	✓	✓	✓
Medium	✓	✗	✓	✗
Dark	✓	✗	✓	✗

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable



OWF 1.1 %



OWF 2.2 %

Characteristic

- Medium temperature dye
- Excellent dyeing fastness and depressiveness
- Excellent compatibility and reproducibility

Properties

pH dependency	4-7
Liquid ratio dependency	1: (20-30)
Temperature dependency	130-135°C

HT color absorption	91.14%
Levelling	93.53%

Dischargeability	○
Build up: HT dyeing	A

Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm
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Fastness Properties**Xenon light fastness (blue scale), ISO 105-B02**

1/25 SD	CH	5
1/1 SD	CH	5-6
2/1 SD	CH	6

Sublimation fastness, ISO 105-P01

°C	150	5
	180	4
	200	2-3

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4	3-4+

Rubbing fastness, ISO 105-X12

	dry	wet
	4-5	4-5

Hot pressing fastness, ISO 105-X11

200°C	instant	4 hours
	4	4

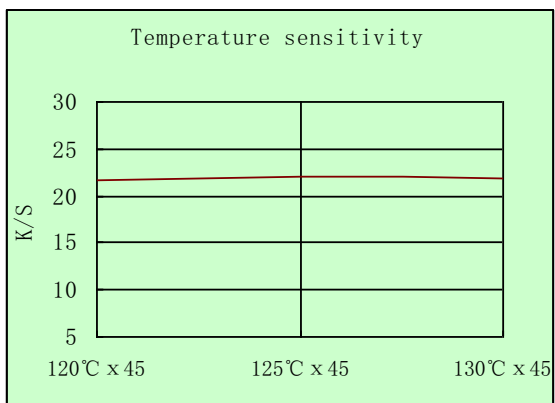
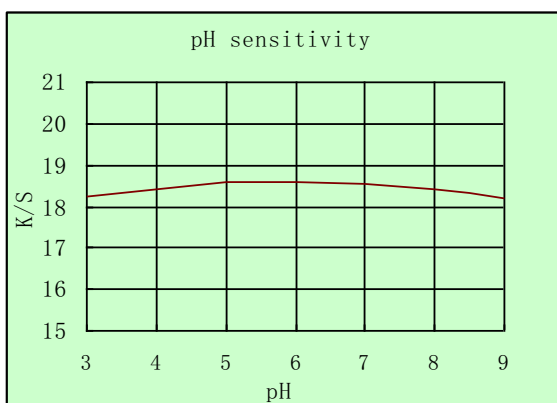
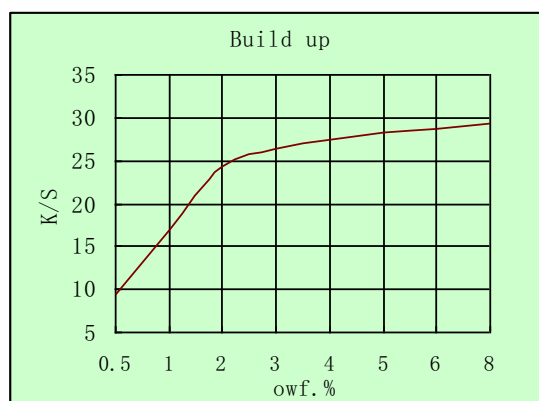
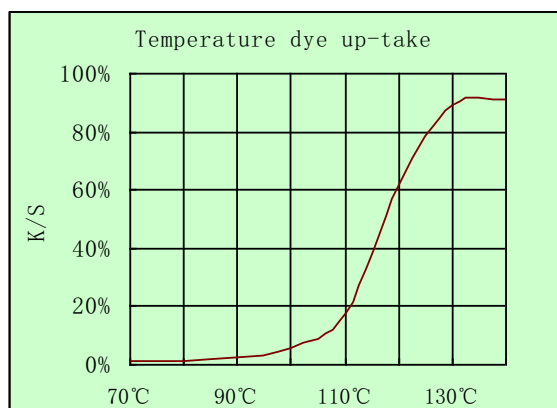
Wet fastness properties

<i>Washing</i>	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4-5	3	4-5	4	4-5	4-5	4
AATCC 11A, 49°C		4-5	3	4-5	4	4-5	4-5	4

Perspiration

ISO 105 E04, Alkaline		4	3	4+	3-4	3	4-5	3-4+
ISO 105 E04, Acid		4	3-4	4	3-4	3	4-5	3-4+

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

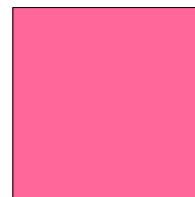
Dye application performance

Jihua STARCron® General series

Starcron Red S-5BL (100%)

Identification

C.I. Disperse	Red 167
Energy Level	High
Chemical Class	Mono azo

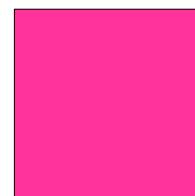


OWF 0.70 %

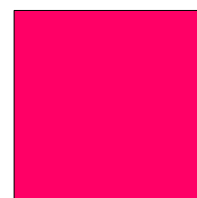
Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✓	✓	✗	✓
Medium	✓	✓	✗	✓
Dark	✓	✓	✗	✓

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable



OWF 1.1 %



OWF 2.2 %

Characteristic

- High temperature dyes
- Excellent deep dyeing quality and high light fastness
- As one of high temperature tricolor
- Main variety of exhaust dyeing, thermal melting and printing
- Light color, low liquor ratio; used with the high temperature levelling agent

Properties

pH dependency	4-7
Liquid ratio dependency	1: (20-30)
Temperature dependency	130-135°C
HT color absorption	88.10%
Levelling	81.00%
Dischargeability	○
Build up: HT dyeing	A
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties

Xenon light fastness (blue scale), ISO 105-B02		
1/25 SD	CH	5
1/1 SD	CH	5-6
2/1 SD	CH	6
Sublimation fastness, ISO 105-P01		
°C	150	5
	180	4-5
	200	3-4
Fastness to chlorinated water, ISO 105-E03		
	20 ppm	50 ppm
	3-4	3

Rubbing fastness, ISO 105-X12		
	dry	wet
	4-5	4-5

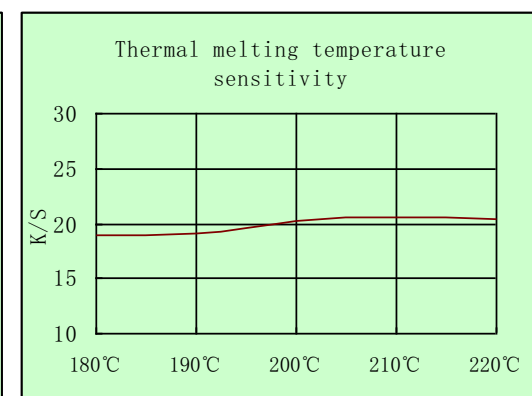
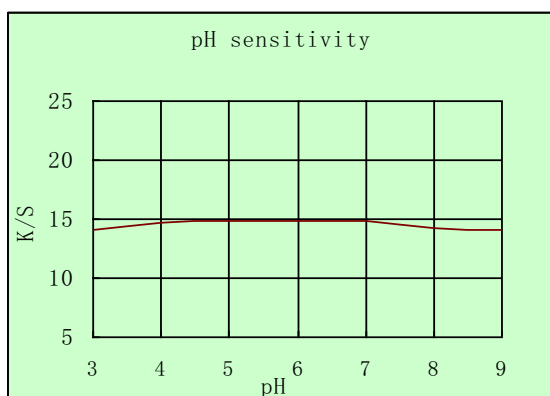
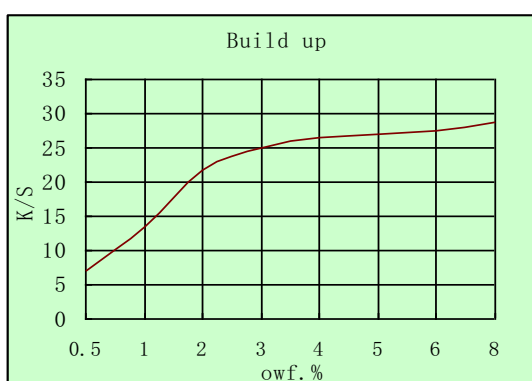
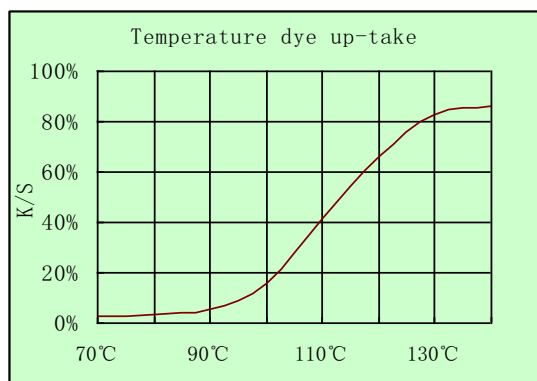
Hot pressing fastness, ISO 105-X11		
200°C	instant	4 hours
	4	4

Wet fastness properties

Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4-5	4	4-5	4	4-5	4-5	4
AATCC 11A, 49°C		4-5	4	4-5	4	4-5	4-5	4
Perspiration								
ISO 105 E04, Alkaline		4	3-4	4	3-4	3-4+	4-5	4
ISO 105 E04, Acid		4+	4	4-5	4	3-4	4-5	4

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance

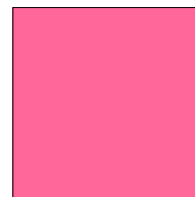


Jihua STARCRO[®] General series

Starcron Red PRB (200%)

Identification

C.I. Disperse	Red 177
Energy Level	High
Chemical Class	Mono azo

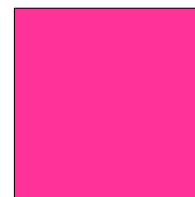


OWF 0.70 %

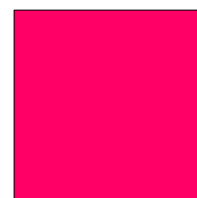
Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✓	✓	✗	✓
Medium	✓	✓	✗	✓
Dark	✓	✓	✗	✓

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable



OWF 1.1 %



OWF 2.2 %

Characteristic

- High temperature dyes
- Excellent deep dyeing quality and high light fastness
- As one of high temperature tricolor
- Main variety of exhaust dyeing, thermal melting and printing
- Light color, low liquor ratio; used with the high temperature levelling agent

Properties

pH dependency	4-7
Liquid ratio dependency	1: (20-30)
Temperature dependency	130-135°C
HT color absorption	88.10%
Levelling	81.00%
Dischargeability	○
Build up: HT dyeing	A
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties

Xenon light fastness (blue scale), ISO 105-B02		
1/25 SD	CH	5
1/1 SD	CH	5-6
2/1 SD	CH	6
Sublimation fastness, ISO 105-P01		
°C	150	5
	180	4-5
	200	3-4
Fastness to chlorinated water, ISO 105-E03		
	20 ppm	50 ppm
	3-4	3

Rubbing fastness, ISO 105-X12		
	dry	wet
	4-5	4-5

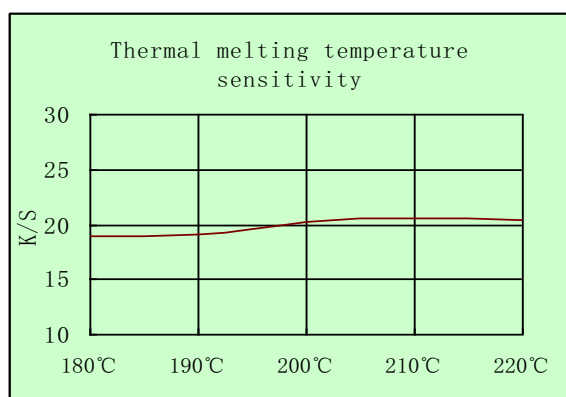
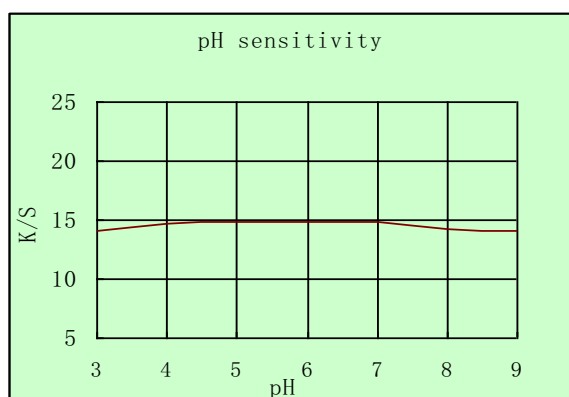
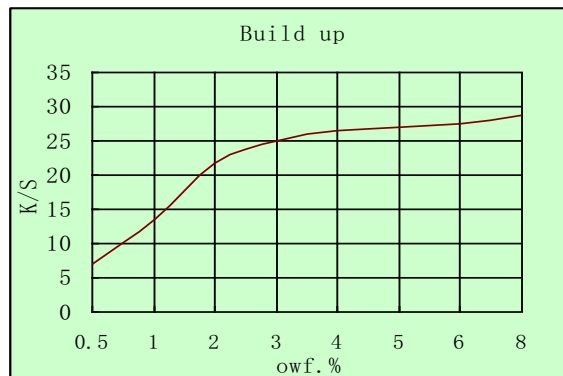
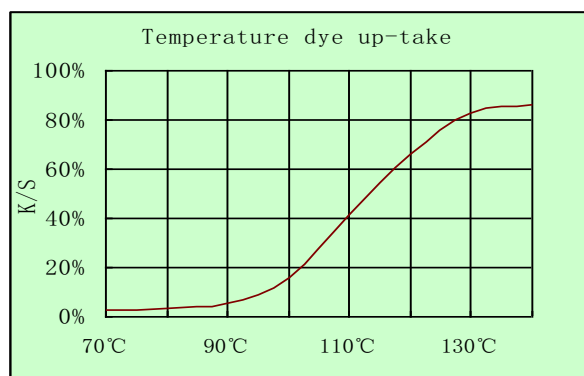
Hot pressing fastness, ISO 105-X11		
200°C	instant	4 hours
	4	4

Wet fastness properties

Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4-5	4	4-5	4	4-5	4-5	4
AATCC 11A, 49°C		4-5	4	4-5	4	4-5	4-5	4
Perspiration								
ISO 105 E04, Alkaline		4	3-4	4	3-4	3-4+	4-5	4
ISO 105 E04, Acid		4+	4	4-5	4	3-4	4-5	4

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance

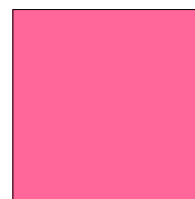


Jihua STARCron® General series

Starcron Red 2BLS

Identification

C.I. Disperse	Red 145
Energy Level	High
Chemical Class	Mono azo

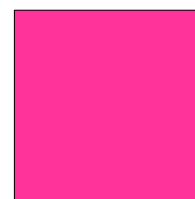


OWF 0.70 %

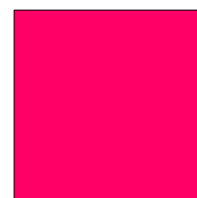
Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✗	✓	✗	✓
Medium	✓	✓	✗	✓
Dark	✓	✓	✗	✓

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable



OWF 1.1 %



OWF 2.2 %

Characteristic

- High temperature dyes
- Excellent light fastness, washing fastness and sublimation fastness
- Excellent compatibility and reproducibility
- Main variety of exhaust dyeing, thermal melting and printing

Properties

pH dependency	4-6
Liquid ratio dependency	1: (20-30)
Temperature dependency	130-135°C
HT color absorption	95.95%
Levelling	92.88%
Dischargeability	○
Build up: HT dyeing	A
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties**Xenon light fastness (blue scale), ISO 105-B02**

1/25 SD	CH	4-5
1/1 SD	CH	5
2/1 SD	CH	5-6

Sublimation fastness, ISO 105-P01

°C	150	5
	180	4-5
	200	4

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4-5	4

Rubbing fastness, ISO 105-X12

	dry	wet
	5	4-5

Hot pressing fastness, ISO 105-X11

200°C	instant	4 hours
	4	4

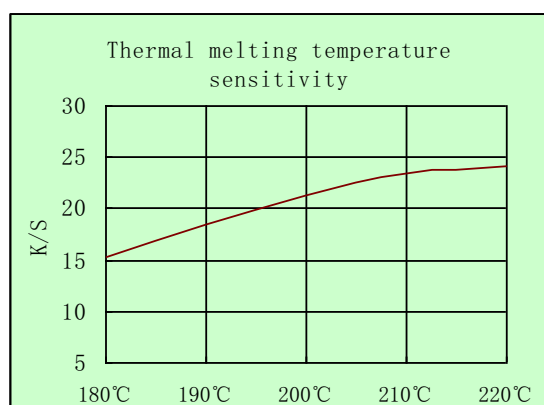
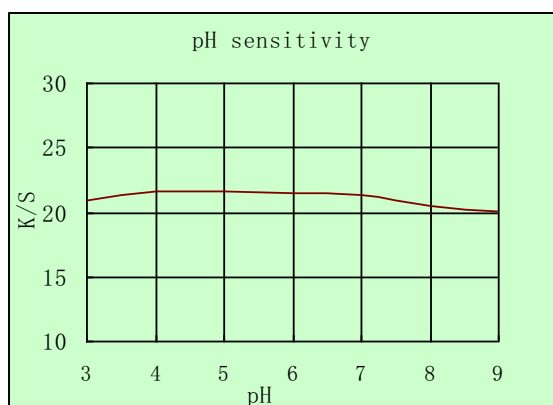
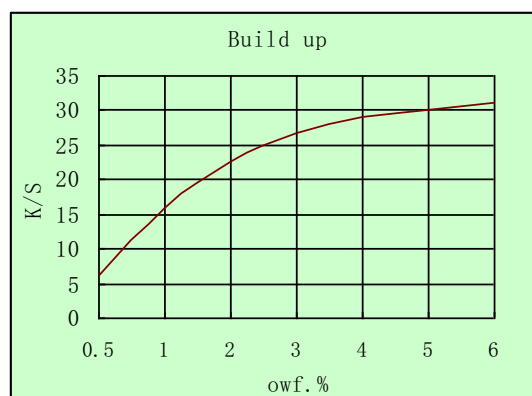
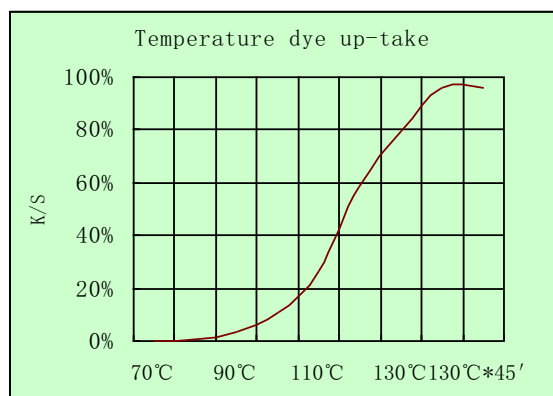
Wet fastness properties

<i>Washing</i>	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4	4	4-5	4	4-5	5	4
AATCC 11A, 49°C		4	4	4-5	4	4-5	5	4

Perspiration

ISO 105 E04, Alkaline		4-5	4	4-5	4	4+	4-5	4+
ISO 105 E04, Acid		4	4-5	4-5	4-5	4	4-5	4+

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

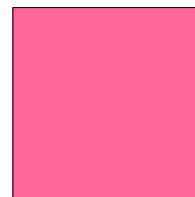
Dye application performance

Jihua STARCRO[®] General series

Starcron Red B-EL

Identification

C.I. Disperse	Red 92
Energy Level	High
Chemical Class	Mono azo

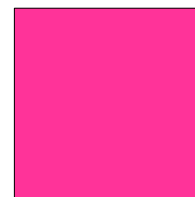


OWF 0.70 %

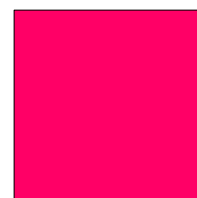
Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✗	✓	✗	✓
Medium	✓	✓	✗	✓
Dark	✓	✓	✗	✓

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable



OWF 1.1 %



OWF 2.2 %

Characteristic

- High temperature dyes
- Excellent light fastness, washing fastness and sublimation fastness
- Can be used for dyeing of polyester and its blended fabric
- Main variety of thermal melting pad dyeing and printing

Properties

pH dependency	3-9
Liquid ratio dependency	1: (20-30)
Temperature dependency	130-135°C
HT color absorption	85.40%
Levelling	95.80%
Dischargeability	✗
Build up: HT dyeing	A
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties**Xenon light fastness (blue scale), ISO 105-B02**

1/25 SD	CH	6
1/1 SD	CH	6
2/1 SD	CH	6-7

Sublimation fastness, ISO 105-P01

°C	150	5
	180	4-5
	200	4

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4-5	4+

Rubbing fastness, ISO 105-X12

	dry	wet
	4-5	4-5

Hot pressing fastness, ISO 105-X11

200°C	instant	4 hours
	4	4

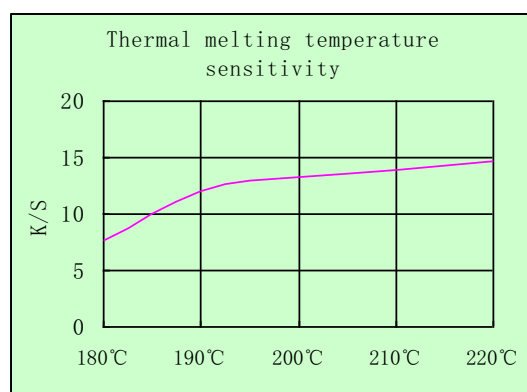
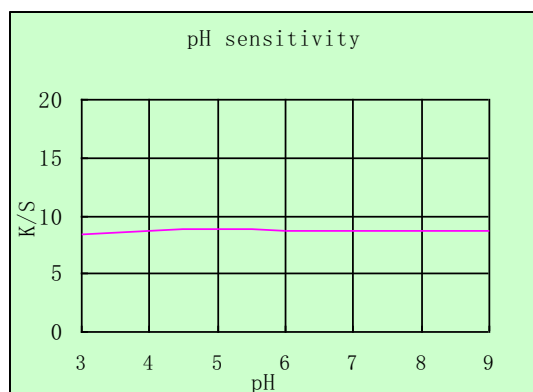
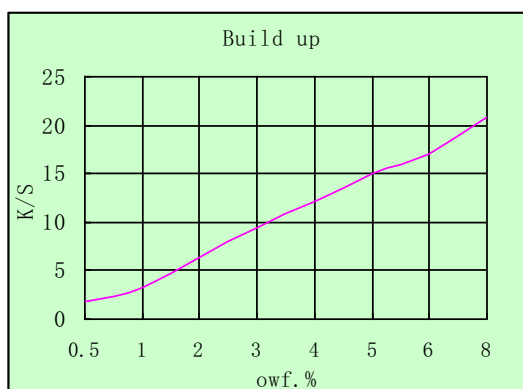
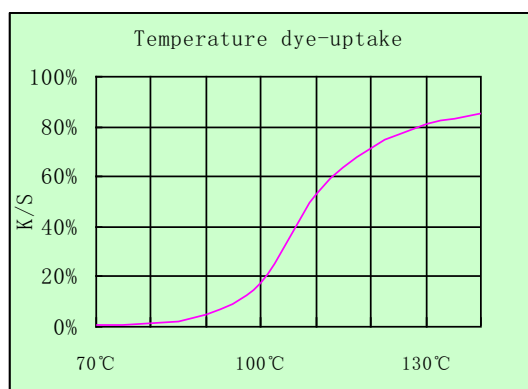
Wet fastness properties

<i>Washing</i>	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4-5	4-5	5	4	4-5	5	4
AATCC 11A, 49°C		4-5	4-5	5	4	4-5	5	4

Perspiration

ISO 105 E04, Alkaline		4	4+	4-5	4+	4-5	4-5	4-5
ISO 105 E04, Acid		4-5	4-5	4-5	4-5	4	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

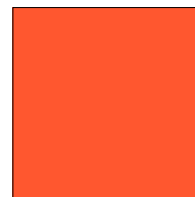
Dye application performance

Jihua STARCron® General series

Starcron Red S2BLS

Identification

C.I. Disperse	Red 74
Energy Level	High
Chemical Class	Mono azo

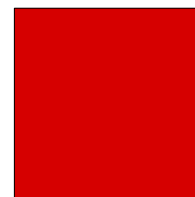


OWF 0.70 %

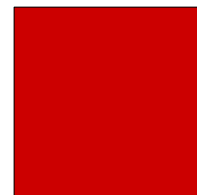
Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✗	✓	✗	✓
Medium	✓	✓	✗	✓
Dark	✓	✓	✗	✓

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable



OWF 1.1 %



OWF 2.2 %

Characteristic

- High temperature dyes
- Excellent washing fastness
- Can be used for direct printing of polyester/cotton blended fabric
- Main variety of exhaust dyeing, thermal melting and printing

Properties

pH dependency	4-6
Liquid ratio dependency	1: (20-30)
Temperature dependency	130-135°C
HT color absorption	88.44%
Levelling	86.86%
Dischargeability	○
Build up: HT dyeing	A
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties

Xenon light fastness (blue scale), ISO 105-B02

1/25 SD	CH	5
1/1 SD	CH	5
2/1 SD	CH	5

Sublimation fastness, ISO 105-P01

°C	150	5
	180	4
	200	3

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	3-4	3

Rubbing fastness, ISO 105-X12

	dry	wet
	4-5	4-5

Hot pressing fastness, ISO 105-X11

200°C	instant	4 hours
	4	4

Wet fastness properties

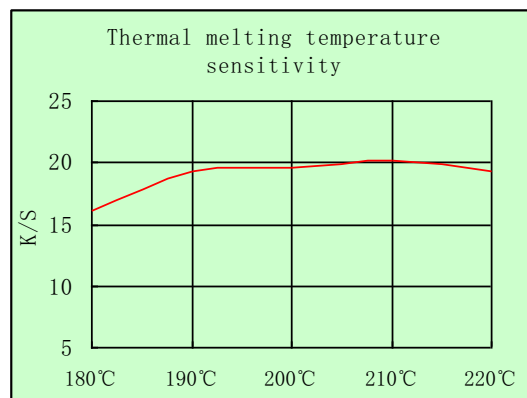
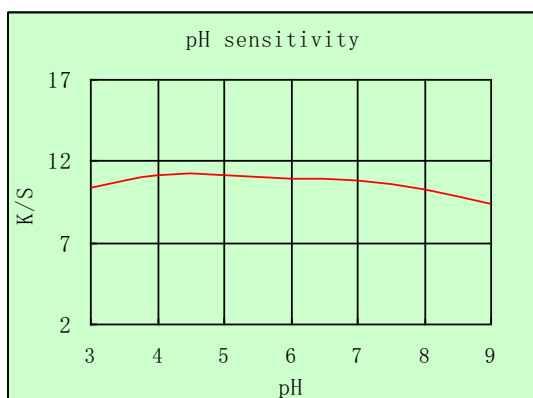
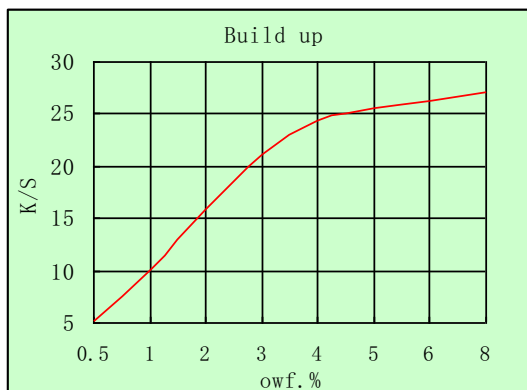
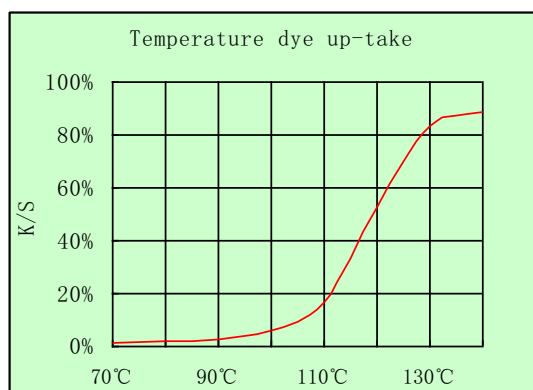
Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4-5	4	4-5	4-5	4-5	4	4-5
AATCC 11A, 49°C		4-5	4	4-5	4-5	4-5	4	4-5

Perspiration

ISO 105 E04, Alkaline		4	3-4	4-5	3-4	4	4-5	3-4
ISO 105 E04, Acid		4+	3-4	4-5	3-4+	3-4	4+	3-4

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance

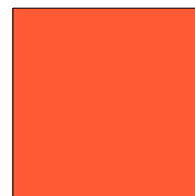


Jihua STARCron® General series

Starcron Red G (200%)

Identification

C.I. Disperse	Red 277
Energy Level	Medium
Chemical Class	Benzopyran

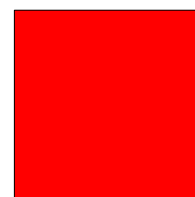


OWF 0.70 %

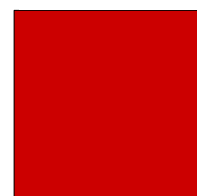
Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✓	✓	✗	✓
Medium	✓	✓	✗	✓
Dark	✓	✗	✗	✗

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable



OWF 1.1 %



OWF 2.2 %

Characteristic

- Medium temperature dyes
- Excellent washing fastness
- Can be used for dyeing of polyester and its blended fabric
- Fluorescence orange-red, sensitive the water quality and pH

Properties

pH dependency	5-7
Liquid ratio dependency	1: (20-30)
Temperature dependency	130-135°C
HT color absorption	72.87%
Levelling	74.80%
Dischargeability	✗
Build up: HT dyeing	B
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties**Xenon light fastness (blue scale), ISO 105-B02**

1/25 SD	CH	3
1/1 SD	CH	3-4
2/1 SD	CH	4

Sublimation fastness, ISO 105-P01

°C	150	5
	180	5
	200	4

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4-5	4

Rubbing fastness, ISO 105-X12

	dry	wet
	5	5

Hot pressing fastness, ISO 105-X11

200°C	instant	4 hours
	4-5	4-5

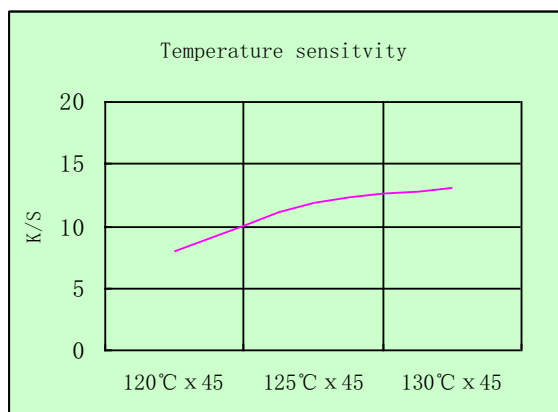
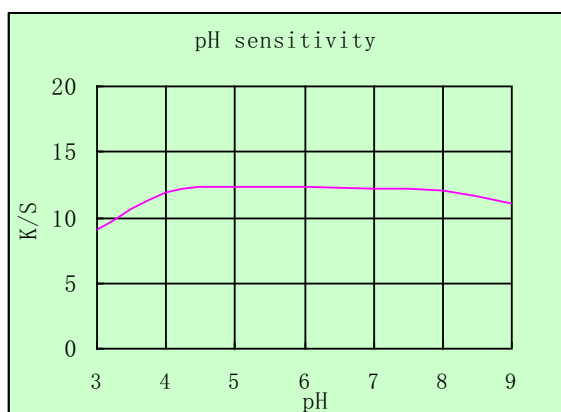
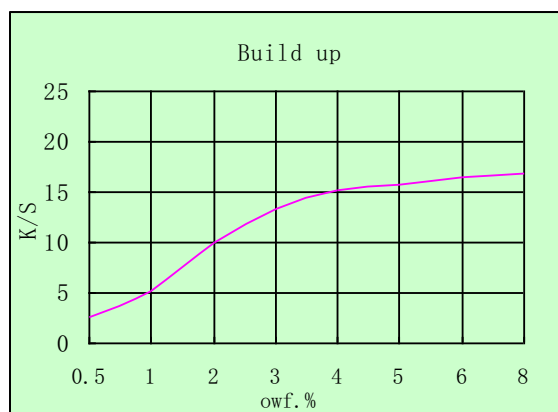
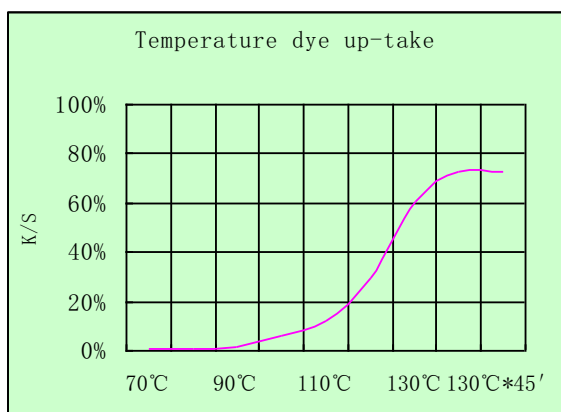
Wet fastness properties

Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4	4-5	4-5	3-4	4-5	4-5	4-5
AATCC 11A, 49°C		4	4-5	4-5	3-4	4-5	4-5	4-5

Perspiration

ISO 105 E04, Alkaline		4-5	4-5	4-5	4-5	4-5	4-5	4-5
ISO 105 E04, Acid		4-5	4-5	4-5	4-5	4-5	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

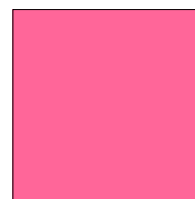
Dye application performance

Jihua STARCRO[®] General series

Starcron Red SE-3B (150%)

Identification

C.I. Disperse	Red 343
Energy Level	Medium
Chemical Class	Mono azo

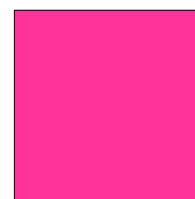


OWF 0.70 %

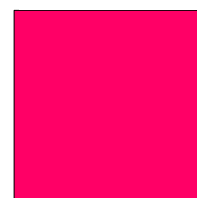
Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✓	✓	✗	✓
Medium	✓	✓	✗	✓
Dark	✓	✗	✗	✗

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable



OWF 1.1 %



OWF 2.2 %

Characteristic

- Medium temperature dyes
- Excellent dyeing fastness and brighter shade
- Good deep dyeing quality, suitable for dyeing of super fine fiber
- As main variety of red medium temperature yes, widely applied

Properties

pH dependency	4-8
Liquid ratio dependency	1: (20-30)
Temperature dependency	130-135°C
HT color absorption	87.80%
Levelling	76.14%
Dischargeability	✗
Build up: HT dyeing	B
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties**Xenon light fastness (blue scale), ISO 105-B02**

1/25 SD	CH	4-5
1/1 SD	CH	5
2/1 SD	CH	5-6

Sublimation fastness, ISO 105-P01

°C	150	5
	180	4
	200	2-3

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4+	4-

Rubbing fastness, ISO 105-X12

	dry	wet
	4-5	4-5

Hot pressing fastness, ISO 105-X11

	instant	4 hours
	4	4

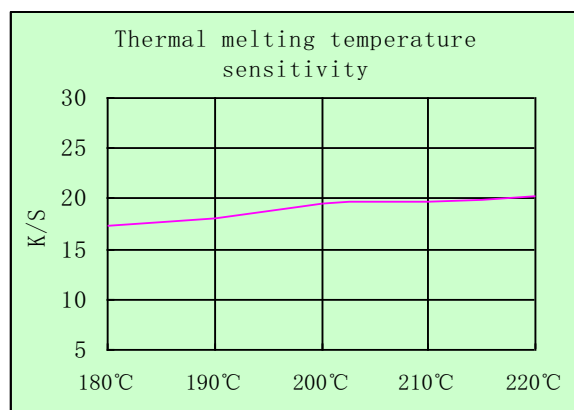
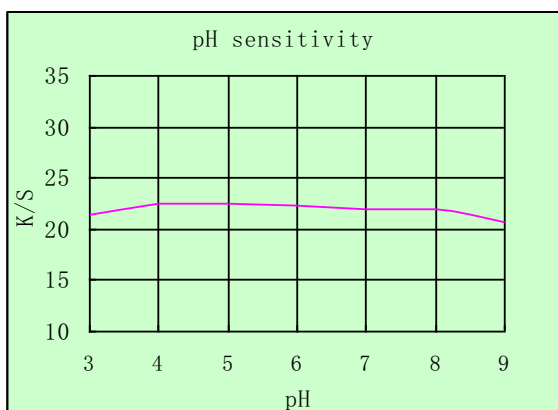
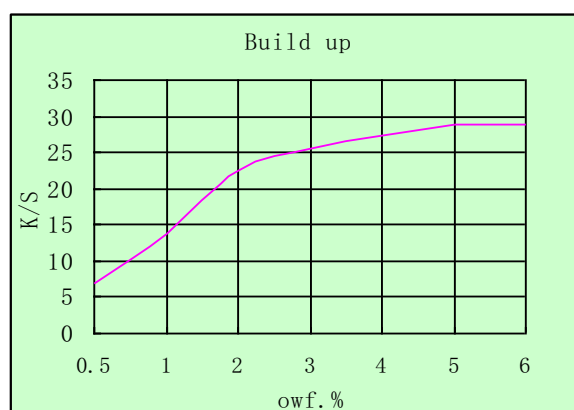
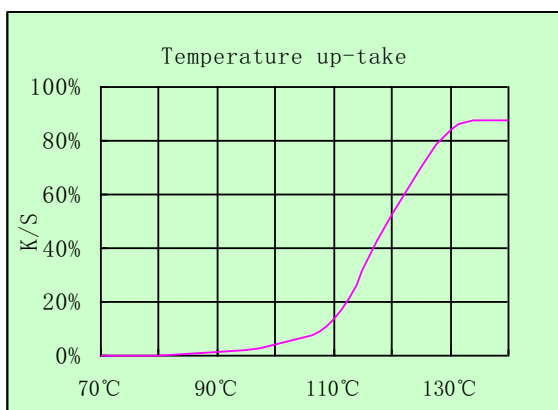
Wet fastness properties

<i>Washing</i>	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4-5	4	4-5	3-4	4-5	4-5	4
AATCC 11A, 49°C		4-5	4	4-5	3-4	4-5	4-5	4

Perspiration

ISO 105 E04, Alkaline		4	3	4	3	3-4	4-5	4-5
ISO 105 E04, Acid		3	4	4-5	3-4	3-4	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

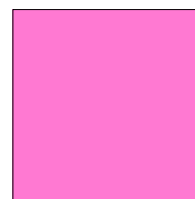
Dye application performance

Jihua STARCRO[®] General series

Starcron Red BG (200%)

Identification

C.I. Disperse	Red 362
Energy Level	Medium
Chemical Class	Benzopyran

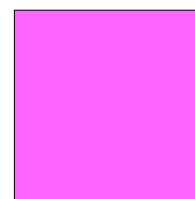


OWF 0.70 %

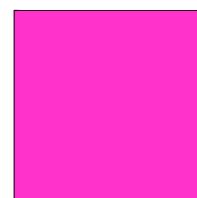
Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✓	✓	✗	✓
Medium	✓	✓	✗	✓
Dark	✓	✗	✗	✗

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable



OWF 1.1 %



OWF 2.2 %

Characteristic

- Medium temperature dyes
- Excellent dyeing fastness
- Excellent compatibility and reproducibility
- Bluish red with fluorescence, sensitive to water quality and pH

Properties

pH dependency	5-6
Liquid ratio dependency	1: (20-30)
Temperature dependency	130-135°C
HT color absorption	95.34%
Levelling	76.05%
Dischargeability	✗
Build up: HT dyeing	B
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties

Xenon light fastness (blue scale), ISO 105-B02		
1/25 SD	CH	3-4
1/1 SD	CH	4
2/1 SD	CH	4-5
Sublimation fastness, ISO 105-P01		
°C	150	5
	180	5
	200	4
Fastness to chlorinated water, ISO 105-E03		
	20 ppm	50 ppm
	4-5	4

Rubbing fastness, ISO 105-X12		
	dry	wet
	4-5	4

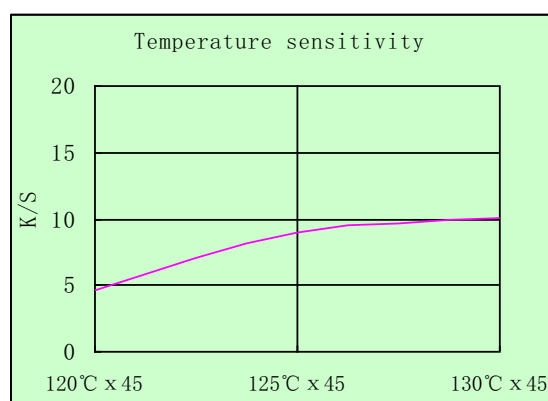
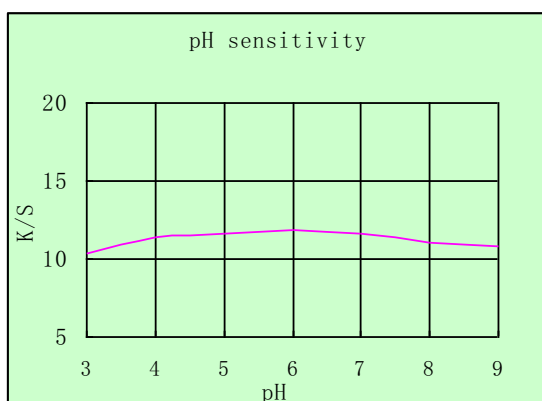
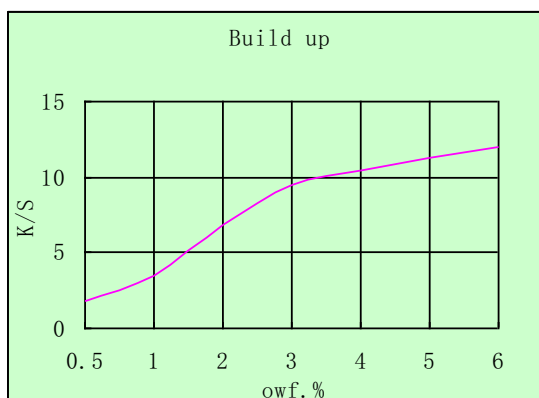
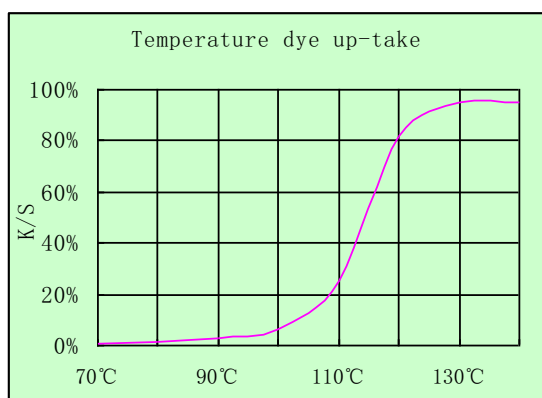
Hot pressing fastness, ISO 105-X11		
200°C	instant	4 hours
	4	4

Wet fastness properties

Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4-5	4	4-5	3-4	4-5	4-5	4
AATCC 11A, 49°C		4-5	4	4-5	3-4	4-5	4-5	4
Perspiration								
ISO 105 E04, Alkaline		4-	4-5	4-5	4-5	4-5	4-5	4-5
ISO 105 E04, Acid		4+	4-5	4-5	4-5	4+	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance

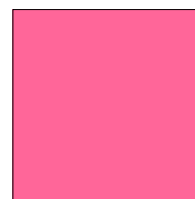


Jihua STARCron® General series

StarcronRubine RB-LS (200%)

Identification

C.I. Disperse	Violet 33
Energy Level	High
Chemical Class	Mono azo

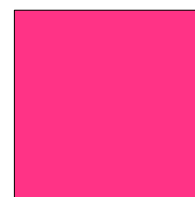


OWF 0.70 %

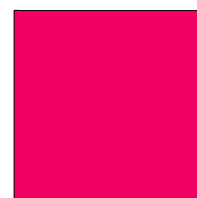
Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✓	✓	✗	✓
Medium	✓	✓	✗	✓
Dark	✓	✓	✗	✗

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable



OWF 1.1 %



OWF 2.2 %

Characteristic

- High temperature dyes
- Excellent washing fastness and coverage
- Excellent compatibility and reproducibility

Properties

pH dependency	4-6
Liquid ratio dependency	1: (20-30)
Temperature dependency	130-135°C
HT color absorption	97.94%
Levelling	97.37%
Dischargeability	○
Build up: HT dyeing	B
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties**Xenon light fastness (blue scale), ISO 105-B02**

1/25 SD	CH	6
1/1 SD	CH	6
2/1 SD	CH	6-7

Sublimation fastness, ISO 105-P01

°C	150	5
	180	4
	200	3

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	3-4	3

Rubbing fastness, ISO 105-X12

	dry	wet
	4-5	4-5

Hot pressing fastness, ISO 105-X11

200°C	instant	4 hours
	4	4

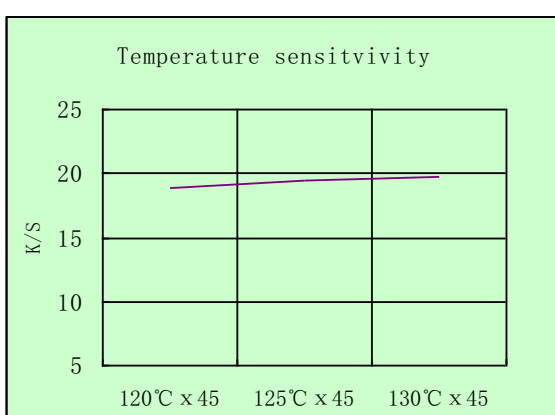
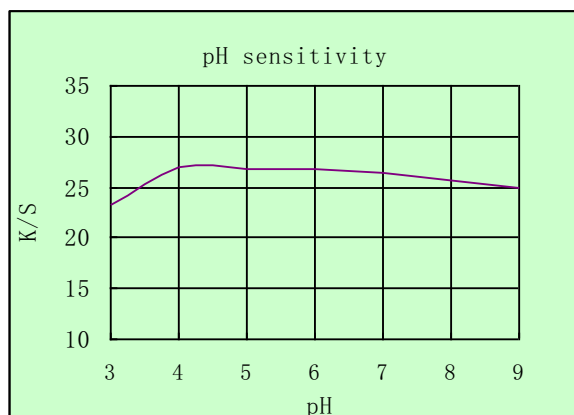
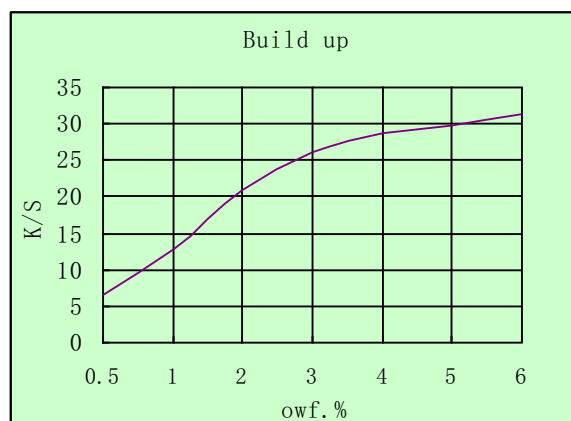
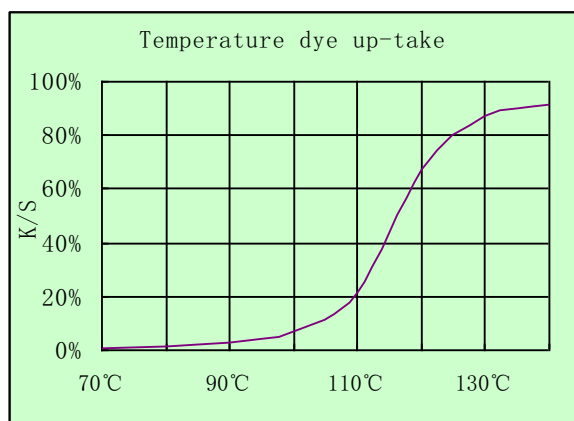
Wet fastness properties

Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4-5	3-4	4-5	4	4-5	4	4
AATCC 11A, 49°C		4-5	3-4	4-5	4	4-5	4	4

Perspiration

ISO 105 E04, Alkaline		4-5	4-5	4-5	4+	4	4-5	4-5
ISO 105 E04, Acid		4	4-5	4-5	4-5	4-5	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

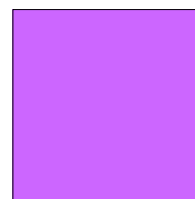
Dye application performance

Jihua STARCron® General series

Starcron Violet RL (200%)

Identification

C.I. Disperse	Violet 63
Energy Level	High
Chemical Class	Mono azo

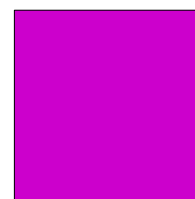


OWF 0.70 %

Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✗	✓	✗	✓
Medium	✓	✓	✗	✓
Dark	✓	✓	✗	✓

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable



OWF 1.1 %



OWF 2.2 %

Characteristic

- High temperature dyes
- Excellent dyeing fastness, especially sublimation fastness
- Excellent color matching
- Main variety of exhaust dyeing, thermal melting pad dyeing and printing

Properties

pH dependency	4-7
Liquid ratio dependency	1: (20-30)
Temperature dependency	130-135°C
HT color absorption	98.17%
Levelling	83.27%
Dischargeability	○
Build up: HT dyeing	A
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties

Xenon light fastness (blue scale), ISO 105-B02

1/25 SD	CH	4
1/1 SD	CH	4-5
2/1 SD	CH	5

Sublimation fastness, ISO 105-P01

°C	150	5
	180	3-4
	200	2-3

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	3-4	3

Rubbing fastness, ISO 105-X12

	dry	wet
	5	5

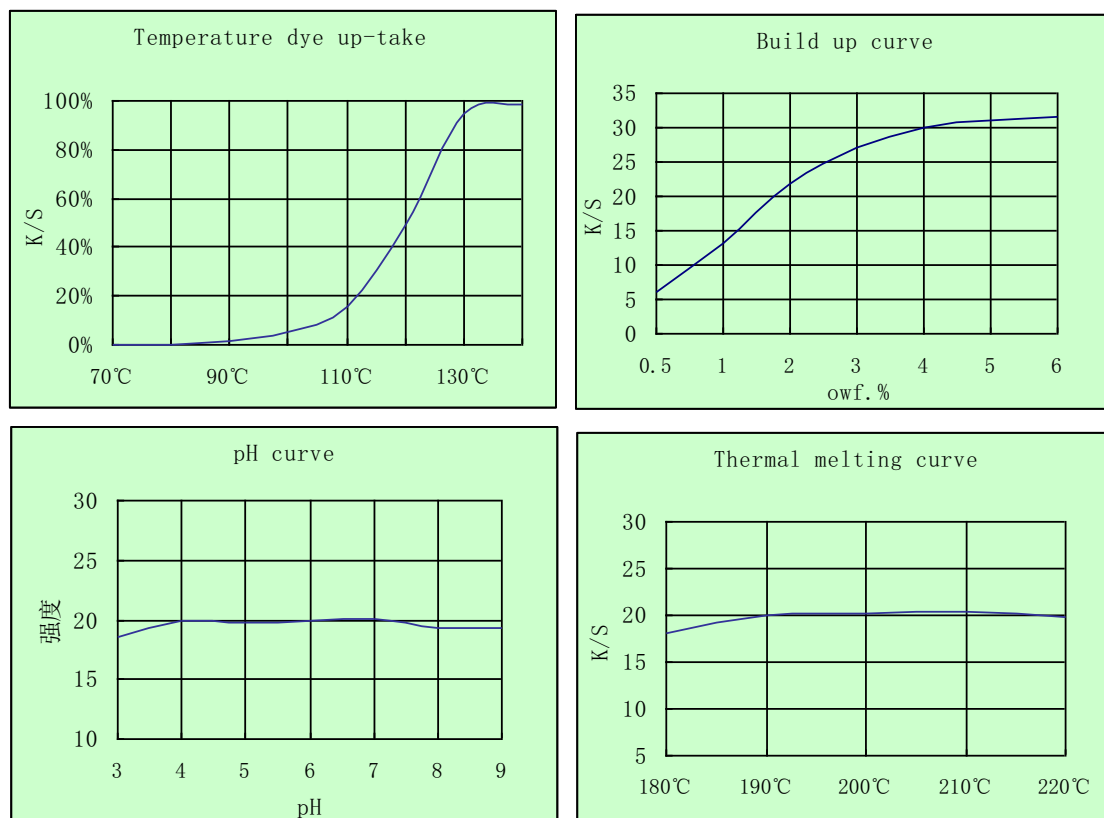
Hot pressing fastness, ISO 105-X11

200°C	instant	4 hours
	4	4

Wet fastness properties

Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4-5	4	4-5	4	4-5	4	3
AATCC 11A, 49°C		4-5	4	4-5	4	4-5	4	3
Perspiration								
ISO 105 E04, Alkaline		4	4-5	4-5	4+	4	4-5	4-5
ISO 105 E04, Acid		4	4-5	4-5	4-5	4	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

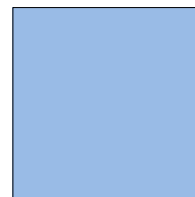
Dye application performance


Jihua STARCRO[®] General series

Starcron Blue E-4RL (150 %)

Identification

C.I. Disperse	Blue 56
Energy Level	Low
Chemical Class	Antraquinone



OWF 0.70 %

Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✓	✓	✓	✓
Medium	✓	✗	✓	✗
Dark	✗	✗	✓	✗



OWF 1.1 %



OWF 2.2 %

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable

Characteristic

- Low temperature dyes
- Excellent light fastness and deep dyeing quality
- Effectual leveling dyeing and coverage
- Suitable for transfer printing
- Main varieties of exhaust dyeing; as one of low temperature tricolor

Properties

pH dependency	3-9
Liquid ratio dependency	1: (20-30)
Temperature dependency	130-135°C
HT color absorption	93.30%
Levelling	89.03%
Dischargeability	✗
Build up: HT dyeing	B
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties**Xenon light fastness (blue scale), ISO 105-B02**

1/25 SD	CH	5-6
1/1 SD	CH	6
2/1 SD	CH	6-7

Sublimation fastness, ISO 105-P01

°C	150	4-5
	180	3
	200	2

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4	3-4

Rubbing fastness, ISO 105-X12

	dry	wet
	4-5	4-5

Hot pressing fastness, ISO 105-X11

200°C	instant	4 hours
	4-5	4-5

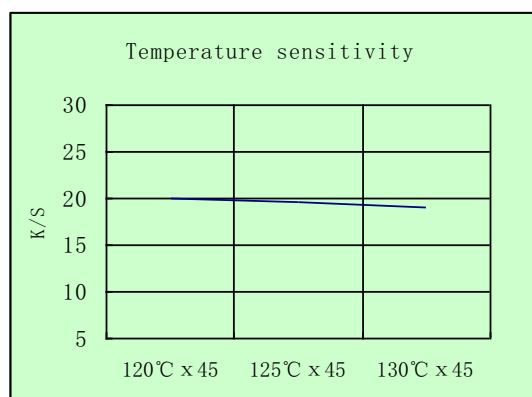
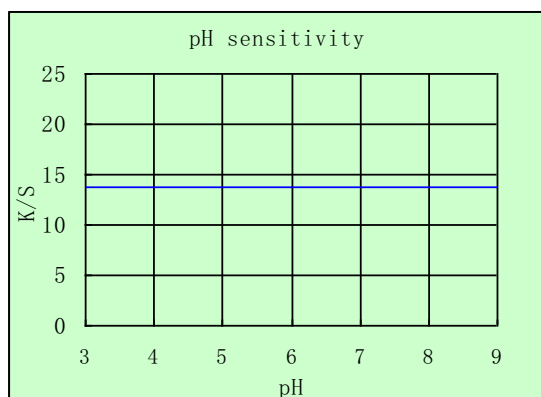
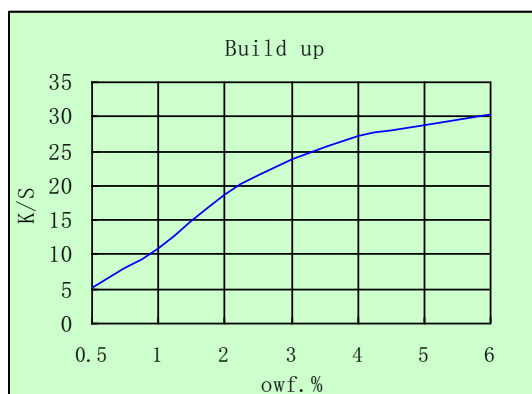
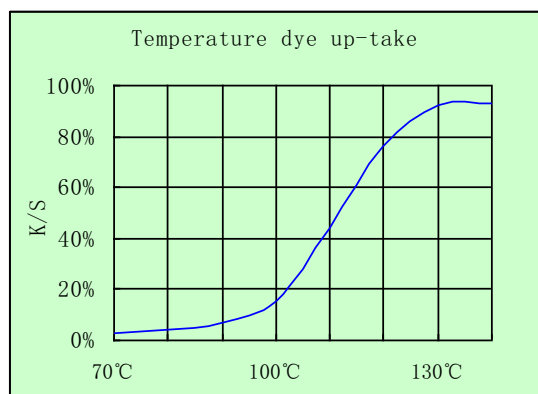
Wet fastness properties

<i>Washing</i>	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4-5	4	4	3	4-5	4-5	4
AATCC 11A, 49°C		4-5	4	4-5	3	4-5	4-5	4

Perspiration

ISO 105 E04, Alkaline		4	4-5	4-5	4+	4-5	4-5	4-5
ISO 105 E04, Acid		4	4-5	4-5	4-5	4-5	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance

Jihua STARCron® General series

Starcron Blue SGLS (200%)

Identification

C.I. Disperse	Blue 60
Energy Level	High
Chemical Class	Antraquinone

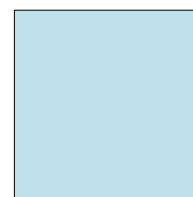


OWF 0.70 %

Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✓	✓	✗	✓
Medium	✓	✓	✗	✓
Dark	✓	✓	✗	✓

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable



OWF 1.1 %



OWF 2.2 %

Characteristic

- High temperature dyes
- Excellent light fastness, washing fastness and sublimation fastness
- Can be used in direct printing of PES/CELL bended fabric
- Main varieties of exhaust dyeing, thermal melting pad dyeing and printing
- Used with high temperature levelling agent for dyeing for light color

Properties

pH dependency	4-9
Liquid ratio dependency	1: (20-30)
Temperature dependency	130-135°C
HT color absorption	90.60%
Levelling	96.16%
Dischargeability	✗
Build up: HT dyeing	A
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties

Xenon light fastness (blue scale), ISO 105-B02

1/25 SD	CH	6-7
1/1 SD	CH	6-7
2/1 SD	CH	7

Sublimation fastness, ISO 105-P01

°C	150	5
	180	4-5
	200	3-4

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4+	4-

Rubbing fastness, ISO 105-X12

	dry	wet
	4-5	5

Hot pressing fastness, ISO 105-X11

200°C	instant	4 hours
	3-4	3-4

Wet fastness properties

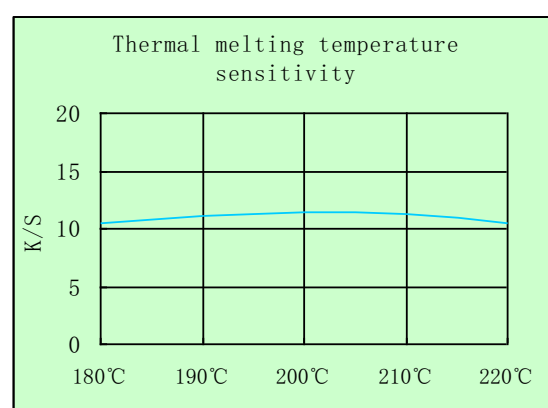
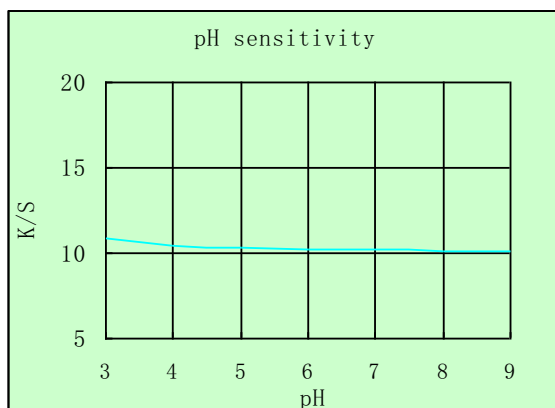
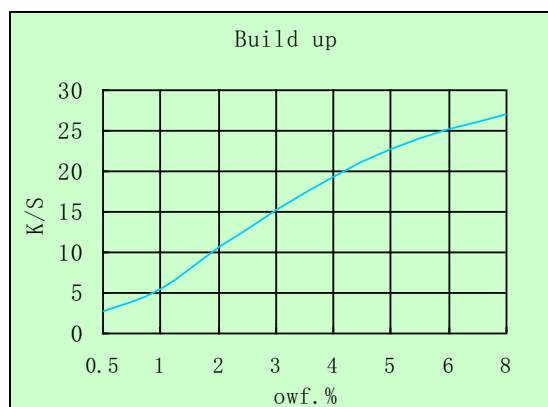
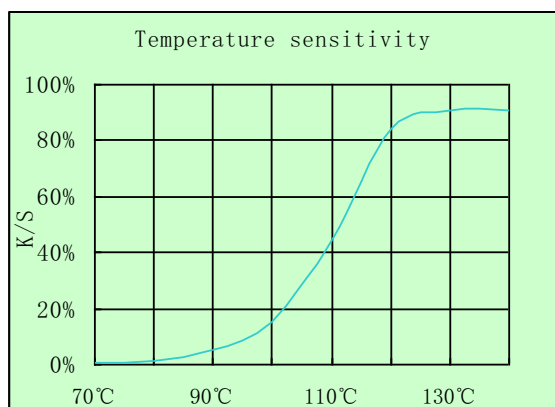
Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		5	4-5	5	4-5	5	4-5	4-5
AATCC 11A, 49°C		5	4-5	5	4-5	5	4-5	4-5

Perspiration

ISO 105 E04, Alkaline		3	4-5	4-5	4-5	4-5	4-5	4-5
ISO 105 E04, Acid		3-4	4-5	4-5	4-5	4-5	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance

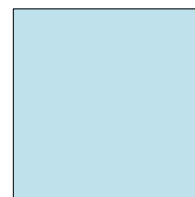


Jihua STARCron® General series

Starcron Blue KFBL

Identification

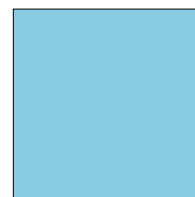
C.I. Disperse	Mix
Energy Level	Medium
Chemical Class	—



OWF 0.70 %

Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✓	✓	✓	✓
Medium	✓	✓	✓	✓
Dark	✓	✗	✗	✗



OWF 1.1 %

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable

Characteristic

- Medium temperature dyes.
- Excellent washing fastness.
- Bright and vivid color; suitable for color spectrum of bright blue series.
- Main variety of blue medium temperature, brilliant deep-dyeing performance.



OWF 2.2 %

Properties

pH dependency	4-6
Liquid ratio dependency	1: (20-30)
Temperature dependency	130-135°C
HT color absorption	57.80%
Levelling	93.65%
Dischargeability	○
Build up: HT dyeing	A
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties**Xenon light fastness (blue scale), ISO 105-B02**

1/25 SD	CH	5-6
1/1 SD	CH	6
2/1 SD	CH	6

Sublimation fastness, ISO 105-P01

°C	150	5
	180	4
	200	3-4

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4	3-4

Rubbing fastness, ISO 105-X12

	dry	wet
	4-5	4-5

Hot pressing fastness, ISO 105-X11

200°C	instant	4 hours
	3-4	3-4

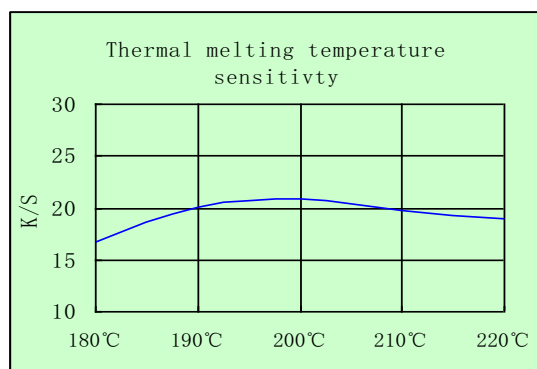
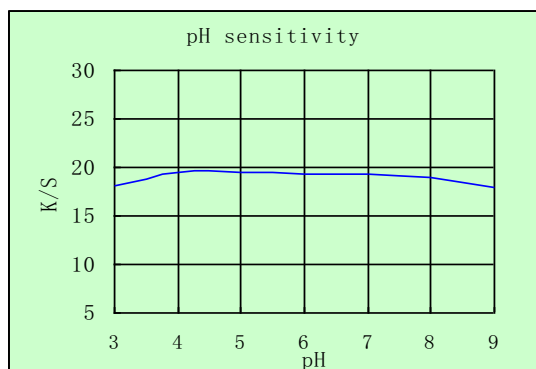
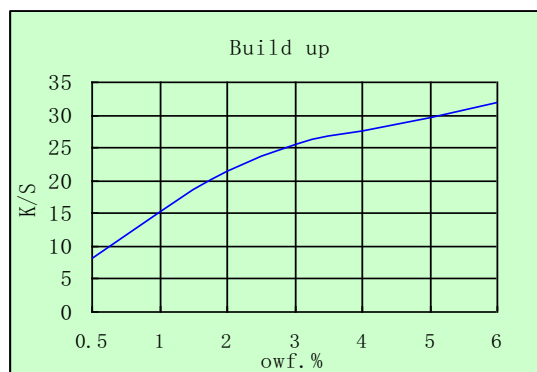
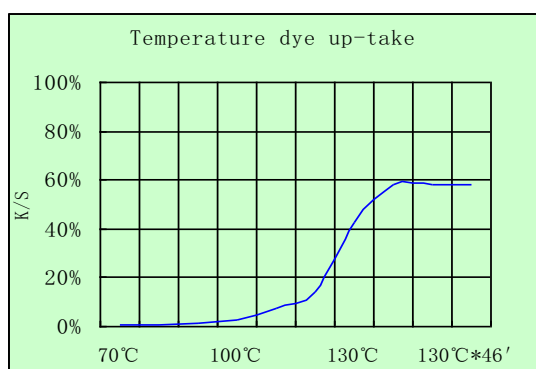
Wet fastness properties

<i>Washing</i>	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4-5	4-5	4-5	4	4-5	4-5	4
AATCC 11A, 49°C		4-5	4-5	4-5	4	4-5	4-5	4

Perspiration

ISO 105 E04, Alkaline		4	4-5	4-5	4-5	4-5-	4-5	4-5
ISO 105 E04, Acid		4	4-5	4-5	4-5	4-5	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

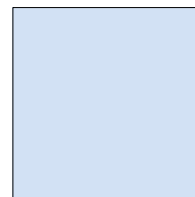
Dye application performance

Jihua STARCRO[®] General series

Starcron Blue S-3LSN (200%)

Identification

C.I. Disperse	Blue 79
Energy Level	High
Chemical Class	Mono azo

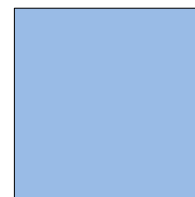


OWF 0.70 %

Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✓	✓	✗	✓
Medium	✓	✓	✗	✓
Dark	✓	✓	✗	✓

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable



OWF 1.1 %



OWF 2.2 %

Characteristic

- High temperature dyes
- Excellent washing fastness and sublimation fastness
- As one of high temperature tricolor
- Main variety of exhaust dyeing, thermal melting and printing
- Used with high temperature levelling agent for dyeing for light color

Properties

pH dependency	4-6
Liquid ratio dependency	1: (20-30)
Temperature dependency	130-135°C
HT color absorption	70.30%
Levelling	67.90%
Dischargeability	○
Build up: HT dyeing	A
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties**Xenon light fastness (blue scale), ISO 105-B02**

1/25 SD	CH	4-5
1/1 SD	CH	5
2/1 SD	CH	5-6

Sublimation fastness, ISO 105-P01

°C	150	5
	180	4-5
	200	3-4

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4	3-4

Rubbing fastness, ISO 105-X12

	dry	wet
	4-5	4-5

Hot pressing fastness, ISO 105-X11

200°C	instant	4 hours
	4	4

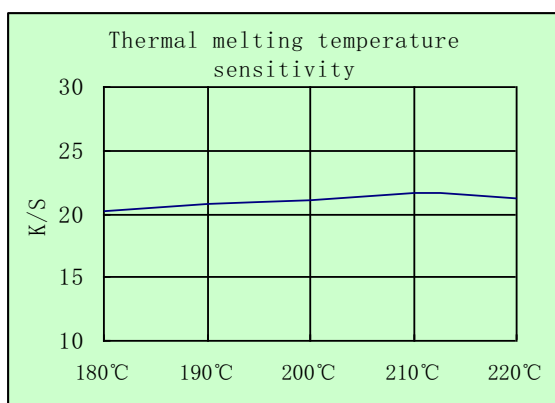
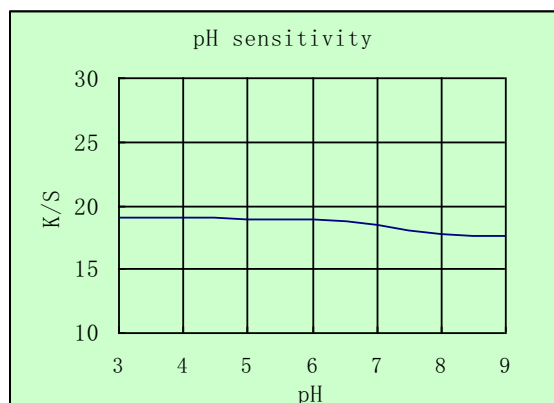
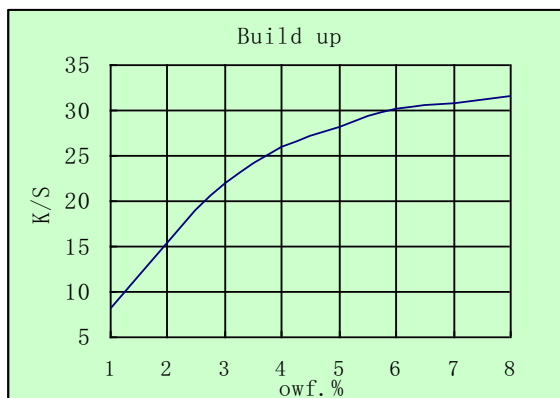
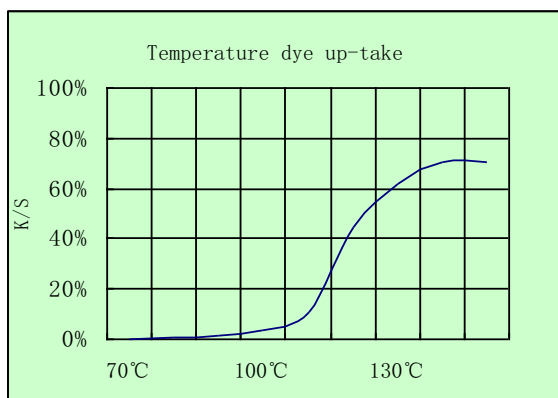
Wet fastness properties

<i>Washing</i>	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		5	4-5	5	4	4-5	4-5	4-5
AATCC 11A, 49°C		5	4-5	5	4	4-5	4-5	4-5

Perspiration

ISO 105 E04, Alkaline		3-4+	4	4-5	3-4	4	4-5	4
ISO 105 E04, Acid		3-4+	4-5	4-5	4	4	4-5	4

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

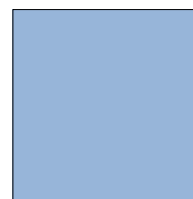
Dye application performance

Jihua STARCRO[®] General series

Starcron Blue 3RT (200%)

Identification

C.I. Disperse	Blue 148
Energy Level	medium
Chemical Class	Mono azo



OWF 0.70 %



OWF 1.1 %



OWF 2.2 %

Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✗	✓	✓	✓
Medium	✓	✓	✓	✓
Dark	✓	✗	✗	✗

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable

Characteristic

- Medium temperature dyes
- Excellent dyeing fastness
- Excellent compatibility and reproducibility
- Main varieties of exhaust dyeing, thermal melting pad dyeing and printing

Properties

pH dependency	4-6
Liquid ratio dependency	1: (20-30)
Temperature dependency	130-135°C
HT color absorption	96.33%
Levelling	86.21%
Dischargeability	○
Build up: HT dyeing	A
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties

Xenon light fastness (blue scale), ISO 105-B02		
1/25 SD	CH	4
1/1 SD	CH	4-5
2/1 SD	CH	5
Sublimation fastness, ISO 105-P01		
°C	150	5
	180	3-4
	200	3
Fastness to chlorinated water, ISO 105-E03		
	20 ppm	50 ppm
	3-4	3

Rubbing fastness, ISO 105-X12		
	dry	wet
	4	4

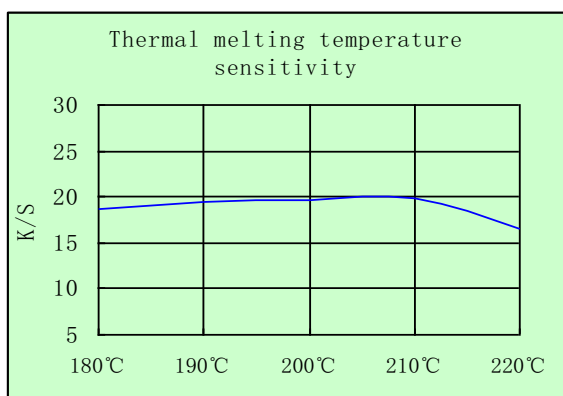
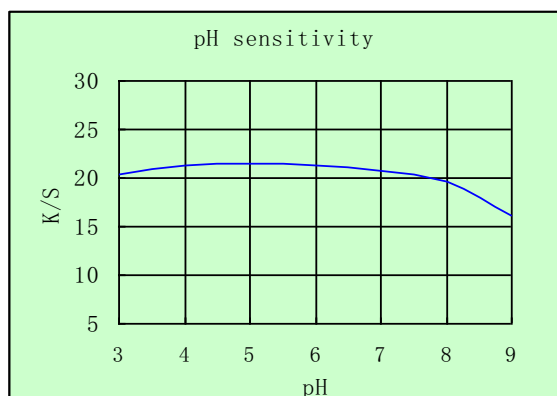
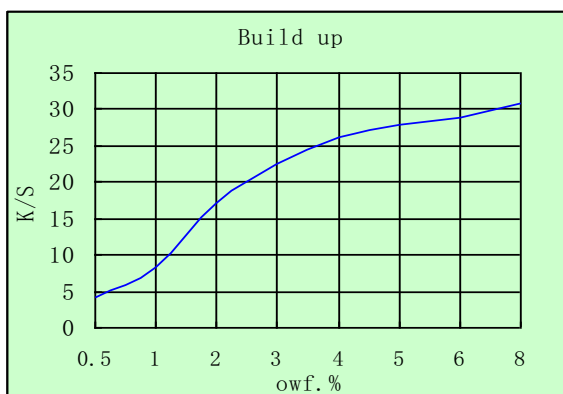
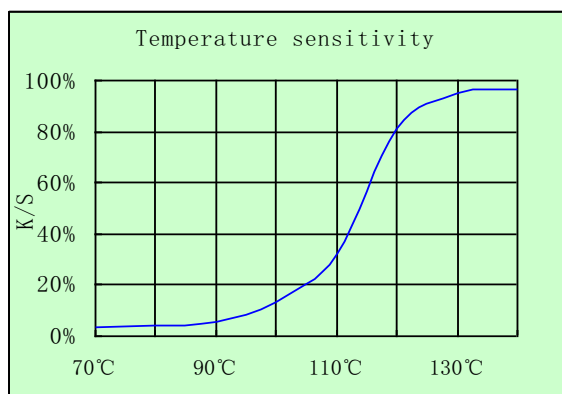
Hot pressing fastness, ISO 105-X11		
200°C	instant	4 hours
	3-4	4

Wet fastness properties

Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4	4	4-5	4	4-5	4-5	4
AATCC 11A, 49°C		4	4	4-5	4	4-5	4-5	4
Perspiration								
ISO 105 E04, Alkaline		4	3-4	3-4	3-4	4-5-	4-5+	3-4
ISO 105 E04, Acid		4	3-4	3-4	3	4-	4+	3-4

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance

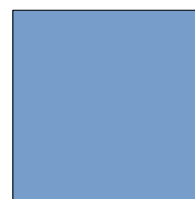


Jihua STARCron® General series

Starcron Navy Blue SE5RLS (200%)

Identification

C.I. Disperse	Blue 183
Energy Level	Medium
Chemical Class	Mono azo



OWF 0.70 %

Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✗	✓	✓	✓
Medium	✓	✓	✓	✓
Dark	✓	✗	✗	✗

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable



OWF 1.1 %



OWF 2.2 %

Characteristic

- Medium temperature dyes
- Excellent washing fastness
- Bright and vivid color; suitable for spectrum of bright blue series
- Main variety of blue medium temperature, brilliant deep dyeing performance

Properties

pH dependency	4-6
Liquid ratio dependency	1: (20-30)
Temperature dependency	130-135°C
HT color absorption	57.80%
Levelling	93.65%
Dischargeability	○
Build up: HT dyeing	A
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties

Xenon light fastness (blue scale), ISO 105-B02

1/25 SD	CH	5-6
1/1 SD	CH	6
2/1 SD	CH	6

Sublimation fastness, ISO 105-P01

°C	150	5
	180	4
	200	3-4

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4	3-4

Rubbing fastness, ISO 105-X12

	dry	wet
	4-5	4-5

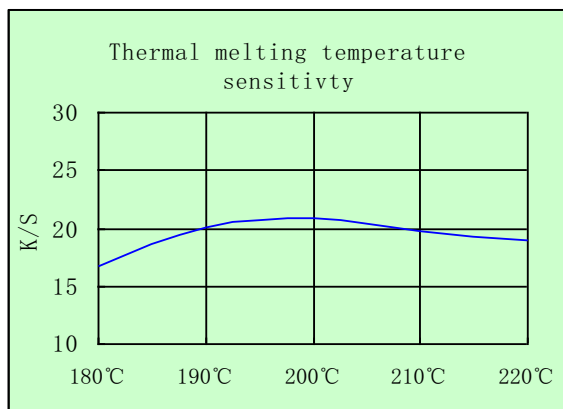
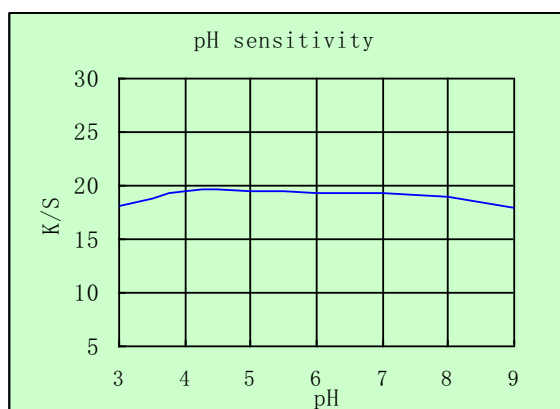
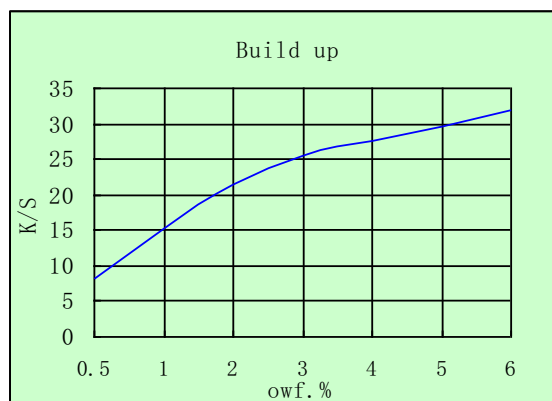
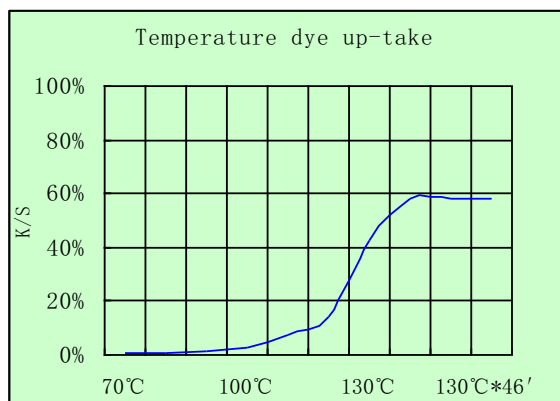
Hot pressing fastness, ISO 105-X11

200°C	instant	4 hours
	4	3-4

Wet fastness properties

Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4-5	4-5	4-5	4	4-5	4-5	4
AATCC 11A, 49°C		4-5	4-5	4-5	4	4-5	4-5	4
Perspiration								
ISO 105 E04, Alkaline		4	4-5	4-5	4-5	4-5	4-5	4
ISO 105 E04, Acid		4	4-5	4-5	4-5	4-5	4-5	4

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

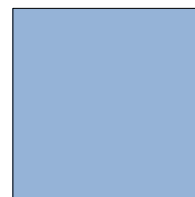
Dye application performance


Jihua STARCron® General series

Starcron Navy ECO-N (300%)

Identification

C.I. Disperse	MIX
Energy Level	Medium
Chemical Class	—



OWF 0.70 %

Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✗	✓	✗	✓
Medium	✓	✓	✗	✓
Dark	✓	✗	✗	✗

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable



OWF 1.1 %



OWF 2.2 %

Characteristic

- Medium temperature dyes
- Excellent washing fastness
- Excellent compatibility and reproducibility
- Satisfactory deep-dyeing performance; pure color

Properties

pH dependency	4-8
Liquid ratio dependency	1: (20-30)
Temperature dependency	130-135°C
HT color absorption	95.80%
Levelling	96.82%
Dischargeability	✗
Build up: HT dyeing	A
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties

Xenon light fastness (blue scale), ISO 105-B02

1/25 SD	CH	4-5
1/1 SD	CH	5-6
2/1 SD	CH	5-6

Sublimation fastness, ISO 105-P01

°C	150	5
	180	3-4
	200	2-3

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4+	4-

Rubbing fastness, ISO 105-X12

	dry	wet
	4	4-5

Hot pressing fastness, ISO 105-X11

200°C	instant	4 hours
	4	4-5

Wet fastness properties

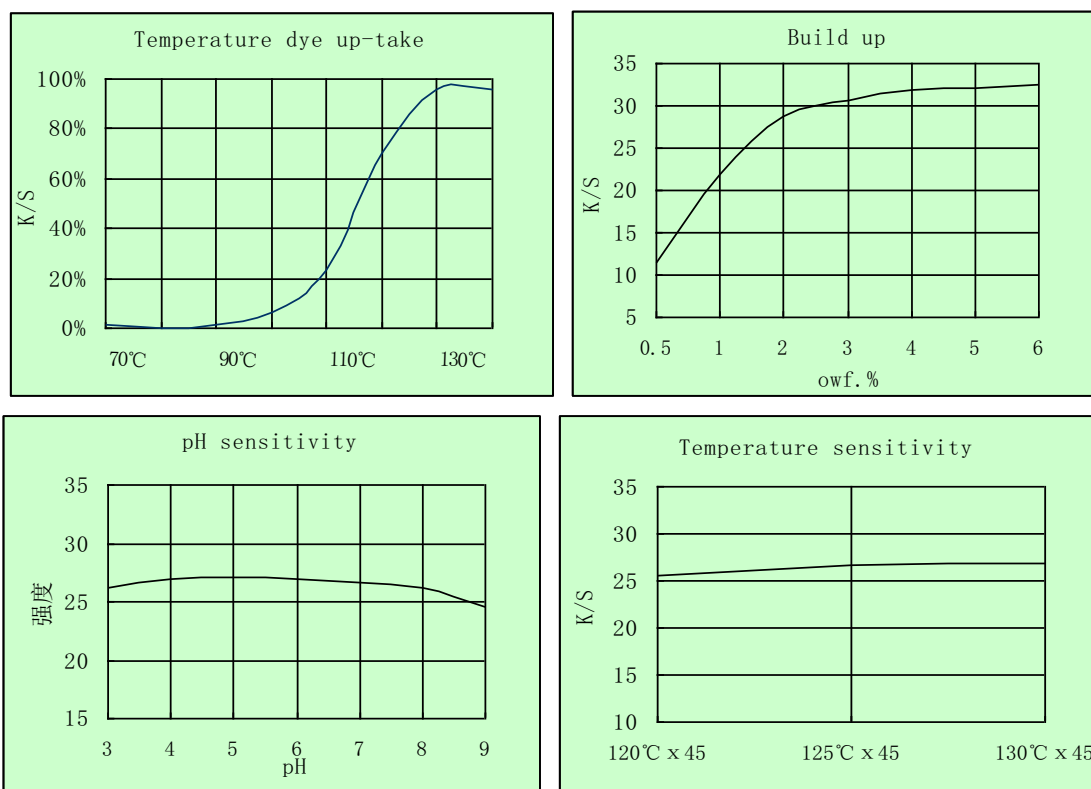
Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4	4-5	4-5	3	4-5	4-5	4
AATCC 11A, 49°C		4	4-5	4-5	3	4-5	4-5	4

Perspiration

ISO 105 E04, Alkaline		4-5	4-5	4-5	4-5	4-5	4-5	4-5
ISO 105 E04, Acid		4+	4-5	4-5	4-5	4-5	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance

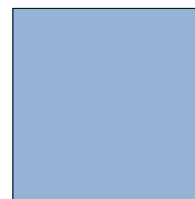


Jihua STARCron® General series

Starcron Black EX-SF (300%)

Identification

C.I. Disperse	Mix
Energy Level	Medium
Chemical Class	—



OWF 0.70 %

Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✗	✓	✗	✓
Medium	✓	✓	✗	✓
Dark	✓	✗	✗	✗

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable



OWF 1.1 %



OWF 2.2 %

Characteristic

- Medium temperature dyes
- Excellent washing fastness
- Excellent compatibility and reproducibility
- Excellent dyeing performance and color purity

Properties

pH dependency	4-8
Liquid ratio dependency	1: (20-30)
Temperature dependency	130-135°C
HT color absorption	92.93%
Levelling	71.54%
Dischargeability	✗
Build up: HT dyeing	A
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties

Xenon light fastness (blue scale), ISO 105-B02

1/25 SD	CH	4-5
1/1 SD	CH	4-5
2/1 SD	CH	4-5

Sublimation fastness, ISO 105-P01

°C	150	5
	180	3-4
	200	2-3

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4-5	4

Rubbing fastness, ISO 105-X12

	dry	wet
	4-5	4-5

Hot pressing fastness, ISO 105-X11

200°C	instant	4 hours
	4-5	4-5

Wet fastness properties

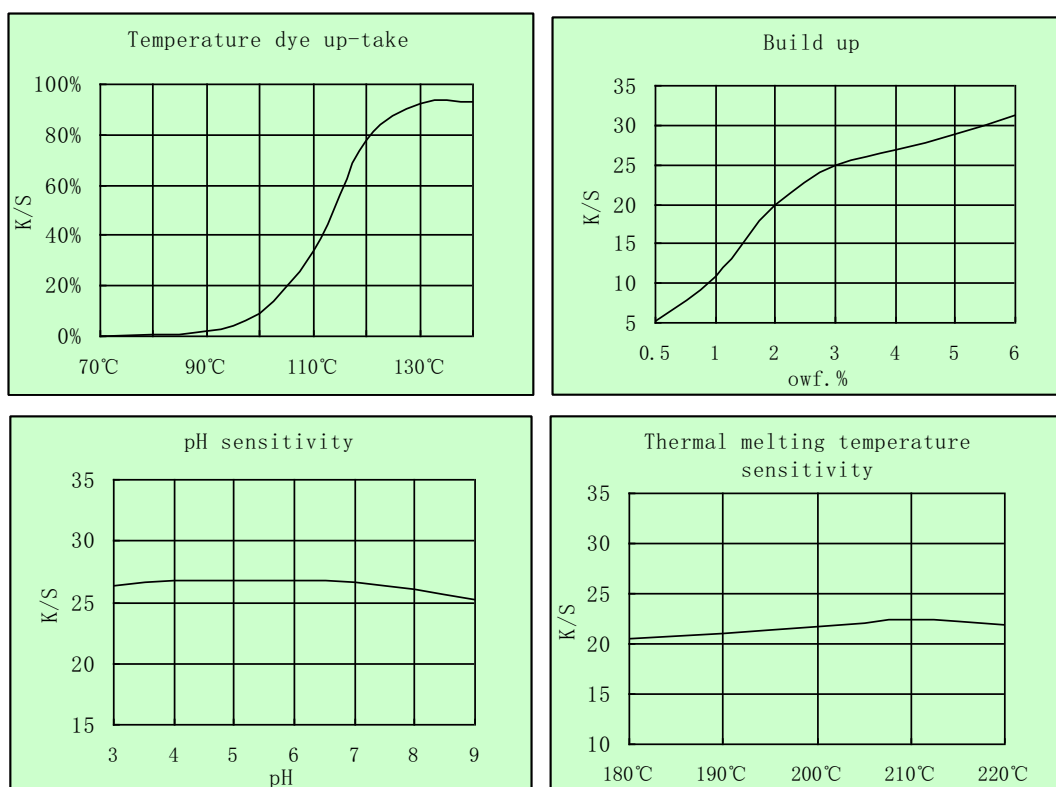
Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4-5	4-5	4-5	3	4	4-5	4-5
AATCC 11A, 49°C		4-5	4-5	4-5	3	4	4-5	4-5

Perspiration

ISO 105 E04, Alkaline		4-5	4-5	4-5	4-5	4	4-5	4
ISO 105 E04, Acid		4-5	4-5	4-5	4-5	4-5	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance



Jihua STARCRO[®] General series

Starcron Black ECO-R

Identification

C.I. Disperse	ECO Mix
Energy Level	Medium
Chemical Class	—



OWF 0.70 %

Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✗	✗	✓	✗
Medium	✓	✗	✓	✗
Dark	✓	✗	✗	✗

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable



OWF 1.1 %



OWF 2.2 %

Characteristic

- Medium temperature dyes
- Excellent washing fastness
- Excellent compatibility and reproducibility
- Excellent dyeing performance and color purity

Properties

pH dependency	4-8
Liquid ratio dependency	1: (20-30)
Temperature dependency	130-135°C
HT color absorption	90.85%
Levelling	70.25%
Dischargeability	✗
Build up: HT dyeing	A
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties

Xenon light fastness (blue scale), ISO 105-B02

1/25 SD	CH	4-5
1/1 SD	CH	4-5
2/1 SD	CH	4-5

Sublimation fastness, ISO 105-P01

°C	150	5
	180	4
	200	3

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4+	4

Rubbing fastness, ISO 105-X12

	dry	wet
	4-5	4-5

Hot pressing fastness, ISO 105-X11

200°C	instant	4 hours
	4-5	4-5

Wet fastness properties

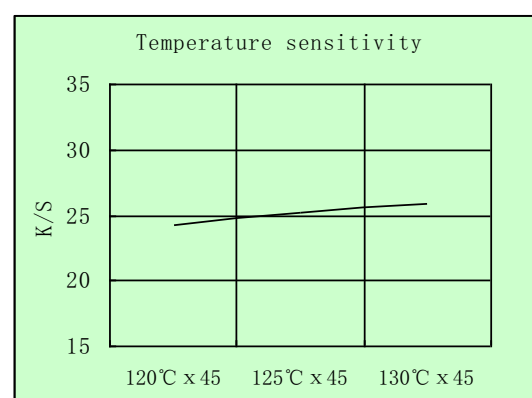
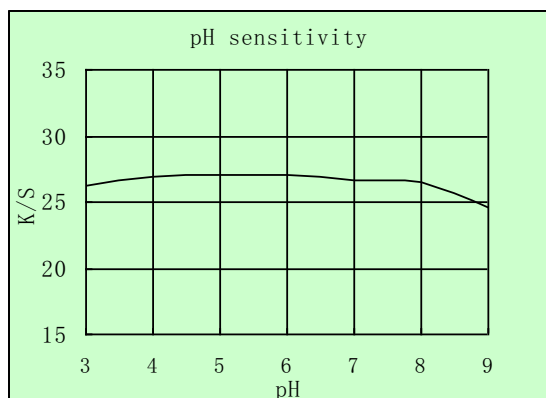
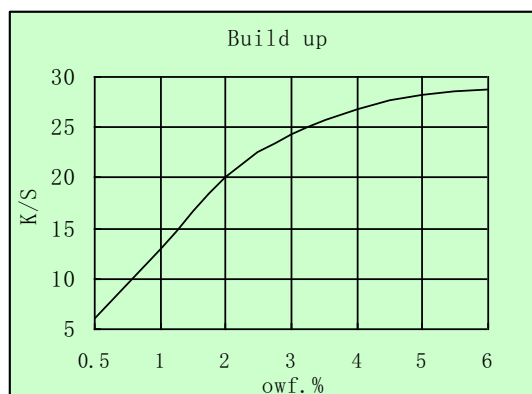
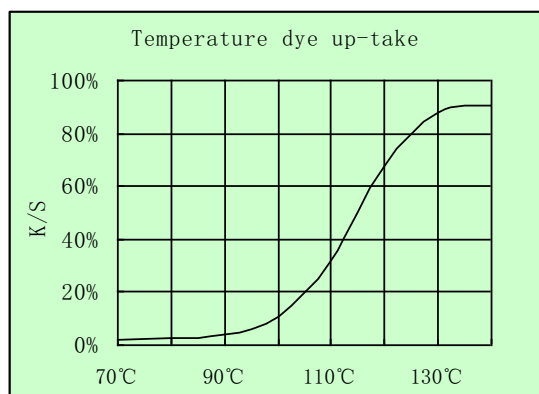
Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4-5	4-5	4-5	3	4	4-5	4
AATCC 11A, 49°C		4-5	4-5	4-5	3	4	4-5	4

Perspiration

ISO 105 E04, Alkaline		4-5	4-5	4-5	3	4	4-5	4
ISO 105 E04, Acid		4-5	4-5	4-5	3	4	4-5	4

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance



Jihua STARCRO[®] General series

Starcron Black S4BL (200%)

Identification

C.I. Disperse	Mix
Energy Level	High
Chemical Class	—



OWF 0.70 %

Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✗	✗	✗	✓
Medium	✓	✓	✗	✓
Dark	✓	✓	✗	✓

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable



OWF 1.1 %



OWF 2.2 %

Characteristic

- High temperature dyes
- Excellent sublimation fastness
- Excellent compatibility and reproducibility
- Main variety of direct printing on polyester fabric
- Staining slightly on different fibers

Properties

pH dependency	4-8
Liquid ratio dependency	1: (20-30)
Temperature dependency	130-135°C
HT color absorption	89.41%
Levelling	66.08%
Dischargeability	✗
Build up: HT dyeing	B
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties

Xenon light fastness (blue scale), ISO 105-B02

1/25 SD	CH	4-5
1/1 SD	CH	4-5
2/1 SD	CH	4-5

Sublimation fastness, ISO 105-P01

°C	150	5
	180	4-5
	200	3

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4	4-

Rubbing fastness, ISO 105-X12

	dry	wet
	4-5	4-5

Hot pressing fastness, ISO 105-X11

200°C	instant	4 hours
	3-4	4

Wet fastness properties

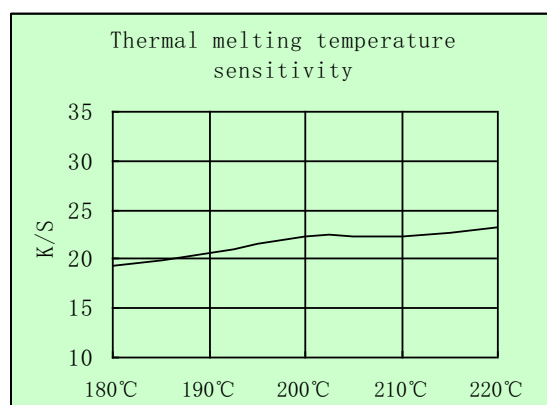
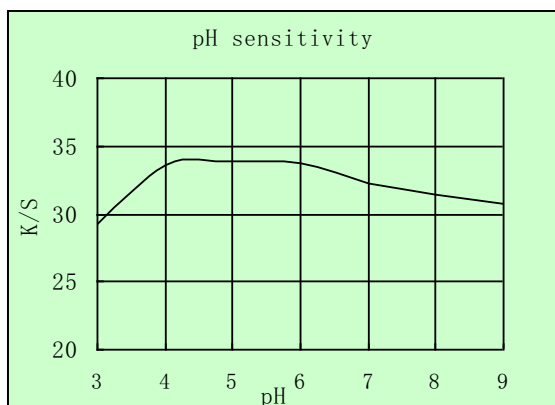
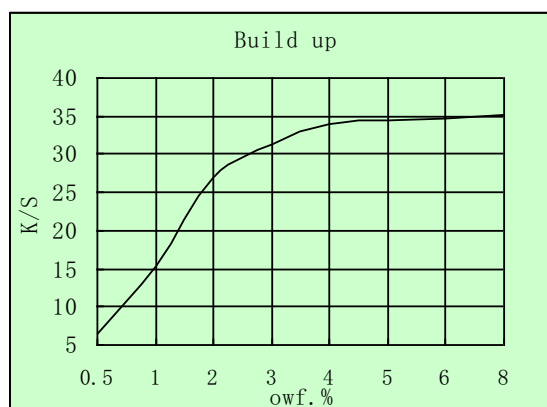
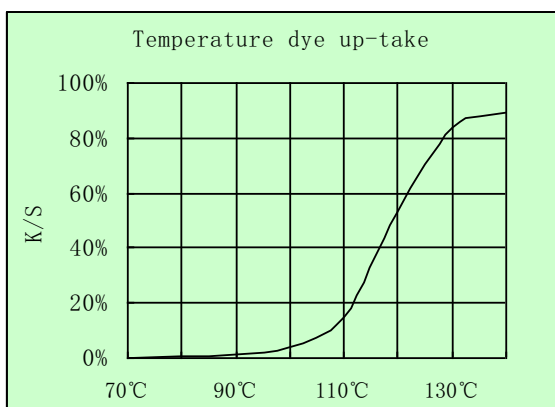
Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4-5	3-4	4-5	4	4-5	4-5	4
AATCC 11A, 49°C		4-5	3-4	4-5	4	4-5	4-5	4

Perspiration

ISO 105 E04, Alkaline		4	4-5	4-5	4+	4-5	4-5	4-5
ISO 105 E04, Acid		3-4	4-5-	4-5	4	4+	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance



Jihua STARCron® High Light Fastness (HXF & HW) series

Starcron Orange HXF

Identification

C.I. Disperse	Mix
Energy Level	High
Chemical Class	—

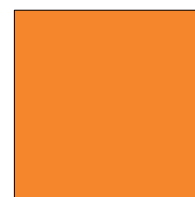


OWF 0.70 %

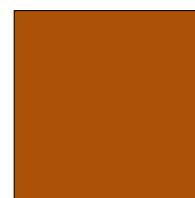
Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✗	✓	✗	✓
Medium	✓	✓	✗	✓
Dark	✓	✓	✗	✓

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable



OWF 1.1 %



OWF 2.2 %

Characteristic

- High temperature dyes
- Variety of high washing fastness; excellent dyeing performance
- Excellent sublimation fastness and thermal migration
- Suitable for dyeing of PES/Cotton and PES/Viscose blended fabrics
- Staining slightly on different fibers

Properties

pH dependency	4-6
Liquid ratio dependency	1: (20-30)
Temperature dependency	130-135°C
HT color absorption	84.30%
Levelling	88.23%
Dischargeability	✗
Build up: HT dyeing	A
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties

Xenon light fastness (blue scale), ISO 105-B02

1/25 SD	CH	6
1/1 SD	CH	6-7
2/1 SD	CH	7

Sublimation fastness, ISO 105-P01

°C	150	5
	180	5-
	200	4-5

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4	3-4

Rubbing fastness, ISO 105-X12

	dry	wet
	5	5

Hot pressing fastness, ISO 105-X11

200°C	instant	4 hours
	5	5

Wet fastness properties

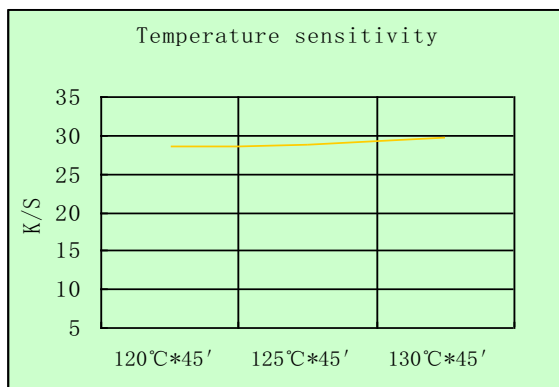
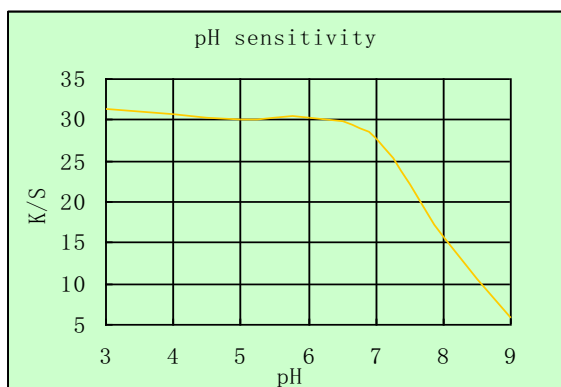
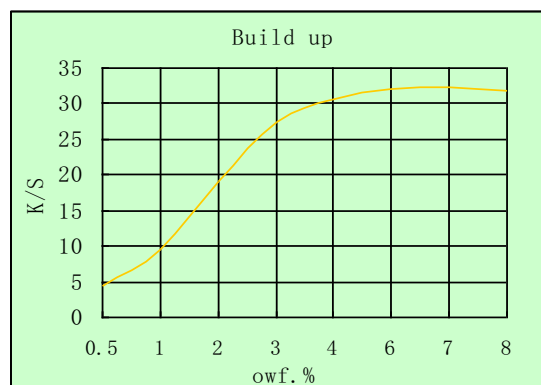
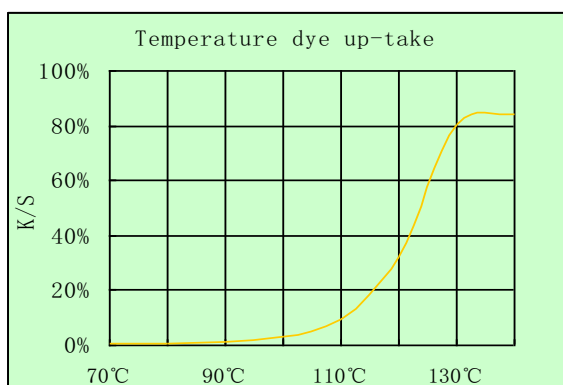
Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		5	4-5	5	4-5	5	5	4-5
AATCC 11A, 49°C		5	4-5	5	4-5	5	5	4-5

Perspiration

ISO 105 E04, Alkaline		4-5	4-5	4-5	4-5	4	4-5	4-5
ISO 105 E04, Acid		4-5	4	4-5	4-	4-5	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance

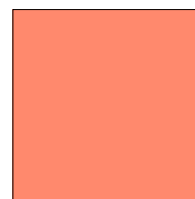


Jihua STARCron® High Light Fastness (HXF & HW) series

StarCron Scarlet HXF

Identification

C.I. Disperse	Mix
Energy Level	High
Chemical Class	—

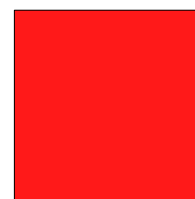


OWF 0.70 %

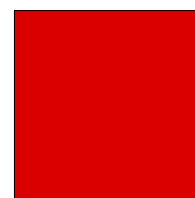
Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	X	✓	X	✓
Medium	✓	✓	X	✓
Dark	✓	✓	X	✓

- ✓ = suitable
 ○ = moderate
 X = unsuitable



OWF 1.1 %



OWF 2.2 %

Characteristic

- High temperature dyes
- Variety of high washing fastness; excellent dyeing performance
- Excellent sublimation fastness and thermal migration
- Suitable for dyeing of PES/Cotton and PES/Viscose blended fabrics
- Staining slightly on different fibers
- In dyeing, buffer system is necessary for controlling pH value

Properties

pH dependency	3-4.5
Liquid ratio dependency	1: (20-30)
Temperature dependency	130-135°C
HT color absorption	87.30%
Levelling	68.61%
Dischargeability	X
Build up: HT dyeing	A
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties**Xenon light fastness (blue scale), ISO 105-B02**

1/25 SD	CH	5-6
1/1 SD	CH	6
2/1 SD	CH	6-7

Sublimation fastness, ISO 105-P01

°C	150	5
	180	5-
	200	4-5

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4-5	4

Rubbing fastness, ISO 105-X12

	dry	wet
	5	5

Hot pressing fastness, ISO 105-X11

200°C	instant	4 hours
	5	5

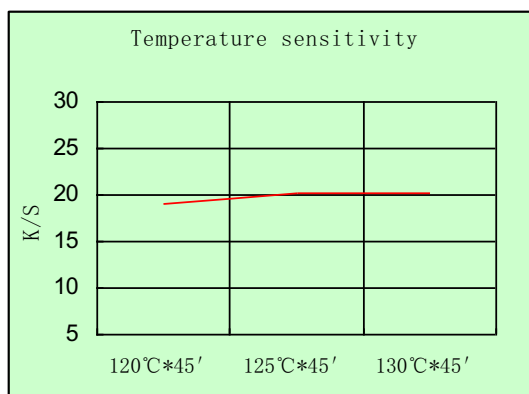
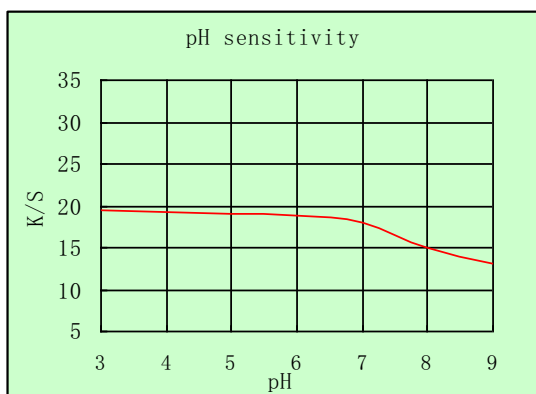
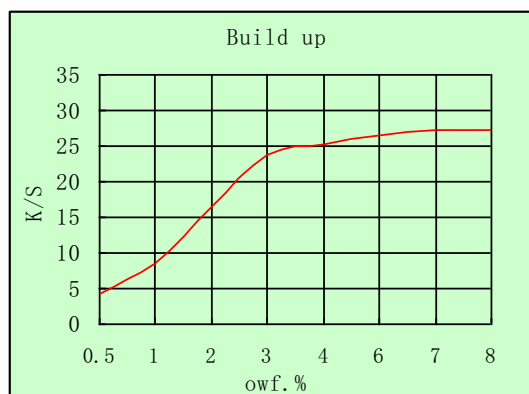
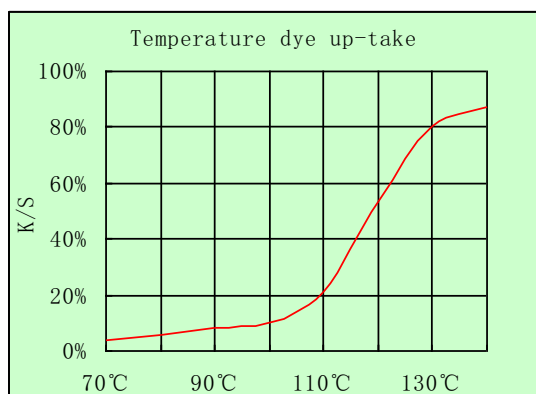
Wet fastness properties

<i>Washing</i>	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		5	4-5	5	4-5	5	5	4-5
AATCC 11A, 49°C		5	4-5	5	4-5	5	5	4-5

Perspiration

ISO 105 E04, Alkaline		4-5	4-5	4-5	4-5	4	4-5	4-5
ISO 105 E04, Acid		4-5	4	4-5	4-	4-5	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

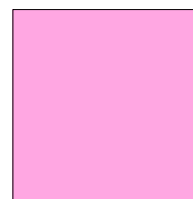
Dye application performance

Jihua STARCron® High Light Fastness (HXF & HW) series

StarcronRubine HXF

Identification

C.I. Disperse	Mix
Energy Level	High
Chemical Class	—

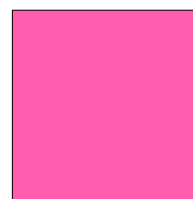


OWF 0.70 %

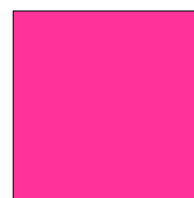
Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	X	✓	X	✓
Medium	✓	✓	X	✓
Dark	✓	✓	X	✓

- ✓ = suitable
 ○ = moderate
 X = unsuitable



OWF 1.1 %



OWF 2.2 %

Characteristic

- High temperature dyes
- Variety of high washing fastness; excellent dyeing performance
- Excellent sublimation fastness and thermal migration
- Suitable for dyeing of PES/Cotton and PES/Viscose blended fabrics
- taining slightly on different fibers
- In dyeing, buffer system is necessary for controlling pH value

Properties

pH dependency	4-4.5
Liquid ratio dependency	1: (20-30)
Temperature dependency	130-135°C
HT color absorption	97.23%
Levelling	67.36%
Dischargeability	X
Build up: HT dyeing	A
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties

Xenon light fastness (blue scale), ISO 105-B02		
1/25 SD	CH	5-6
1/1 SD	CH	6
2/1 SD	CH	6-7
Sublimation fastness, ISO 105-P01		
°C	150	5
	180	5-
	200	4-5
Fastness to chlorinated water, ISO 105-E03		
	20 ppm	50 ppm
	4	3-4

Rubbing fastness, ISO 105-X12		
	dry	wet
	5	5

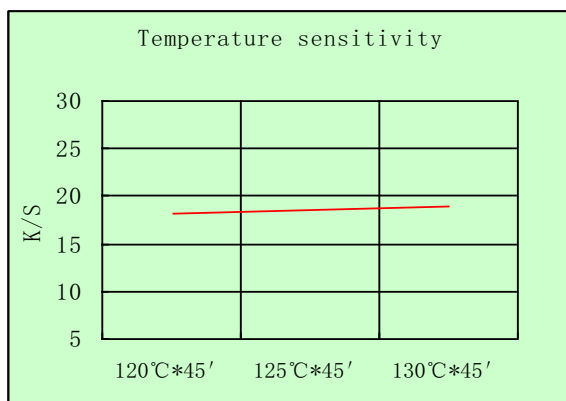
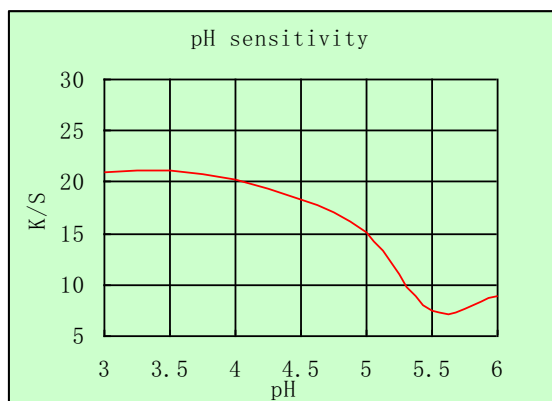
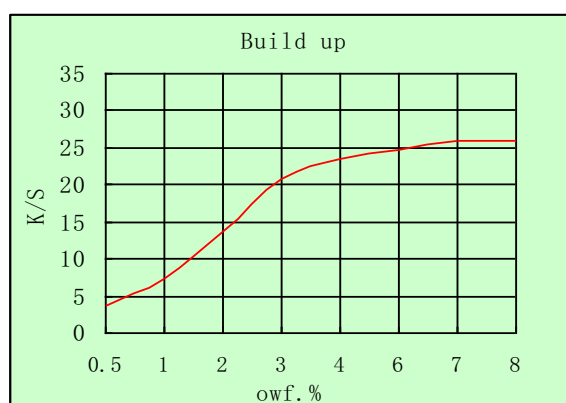
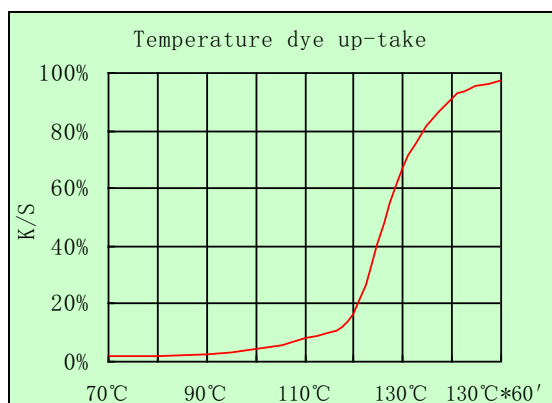
Hot pressing fastness, ISO 105-X11		
200°C	instant	4 hours
	5	5

Wet fastness properties

Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		5	4-5	5	4-5	5	5	4-5
AATCC 11A, 49°C		5	4-5	5	4-5	5	5	4-5
Perspiration								
ISO 105 E04, Alkaline		4-5	4-5	4-5	4-5	4	4-5	4-5
ISO 105 E04, Acid		4-5	4	4-5	4-	4-5	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance



Jihua STARCron® High Light Fastness (HXF & HW) series

Starcron Blue HXF

Identification

C.I. Disperse	Mix
Energy Level	High
Chemical Class	—



OWF 0.70 %

Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✗	✓	✗	✓
Medium	✓	✓	✗	✓
Dark	✓	✓	✗	✓



OWF 1.1 %



OWF 2.2 %

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable

Characteristic

- Excellent washing fastness, excellent dyeing performance
- Excellent sublimation fastness and thermal migration
- Suitable for dyeing of PES/Cotton and PES/Viscose blended fabrics
- Staining slightly on different fibers
- In dyeing, buffer system is necessary for controlling pH value

Properties

pH dependency	4-4.5
Liquid ratio dependency	1: (20-30)
Temperature dependency	130-135°C
HT color absorption	73.20%
Levelling	85.61%
Dischargeability	✗
Build up: HT dyeing	A
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties

Xenon light fastness (blue scale), ISO 105-B02

1/25 SD	CH	5-6
1/1 SD	CH	6
2/1 SD	CH	6

Sublimation fastness, ISO 105-P01

°C	150	5
	180	5-
	200	4-5

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4-5	4

Rubbing fastness, ISO 105-X12

	dry	wet
	5	5

Hot pressing fastness, ISO 105-X11

200°C	instant	4 hours
	5	5

Wet fastness properties

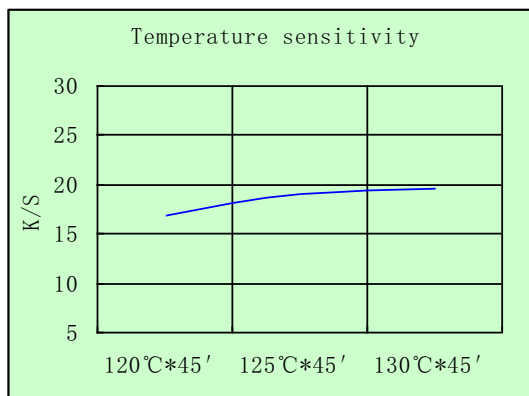
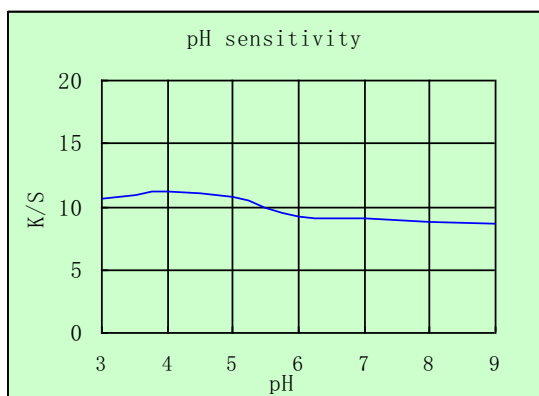
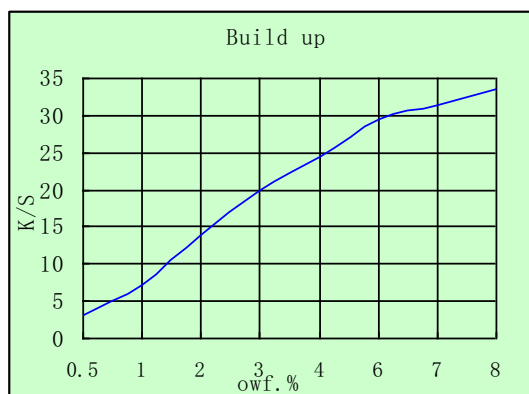
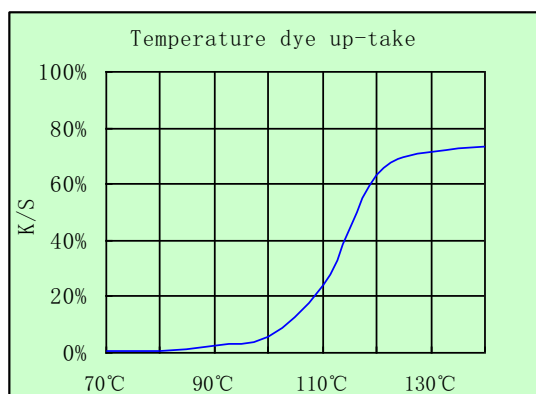
Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		5	4-5	5	4-5	5	5	4-5
AATCC 11A, 49°C		5	4-5	5	4-5	5	5	4-5

Perspiration

ISO 105 E04, Alkaline		4-5	4-5	4-5	4-5	4	4-5	4-5
ISO 105 E04, Acid		4-5	4	4-5	4-	4-5	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance

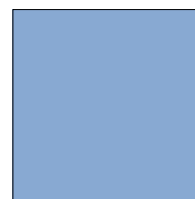


Jihua STARCron® High Light Fastness (HXF & HW) series

Starcron Navy Blue HXF

Identification

C.I. Disperse	Mix
Energy Level	High
Chemical Class	—



OWF 0.70 %

Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✗	✗	✗	✓
Medium	✓	✓	✗	✓
Dark	✓	✓	✗	✓

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable



OWF 1.1 %



OWF 2.2 %

Characteristic

- High temperature dyes
- Excellent washing fastness, excellent dyeing performance
- Excellent sublimation fastness and thermal migration
- Suitable for dyeing of PES/Cotton and PES/Viscose blended fabrics
- Staining slightly on different fibers

Properties

pH dependency	4-8
Liquid ratio dependency	1: (20-30)
Temperature dependency	130-135°C
HT color absorption	88.78%
Levelling	69.24%
Dischargeability	✗
Build up: HT dyeing	A
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties

Xenon light fastness (blue scale), ISO 105-B02

1/25 SD	CH	5-6
1/1 SD	CH	6
2/1 SD	CH	6

Sublimation fastness, ISO 105-P01

°C	150	5
	180	5-
	200	4-5

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4	3-4

Rubbing fastness, ISO 105-X12

	dry	wet
	5	5

Hot pressing fastness, ISO 105-X11

200°C	instant	4 hours
	5	5

Wet fastness properties

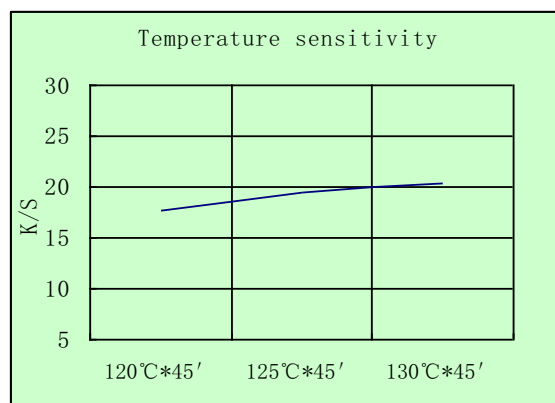
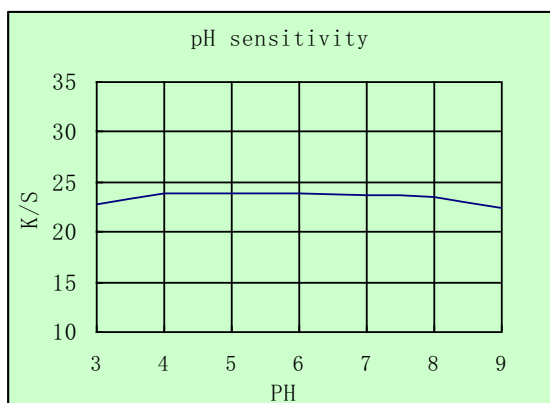
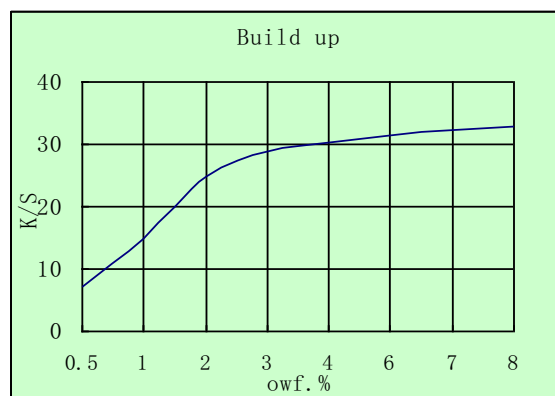
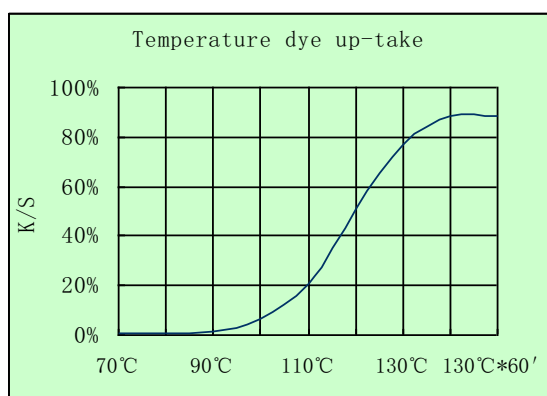
Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		5	4-5	5	4-5	5	5	4-5
AATCC 11A, 49°C		5	4-5	5	4-5	4-5	5	4-5

Perspiration

ISO 105 E04, Alkaline		4-5	4-5	4-5	4-5	4	4-5	4-5
ISO 105 E04, Acid		4-5	4	4-5	4-	4-5	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance

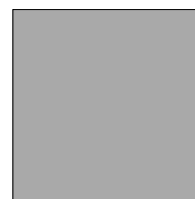


Jihua STARCron® High Light Fastness (HXF & HW) series

Starcron Black HXF

Identification

C.I. Disperse	Mix
Energy Level	High
Chemical Class	—



OWF 0.70 %

Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✗	✗	✗	✓
Medium	✓	✓	✗	✓
Dark	✓	✓	✗	✓

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable



OWF 1.1 %



OWF 2.2 %

Characteristic

- High temperature dyes
- Excellent washing fastness, excellent dyeing performance
- Excellent sublimation fastness and thermal migration
- Suitable for dyeing of PES/Cotton and PES/Viscose blended fabrics
- Staining slightly on different fibers

Properties

pH dependency	4-8
Liquid ratio dependency	1: (20-30)
Temperature dependency	130-135°C
HT color absorption	90.19%
Levelling	56.53%
Dischargeability	✗
Build up: HT dyeing	A
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties**Xenon light fastness (blue scale), ISO 105-B02**

1/25 SD	CH	6
1/1 SD	CH	6-7
2/1 SD	CH	6-7

Sublimation fastness, ISO 105-P01

°C	150	5
	180	5-
	200	4-5

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4	3-4

Rubbing fastness, ISO 105-X12

	dry	wet
	5	5

Hot pressing fastness, ISO 105-X11

200°C	instant	4 hours
	5	5

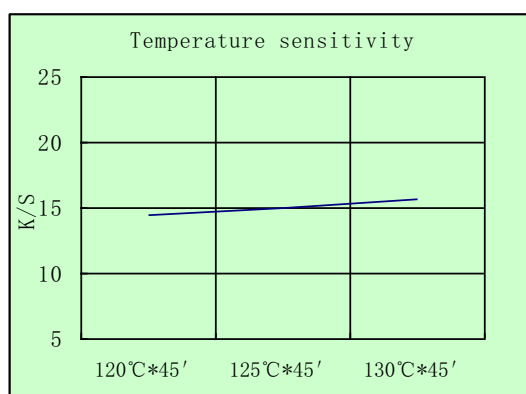
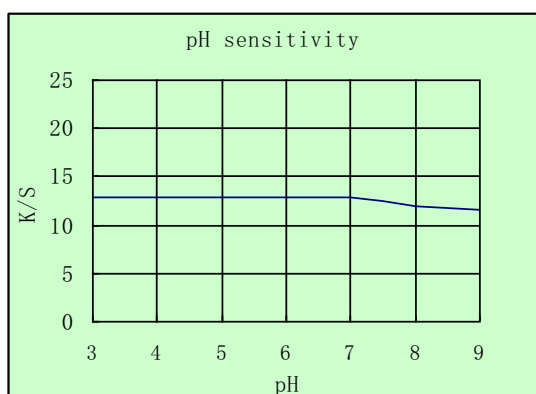
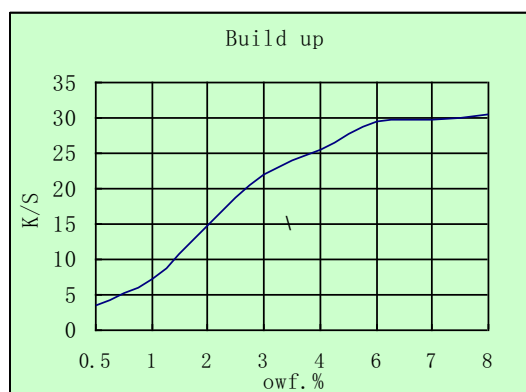
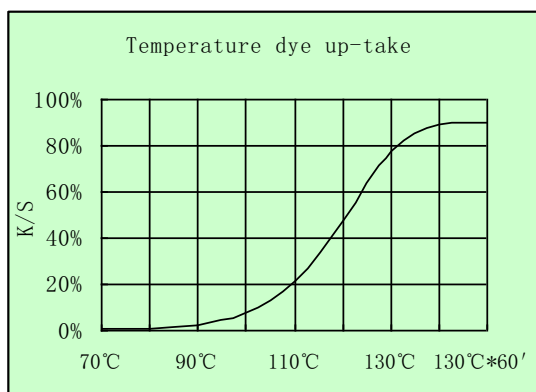
Wet fastness properties

<i>Washing</i>	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		5	4-5	5	4-5	4-5	5	4-5
AATCC 11A, 49°C		5	4-5	5	4-5	4-5	5	4-5

Perspiration

ISO 105 E04, Alkaline		4-5	4-5	4-5	4-5	4	4-5	4-5
ISO 105 E04, Acid		4-5	4	4-5	4-	4-5	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

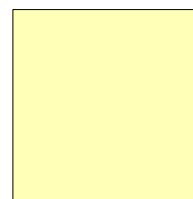
Dye application performance

Jihua STARCRO[®] High Light Fastness (HXF &HW) series

Starcron Yellow HW

Identification

C.I. Disperse	Mix
Energy Level	High
Chemical Class	—

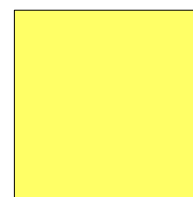


OWF 0.70 %

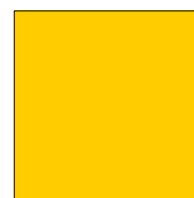
Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✓	✓	✗	✓
Medium	✓	✓	✗	✓
Dark	✓	✓	✗	✓

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable



OWF 1.1 %



OWF 2.2 %

Characteristic

- High temperature dyes
- Excellent light fastness, washing fastness and migration dyeing
- Suits for color matching with high and medium temperature dyes
- Main variety of exhaust dyeing, thermal melting pad dyeing and print

Properties

pH dependency	4-7
Liquid ratio dependency	1: (20-30)
Temperature dependency	130-135°C
HT color absorption	95.93%
Levelling	96.68%
Dischargeability	○
Build up: HT dyeing	B
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties**Xenon light fastness** (blue scale), ISO 105-B02

1/25 SD	CH	7
1/1 SD	CH	7
2/1 SD	CH	7

Sublimation fastness, ISO 105-P01

°C	150	5
	180	4-5
	200	3-4

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4-5	4+

Rubbing fastness, ISO 105-X12

	dry	wet
	4-5	4-5

Hot pressing fastness, ISO 105-X11

200°C	instant	4 hours
	4-5	4-5

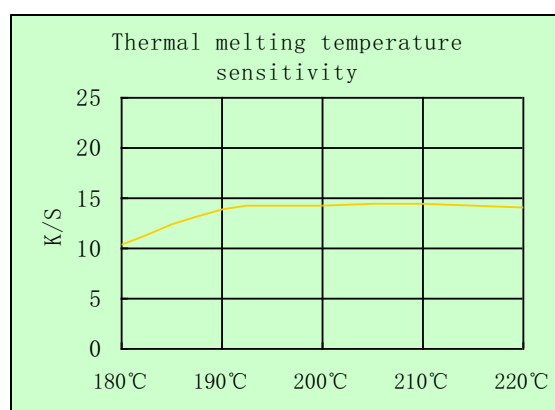
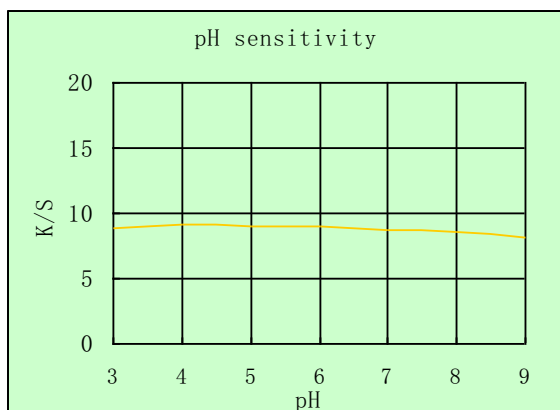
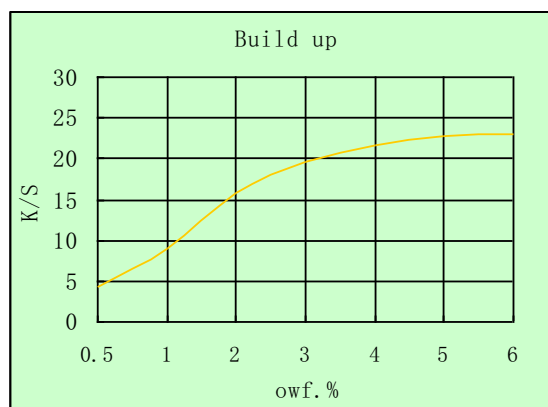
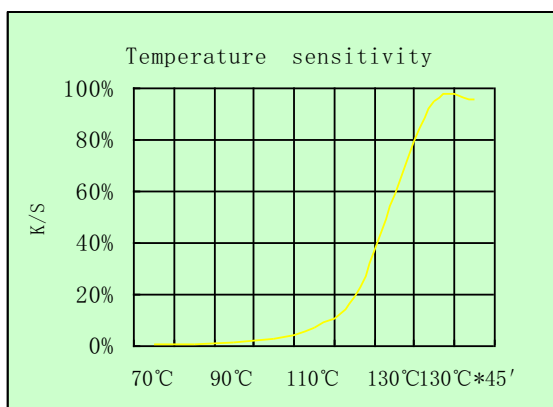
Wet fastness properties

Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		5	4	5	4	5	5	4
AATCC 11A, 49°C		5	4	5	4	5	5	4

Perspiration

ISO 105 E04, Alkaline		4-5	3-4	4-5	3-4+	4	4-5	4
ISO 105 E04, Acid		3-4	3-4+	4-5	3-4+	4	4-5	4

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

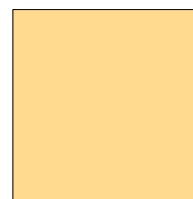
Dye application performance

Jihua STARCron® High Light Fastness (HXF & HW) series

Starcron Golden Yellow HW

Identification

C.I. Disperse	Mix
Energy Level	High
Chemical Class	—

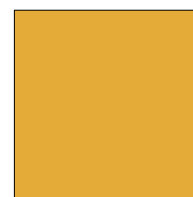


OWF 0.70 %

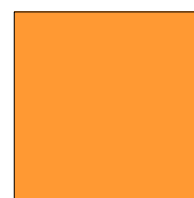
Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	X	✓	X	✓
Medium	✓	✓	X	✓
Dark	✓	✓	X	✓

- ✓ = suitable
 ○ = moderate
 X = unsuitable



OWF 1.1 %



OWF 2.2 %

Characteristic

- High temperature dyes.
- Variety of high washing fastness; excellent dyeing performance.
- Excellent sublimation fastness and thermal migration.
- Suitable for dyeing of polyester/cotton, and polyester/viscose blended fabrics.
- Staining slightly on different fibers.

Properties

pH dependency	4-6
Liquid ratio dependency	1: (20-30)
Temperature dependency	(130-135) °C
HT color absorption	84.30%
Levelling	95.30%
Dischargeability	X
Build up: HT dyeing	B
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties

Xenon light fastness (blue scale), ISO 105-B02		
1/25 SD	CH	6
1/1 SD	CH	6-7
2/1 SD	CH	7
Sublimation fastness, ISO 105-P01		
°C	150	4-5
	180	3-4
	200	2-3
Fastness to chlorinated water, ISO 105-E03		
	20 ppm	50 ppm
	4	3-4

Rubbing fastness, ISO 105-X12		
	dry	wet
	4	4-5

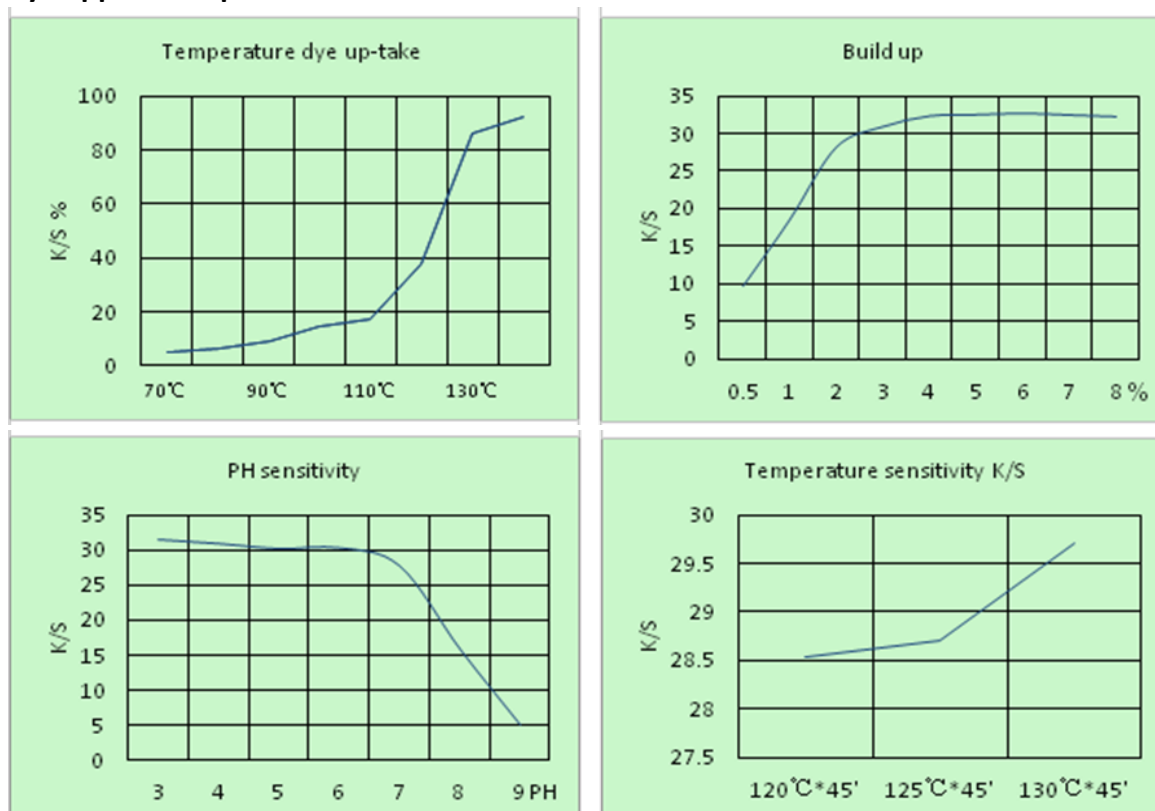
Hot pressing fastness, ISO 105-X11		
200°C	instant	4 hours
	5	5

Wet fastness properties

Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4-5	4-5+	4-5+	4-5	4-5	4-5+	4-5
AATCC 11A, 49°C		4-5	4-5+	4-5+	4-5	4-5	4-5+	4-5
Perspiration								
ISO 105 E04, Alkaline		4-5	4-5	4-5	4	4+	4-5	4-5
ISO 105 E04, Acid		4-5	4	4-5-	4	4-5-	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance

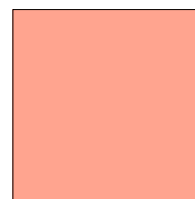


Jihua STARCron® High Light Fastness (HXF &HW) series

Starcron Red HW-3BS

Identification

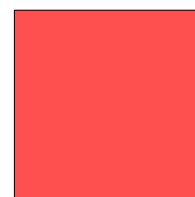
C.I. Disperse	Mix
Energy Level	High
Chemical Class	—



OWF 0.70 %

Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	X	✓	X	✓
Medium	✓	✓	X	✓
Dark	✓	✓	X	✓



OWF 1.1 %

- ✓ = suitable
 ○ = moderate
 X = unsuitable



OWF 2.2 %

Characteristic

- High Temperature dyes
- Variety of high washing fastness; excellent dyeing performance.
- Excellent sublimation fastness and thermal migration.
- Suitable for dyeing of polyester/cotton, and polyester/viscose blended fabrics
- Staining slightly on different fibers.

In dyeing, buffer system is necessary for controlling PH value.

Properties

pH dependency	4
Liquid ratio dependency	1: (20-30)
Temperature dependency	(130-135) °C
HT color absorption	87.30%
Levelling	68.61%
Dischargeability	X
Build up: HT dyeing	B

Metal-ion sensitivity

 $\text{Fe}^{++} \leq 12 \text{ ppm}$ $\text{Mg}^{++} \leq 50 \text{ ppm}$
 $\text{Cu}^{++} \leq 10 \text{ ppm}$ $\text{Ca}^{++} \leq 50 \text{ ppm}$

Fastness Properties

Xenon light fastness (blue scale), ISO 105-B02

1/25 SD	CH	5-6
1/1 SD	CH	6
2/1 SD	CH	6-7

Sublimation fastness, ISO 105-P01

°C	150	4-5
	180	4
	200	3

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4-5	4

Rubbing fastness, ISO 105-X12

	dry	wet
	4	4-5

Hot pressing fastness, ISO 105-X11

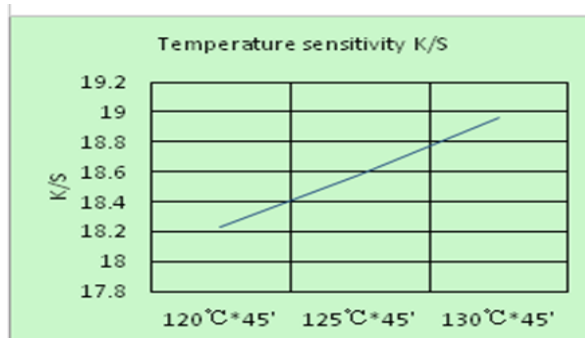
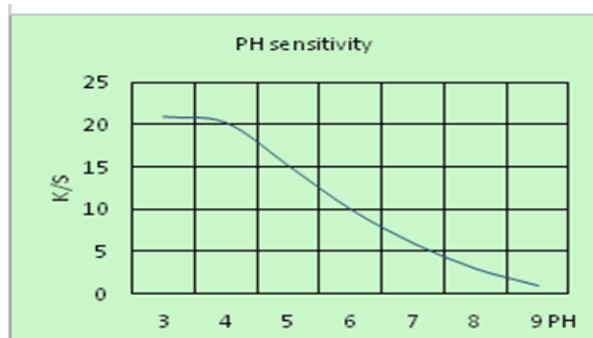
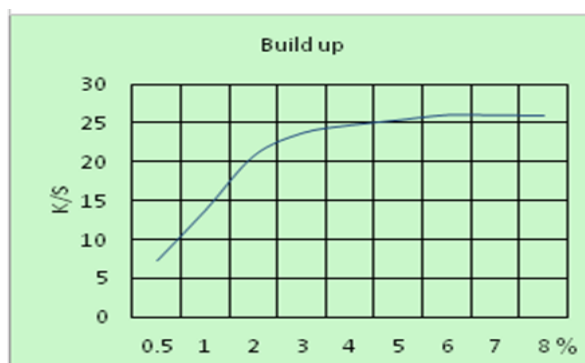
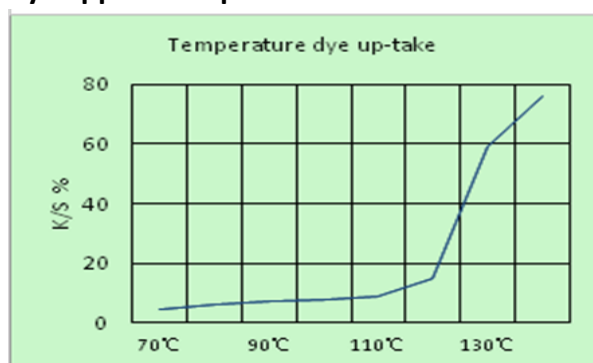
200°C	instant	4 hours
	5	5

Wet fastness properties

Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4+	4-5	4-5	4-5	4-5	4-5	4
AATCC 11A, 49°C		4+	4-5	4-5	4-5	4-5	4-5	4
Perspiration								
ISO 105 E04, Alkaline		4	4-5	4-5	4-5	4-5	4-5	4-5
ISO 105 E04, Acid		4+	4-5	4-5	4-5	4-5	4-5	4+

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance

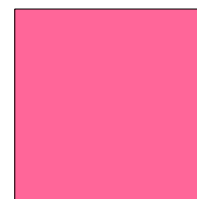


Jihua STARCron® High Light Fastness (HXF &HW) series

StarcronRubine HW

Identification

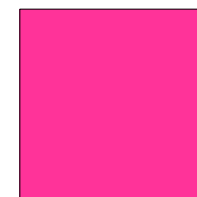
C.I. Disperse	Mix
Energy Level	High
Chemical Class	—



OWF 0.70 %

Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	X	✓	X	✓
Medium	✓	✓	X	✓
Dark	✓	✓	X	✓



OWF 1.1 %

- ✓ = suitable
 ○ = moderate
 X = unsuitable



OWF 2.2 %

Characteristic

- High temperature dyes.
- Variety of high washing fastness; excellent dyeing performance.
- Excellent sublimation fastness and thermal migration.
- Suitable for dyeing of polyester/cotton, and polyester/viscose blended fabrics.
- Staining slightly on different fibers.
- In dyeing, buffer system is necessary for controlling PH value

Properties

pH dependency	4
Liquid ratio dependency	1: (20-30)
Temperature dependency	(130-135) °C
HT color absorption	97.23%
Levelling	67.95%
Dischargeability	X
Build up: HT dyeing	B
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties

Xenon light fastness (blue scale), ISO 105-B02

1/25 SD	CH	5-6
1/1 SD	CH	6
2/1 SD	CH	6-7

Sublimation fastness, ISO 105-P01

°C	150	4-5
	180	4
	200	3

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	3-4	3

Rubbing fastness, ISO 105-X12

	dry	wet
	4	4-5

Hot pressing fastness, ISO 105-X11

	instant	4 hours
200°C	5	5

Wet fastness properties

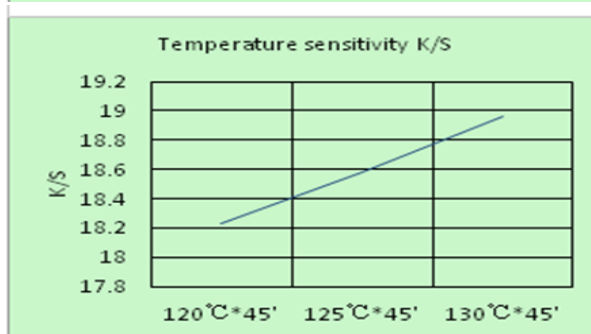
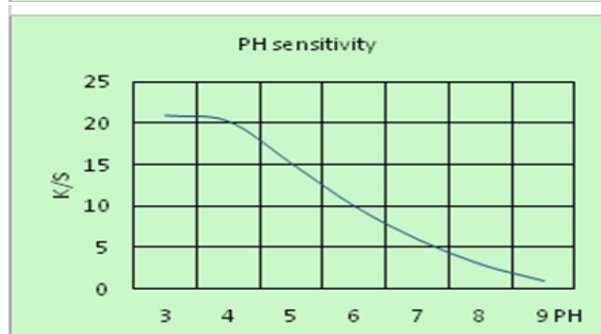
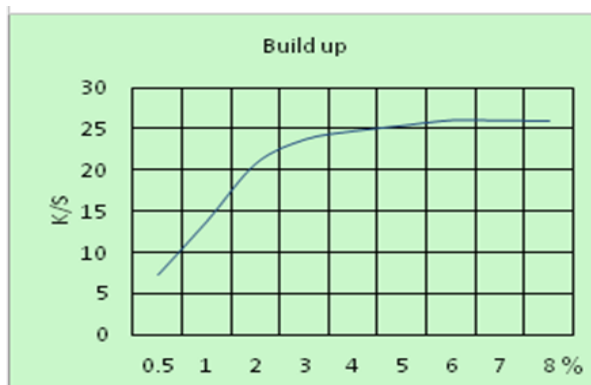
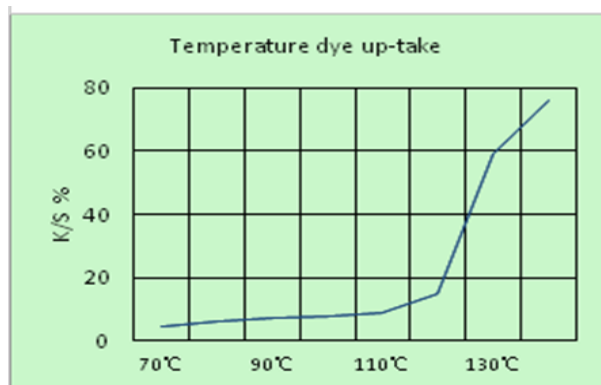
Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4+	4-5	4-5	4-5	4-5	4-5	4
AATCC 11A, 49°C		4+	4-5	4-5	4-5	4-5	4-5	4

Perspiration

ISO 105 E04, Alkaline		4	4-5	4-5	4-5	4-5	4-5	4-5
ISO 105 E04, Acid		4+	4-5	4-5	4-5	4-5	4-5	4+

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance

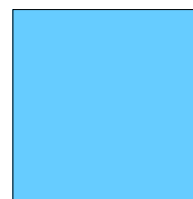


Jihua STARCron® High Light Fastness (HXF &HW) series

Starcron Turquoise Blue HW

Identification

C.I. Disperse	Mix
Energy Level	High
Chemical Class	—



OWF 0.70 %

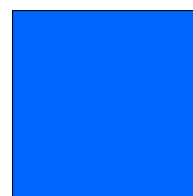
Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✓	✓	✗	✓
Medium	✓	✓	✗	✓
Dark	✓	✓	✗	✓

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable



OWF 1.1 %



OWF 2.2 %

Characteristic

- High temperature dyes
- Excellent light fastness, washing fastness and sublimation fastness
- Can be used in direct printing of PES/CELL bended fabric
- Main varieties of exhaust dyeing, thermal melting pad dyeing and printing
- Used with high temperature levelling agent for dyeing for light color

Properties

pH dependency	4-9
Liquid ratio dependency	1: (20-30)
Temperature dependency	130-135°C
HT color absorption	90.60%
Levelling	96.16%
Dischargeability	✗
Build up: HT dyeing	A
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties**Xenon light fastness (blue scale), ISO 105-B02**

1/25 SD	CH	6-7
1/1 SD	CH	6-7
2/1 SD	CH	7

Sublimation fastness, ISO 105-P01

°C	150	5
	180	4-5
	200	3-4

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4+	4-

Rubbing fastness, ISO 105-X12

	dry	wet
	4-5	5

Hot pressing fastness, ISO 105-X11

	instant	4 hours
200°C	3-4	3-4

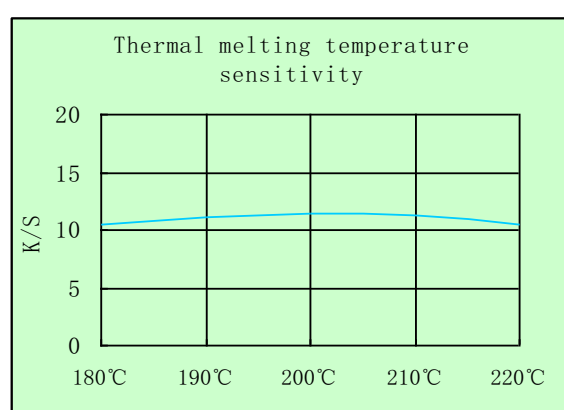
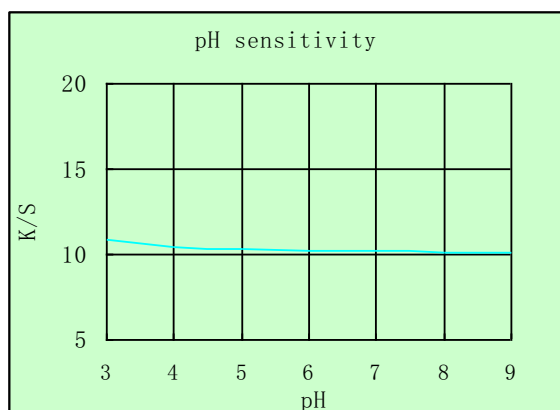
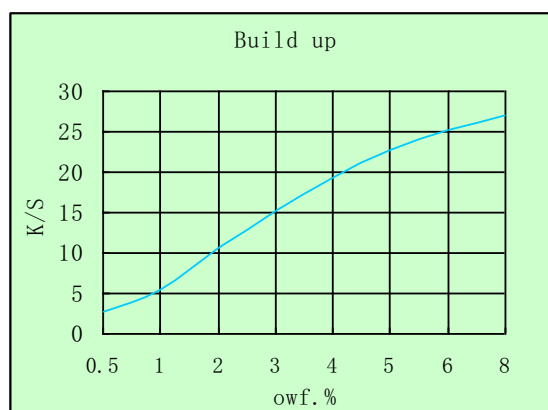
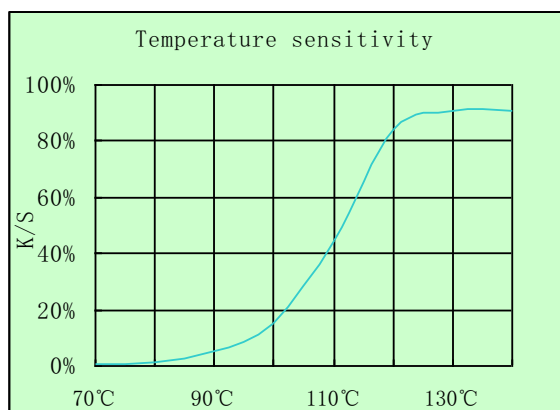
Wet fastness properties

<i>Washing</i>	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		5	4-5	5	4-5	5	4-5	4-5
AATCC 11A, 49°C		5	4-5	5	4-5	5	4-5	4-5

Perspiration

ISO 105 E04, Alkaline		3	4-5	4-5	4-5	4-5	4-5	4-5
ISO 105 E04, Acid		3-4	4-5	4-5	4-5	4-5	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance

Jihua STARCron® High Light Fastness (HXF &HW) series

Starcron Blue HW-TGS

Identification

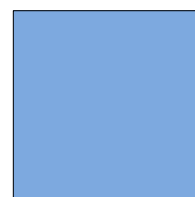
C.I. Disperse	Mix
Energy Level	High
Chemical Class	—



OWF 0.70 %

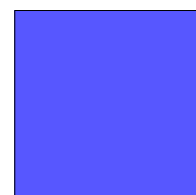
Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	X	✓	X	✓
Medium	✓	✓	X	✓
Dark	✓	✓	X	✓



OWF 1.1 %

- ✓ = suitable
 ○ = moderate
 X = unsuitable



OWF 2.2 %

Characteristic

- Excellent washing fastness; excellent dyeing performance.
- Excellent sublimation fastness and thermal migration.
- Suitable for dyeing of polyester/cotton, and polyester/viscose blended fabrics.
- Staining slightly on different fibers.
- In dyeing, buffer system is necessary for controlling PH value.

Properties

pH dependency	4-4.5
Liquid ratio dependency	1: (20-30)
Temperature dependency	(130-135) °C
HT color absorption	73.20%
Levelling	85.61%
Dischargeability	X
Build up: HT dyeing	B
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties

Xenon light fastness (blue scale), ISO 105-B02		
1/25 SD	CH	5-6
1/1 SD	CH	6
2/1 SD	CH	6
Sublimation fastness, ISO 105-P01		
°C	150	5
	180	4-5
	200	3-4
Fastness to chlorinated water, ISO 105-E03		
	20 ppm	50 ppm
	4-5	4

Rubbing fastness, ISO 105-X12		
	dry	wet
	5	5

Hot pressing fastness, ISO 105-X11		
200°C	instant	4 hours
	5	5

Wet fastness properties

<i>Washing</i>	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4	4-5	4-5	4-5	4-5	5	4-5
AATCC 11A, 49°C		4	4-5	4-5	4-5	4-5	5	4-5
<i>Perspiration</i>								
ISO 105 E04, Alkaline		4	4-5	4-5	4	4-5	5	4
ISO 105 E04, Acid		4	4-5	4+	4	4-5	5	4

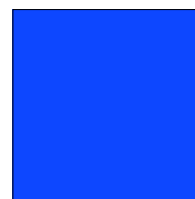
*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Jihua STARCron® High Light Fastness (HXF &HW) series

Starcron Navy Blue HW-GS

Identification

C.I. Disperse	Mix
Energy Level	High
Chemical Class	—



OWF 0.70 %

Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	X	X	X	✓
Medium	✓	✓	X	✓
Dark	✓	✓	X	✓



OWF 1.1 %

- ✓ = suitable
 ○ = moderate
 X = unsuitable

Characteristic

- High temperature dyes.
- Excellent washing fastness; excellent dyeing performance.
- Excellent sublimation fastness and thermal migration.
- Suitable for dyeing of polyester/cotton, and polyester/viscose blended fabrics
- Staining slightly on different fibers.



OWF 2.2 %

Properties

pH dependency	4-4.5
Liquid ratio dependency	1: (20-30)
Temperature dependency	(130-135) °C
HT color absorption	88.78%
Levelling	69.24%
Dischargeability	X
Build up: HT dyeing	A
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties

Xenon light fastness (blue scale), ISO 105-B02		
1/25 SD	CH	5-6
1/1 SD	CH	6
2/1 SD	CH	6
Sublimation fastness, ISO 105-P01		
°C	150	5
	180	4-5
	200	3-
Fastness to chlorinated water, ISO 105-E03		
	20 ppm	50 ppm
	4	3-4

Rubbing fastness, ISO 105-X12		
	dry	wet
	5	5

Hot pressing fastness, ISO 105-X11		
200°C	instant	4 hours
	5	5

Wet fastness properties

<i>Washing</i>	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4-5	4-5	5	5	5	5	3
AATCC 11A, 49°C		4-5	4-5	5	5	5	5	3
<i>Perspiration</i>								
ISO 105 E04, Alkaline		3-4	4	4	3-4-	4	5	4
ISO 105 E04, Acid		4	3-4+	4-5	3-4+	4	5	4

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Jihua STARCron® High Light Fastness (HXF &HW) series

Starcron Black HW-KSN

Identification

C.I. Disperse	Mix
Energy Level	High
Chemical Class	—

Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	X	X	X	✓
Medium	✓	✓	X	✓
Dark	✓	✓	X	✓

- ✓ = suitable
 ○ = moderate
 X = unsuitable

Characteristic

- High temperature dyes.
- Excellent washing fastness; excellent dyeing performance.
- Excellent sublimation fastness and thermal migration.
- Suitable for dyeing of polyester/cotton, and polyester/viscose blended fabrics
- Staining slightly on different fibers.

Properties

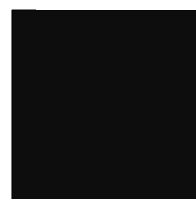
pH dependency	4-8
Liquid ratio dependency	1: (20-30)
Temperature dependency	(130-135) °C
HT color absorption	90.19%
Levelling	75.30%
Dischargeability	X
Build up: HT dyeing	B
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm



OWF 0.70 %



OWF 1.1 %



OWF 2.2 %

Fastness Properties

Xenon light fastness (blue scale), ISO 105-B02		
1/25 SD	CH	6
1/1 SD	CH	6-7
2/1 SD	CH	6-7
Sublimation fastness, ISO 105-P01		
°C	150	5
	180	4-5
	200	3-4
Fastness to chlorinated water, ISO 105-E03		
	20 ppm	50 ppm
	4	3-4

Rubbing fastness, ISO 105-X12		
	dry	wet
	5	5

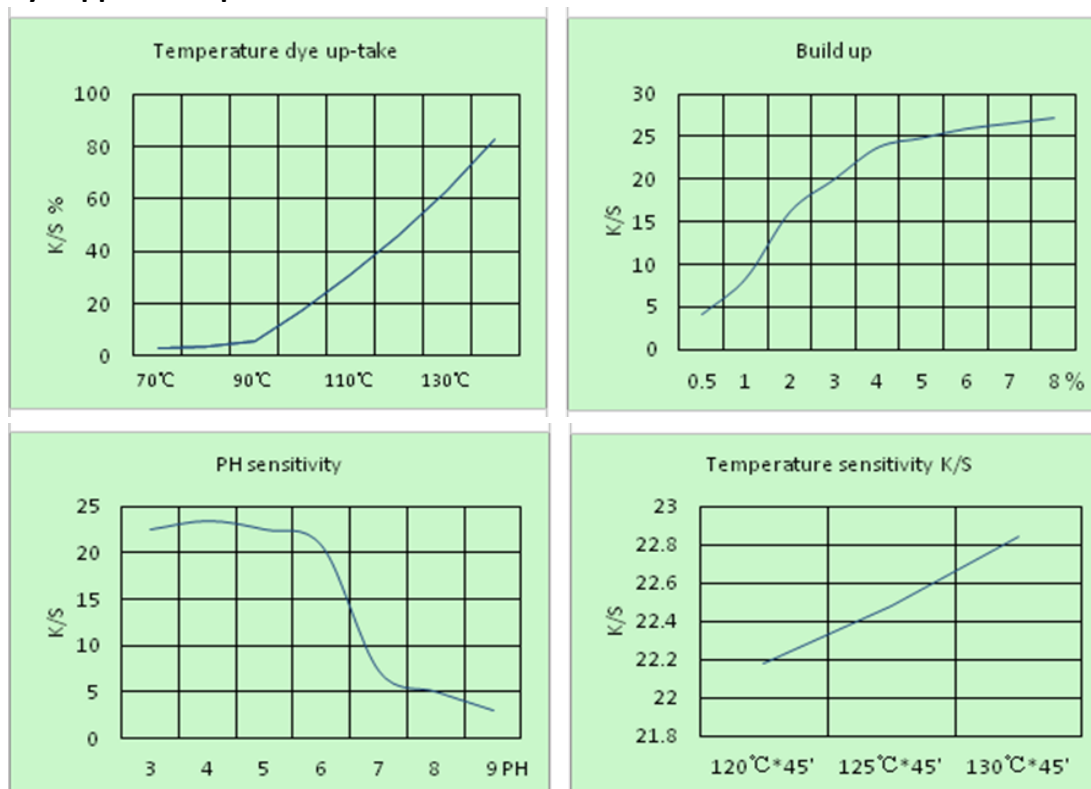
Hot pressing fastness, ISO 105-X11		
200°C	instant	4 hours
	5	5

Wet fastness properties

Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4-5	4-5	5	4-5	5	5	3-4
AATCC 11A, 49°C		4-5	4-5	5	4-5	5	5	3-4
Perspiration								
ISO 105 E04, Alkaline		4-5	4-5	4-5+	4	4	5	3-4+
ISO 105 E04, Acid		4-	3-4	4	4-5	4-5	5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance



Jihua STARCron® High Light Fastness (HXF &HW) series

Starcron Black HW

Identification

C.I. Disperse	Mix
Energy Level	High
Chemical Class	—



OWF 0.70 %

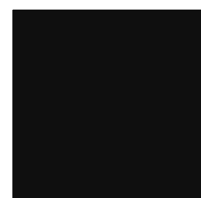
Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	X	X	X	✓
Medium	✓	✓	X	✓
Dark	✓	✓	X	✓

- ✓ = suitable
 ○ = moderate
 X = unsuitable



OWF 1.1 %



OWF 2.2 %

Characteristic

- High temperature dyes.
- Excellent washing fastness; excellent dyeing performance.
- Excellent sublimation fastness and thermal migration.
- Suitable for dyeing of polyester/cotton, and polyester/viscose blended fabrics
- Staining slightly on different fibers.
- In dyeing, buffer system is necessary for controlling PH value.

Properties

pH dependency	4-4.5
Liquid ratio dependency	1: (20-30)
Temperature dependency	(130-135) °C
HT color absorption	76.39%
Levelling	79.15%
Dischargeability	X
Build up: HT dyeing	A

Metal-ion sensitivity

 $\text{Fe}^{++} \leq 12 \text{ ppm}$ $\text{Mg}^{++} \leq 50 \text{ ppm}$
 $\text{Cu}^{++} \leq 10 \text{ ppm}$ $\text{Ca}^{++} \leq 50 \text{ ppm}$

Fastness Properties

Xenon light fastness (blue scale), ISO 105-B02

1/25 SD	CH	6
1/1 SD	CH	6-7
2/1 SD	CH	6-7

Sublimation fastness, ISO 105-P01

°C	150	5
	180	5-
	200	4-5

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4-5	4

Rubbing fastness, ISO 105-X12

	dry	wet
	5	5

Hot pressing fastness, ISO 105-X11

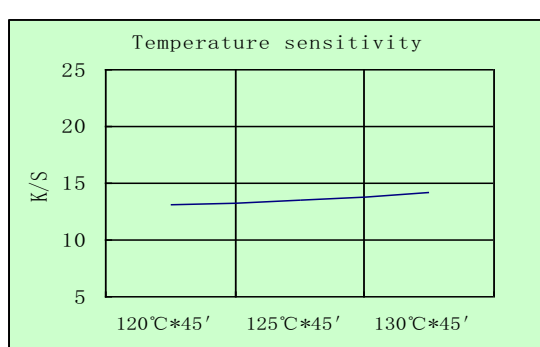
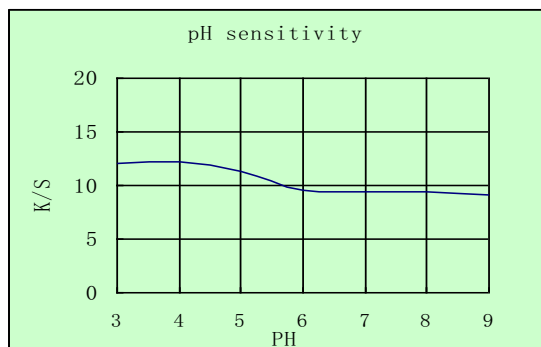
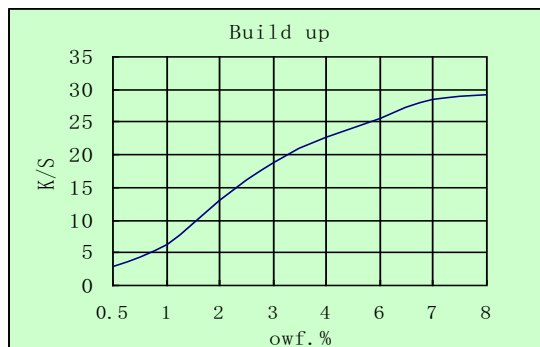
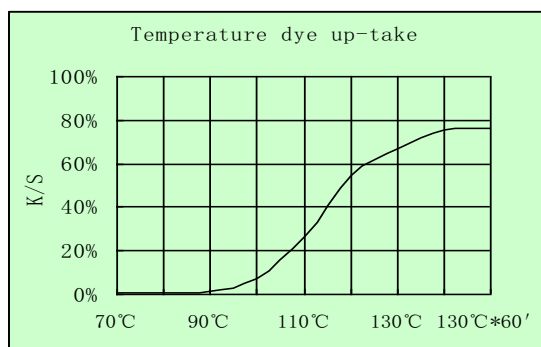
200°C	instant	4 hours
	5	5

Wet fastness properties

Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		5	4-5	5	4-5	5	5	4-5
AATCC 11A, 49°C		5	4-5	5	4-5	5	5	4-5
Perspiration								
ISO 105 E04, Alkaline		4-5	4-5	4-5	4-5	4	4-5	4-5
ISO 105 E04, Acid		4-5	4	4-5	4-	4-5-	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance

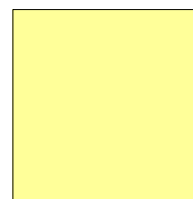


Jihua STARCron® Rapid dyeing (HRD & NN) series

Starcron Yellow HRD-4GN

Identification

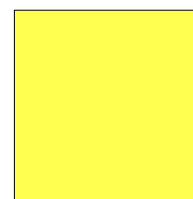
C.I. Disperse	Mix
Energy Level	Medium
Chemical Class	—



OWF 0.70 %

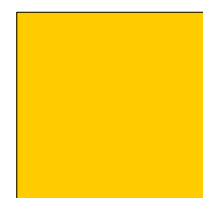
Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✓	✗	✓	✓
Medium	✓	✓	✓	✓
Dark	✓	✓	✗	✗



OWF 1.1 %

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable



OWF 2.2 %

Characteristic

- Medium temperature dyes.
- Excellent deep-dyeing performance; suits medium and dark color.
- Excellent compatibleness among varieties in this series; superb success rate.
- Suitable for dyeing of super fine fiber, and exhaust dyeing and pad dyeing of polyesterfabrics and polyester/cotton blended fabrics.
- Excellent all-around color fastness.

Properties

pH dependency	4-8
Liquid ratio dependency	1: (20-30)
Temperature dependency	(130-135) °C
HT color absorption	94.27%
Levelling	99.45%
Dischargeability	✗
Build up: HT dyeing	A
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties

Xenon light fastness (blue scale), ISO 105-B02		
1/25 SD	CH	6-7
1/1 SD	CH	7
2/1 SD	CH	7
Sublimation fastness, ISO 105-P01		
°C	150	4
	180	3-
	200	2-
Fastness to chlorinated water, ISO 105-E03		
	20 ppm	50 ppm
	4-5	4

Rubbing fastness, ISO 105-X12		
	dry	wet
	4-5	4-5

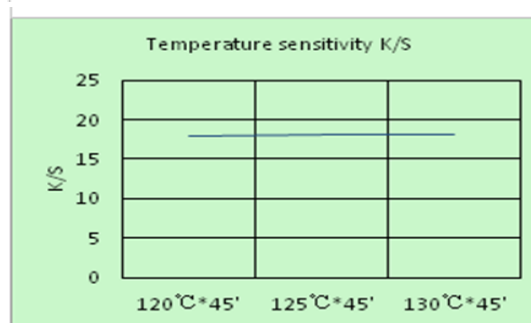
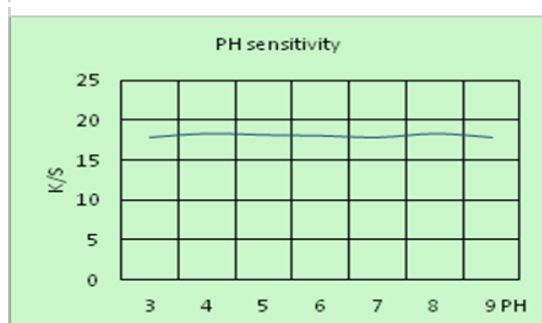
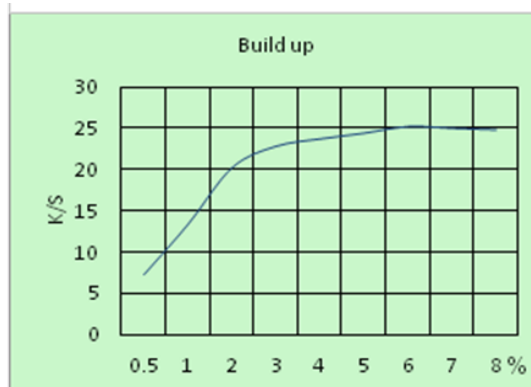
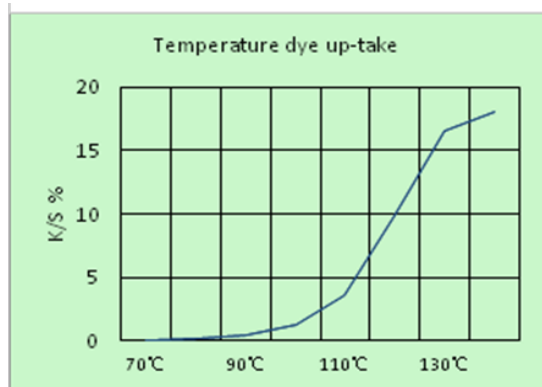
Hot pressing fastness, ISO 105-X11		
200°C	instant	4 hours
	4-5	4-5

Wet fastness properties

Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4-5	4-5	5	4	5	5	4-5
AATCC 11A, 49°C		4-5	4-5	5	4	5	5	4-5
Perspiration								
ISO 105 E04, Alkaline		4-5	3-4	4-5	3-4+	4	4-5	4
ISO 105 E04, Acid		4-5	3-4+	4-5	3-4	4	4-5	4

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance

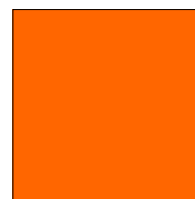


Jihua STARCRO[®] Rapid dyeing (HRD & NN) series

Starcron Red HRD-2R

Identification

C.I. Disperse	Mix
Energy Level	Medium
Chemical Class	—

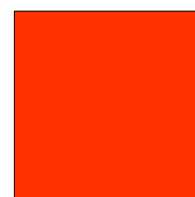


OWF 0.70 %

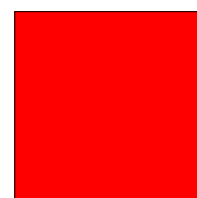
Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✓	✓	✓	✓
Medium	✓	✓	✗	✓
Dark	✓	✗	✗	✓

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable



OWF 1,1 %



OWF 2.2 %

Characteristic

- Medium temperature dyes.
- Excellent light fastness、washingfastness、sublimation fastness.
- Good color staining fastness on cotton in polyester/cotton blended fabric.
- Main varieties of exhaust dyeing、thermal melting pad dyeing and printing.

Properties

pH dependency	4-8
Liquid ratio dependency	1: (20-30)
Temperature dependency	(130-135) °C
HT color absorption	94.50%
Levelling	82.45%
Dischargeability	○
Build up: HT dyeing	A
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties

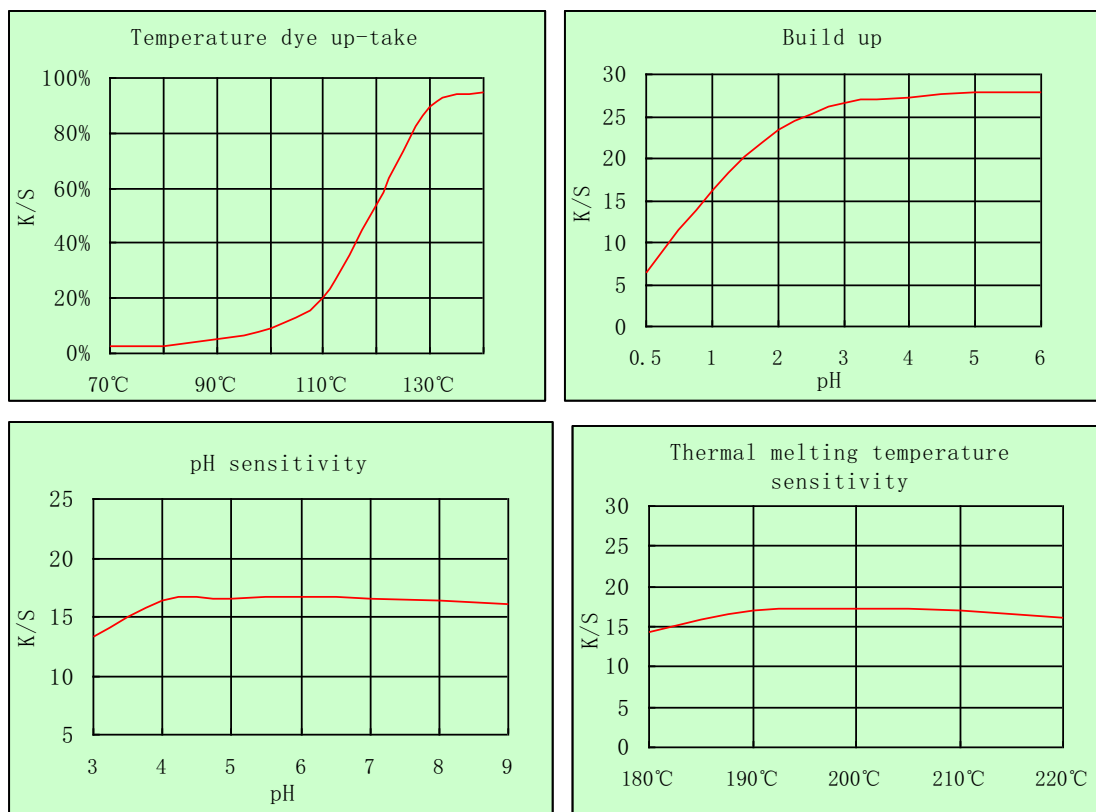
Xenon light fastness (blue scale), ISO 105-B02			Rubbing fastness, ISO 105-X12		
1/25 SD	CH	4		dry	wet
1/1 SD	CH	4-5		4-5	4-5
2/1 SD	CH	5			
Sublimation fastness, ISO 105-P01			Hot pressing fastness, ISO 105-X11		
°C	150	5	200°C	instant	4 hours
	180	4		4-5	4-5
	200	3-4			
Fastness to chlorinated water, ISO 105-E03					
	20 ppm	50 ppm			
	4-5	4			

Wet fastness properties

Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4-5	4	4-5	3-4	4-5	4-5	4
AATCC 11A, 49°C		4-5	4	4-5	3-4	4-5	4-5	4
Perspiration								
ISO 105 E04, Alkaline		4-5	4-5	4-5	4-5	4-5	4-5	4-5
ISO 105 E04, Acid		4	4-5	4-5	4-5	4+	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance

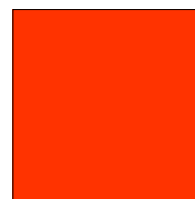


Jihua STARCron® Rapid dyeing (HRD & NN) series

Starcron Red HRD-GFL

Identification

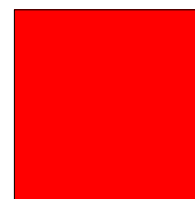
C.I. Disperse	Mix
Energy Level	Medium
Chemical Class	—



OWF 0.70 %

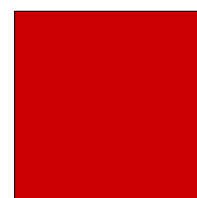
Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✓	✓	✗	✓
Medium	✓	✓	✗	✓
Dark	✓	✗	✗	✗



OWF 1.1 %

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable



OWF 2.2 %

Characteristic

- Medium temperature dyes.
- Excellent dyeing fastness and brighter shade.
- Good deep dyeing quality, suitable for dyeing of super fine fiber.
- As main variety of 红 medium temperature dyes, widely applied.

Properties

pH dependency	4-7
Liquid ratio dependency	1: (20-30)
Temperature dependency	(130-135) °C
HT color absorption	87.80%
Levelling	76.14%
Dischargeability	✗
Build up: HT dyeing	B
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties

Xenon light fastness (blue scale), ISO 105-B02

1/25 SD	CH	4-5
1/1 SD	CH	5
2/1 SD	CH	5-6

Sublimation fastness, ISO 105-P01

°C	150	5
	180	4
	200	2-3

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4+	4-

Rubbing fastness, ISO 105-X12

	dry	wet
	4-5	4-5

Hot pressing fastness, ISO 105-X11

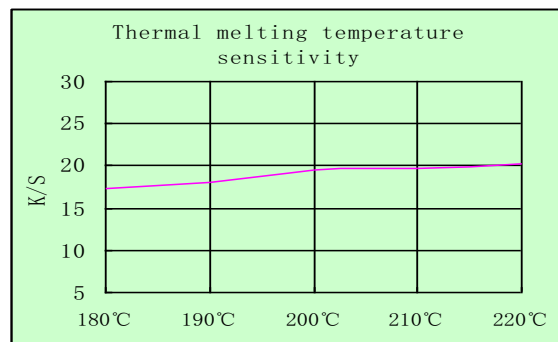
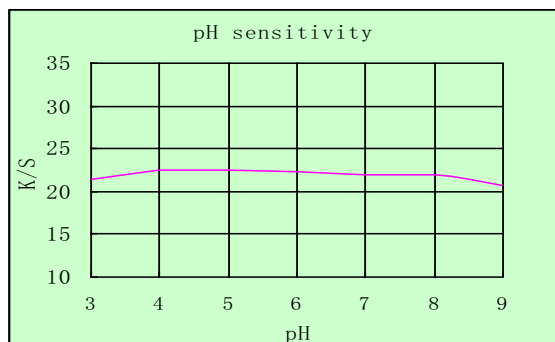
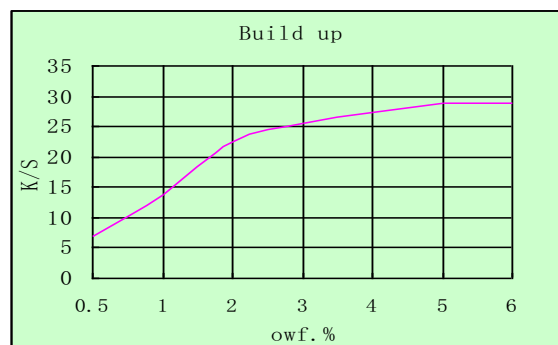
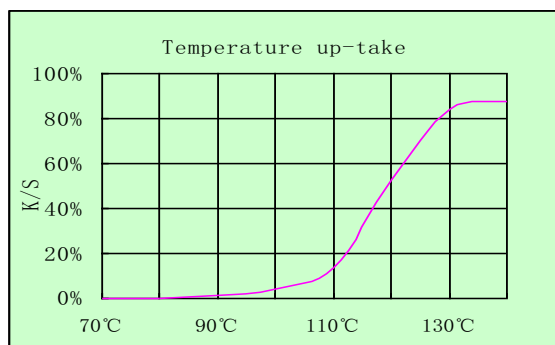
200°C	instant	4 hours
	4	4

Wet fastness properties

Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4-5	4	4-5	3-4	4-5	4-5	4
AATCC 11A, 49°C		4-5	4	4-5	3-4	4-5	4-5	4
Perspiration								
ISO 105 E04, Alkaline		4	3	4	3	3-4	4-5	4-5
ISO 105 E04, Acid		3	4	4-5	3-4	3-4	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance

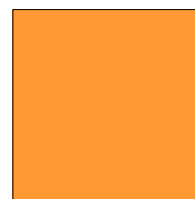


Jihua STARCron® Rapid dyeing (HRD & NN) series

Starcron Orange HRD-2RL

Identification

C.I. Disperse	Mix
Energy Level	Medium
Chemical Class	—

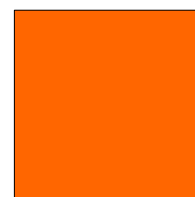


OWF 0.70 %

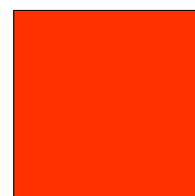
Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	X	X	✓	X
Medium	✓	✓	✓	X
Dark	✓	✓	X	X

- ✓ = suitable
 ○ = moderate
 X = unsuitable



OWF 1.1 %



OWF 2.2 %

Characteristic

- Medium temperature dyes.
- Excellent compatibleness among varieties in this series; superb success rate.
- Excellent deep-dyeing performance; suits medium and dark color.
- Suitable for dyeing of super fine fiber, and exhaust dyeing and pad dyeing of polyester fabrics and polyester/cotton blended fabrics.
- Excellent all-around color fastness.

Properties

pH dependency	4-7
Liquid ratio dependency	1: (20-30)
Temperature dependency	(130-135) °C
HT color absorption	88.16%
Levelling	89.00%
Dischargeability	X
Build up: HT dyeing	A
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties

Xenon light fastness (blue scale), ISO 105-B02

1/25 SD	CH	6
1/1 SD	CH	6-7
2/1 SD	CH	6-7

Sublimation fastness, ISO 105-P01

°C	150	5
	180	4-5
	200	3

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4	3-4

Rubbing fastness, ISO 105-X12

	dry	wet
	4-5	4-5

Hot pressing fastness, ISO 105-X11

200°C	instant	4 hours
	4-5	4-5

Wet fastness properties

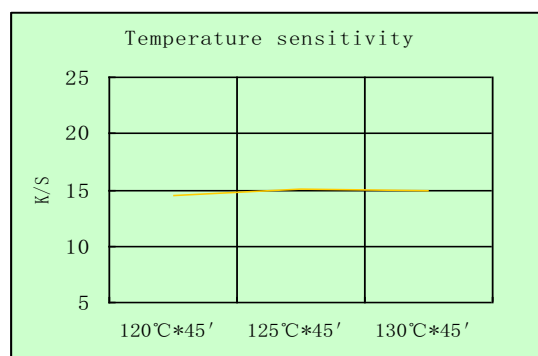
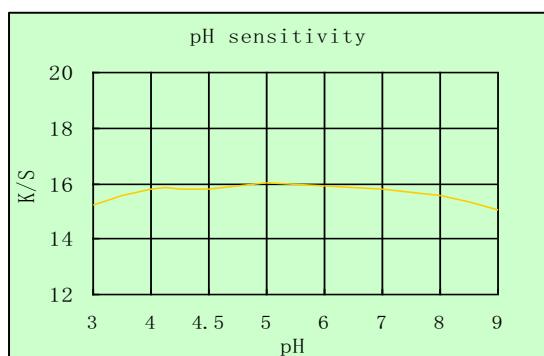
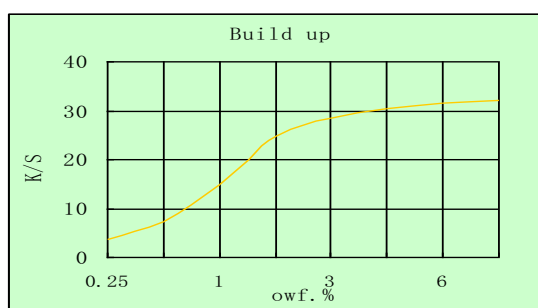
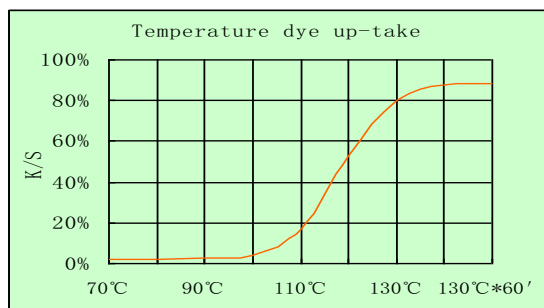
Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4	4-5	4-5	4-5	5	5	4-5
AATCC 11A, 49°C		4	4-5	4-5	4-5	5	5	4-5

Perspiration

ISO 105 E04, Alkaline		4-5	4-5	4-5	4-5	4	4-5	4-5
ISO 105 E04, Acid		4-5	4	4-5	4-	4-5-	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance



Jihua STARCron® Rapid dyeing (HRD & NN) series

Starcron Blue HRD-RFL

Identification

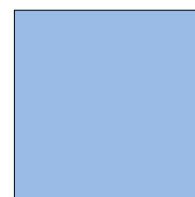
C.I. Disperse	Mix
Energy Level	Medium
Chemical Class	—



OWF 0.70 %

Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	X	✓	X	✓
Medium	✓	✓	X	✓
Dark	✓	✓	X	X



OWF 1.1 %



OWF 2.2 %

- ✓ = suitable
 ○ = moderate
 X = unsuitable

Characteristic

- Medium temperature dyes.
- Excellent compatibleness among varieties in this series; superb success rate.
- Excellent deep-dyeing performance; suits medium and dark color.
- Suitable for dyeing of super fine fiber, and exhaust dyeing and pad dyeing of polyester fabrics and polyester/cotton blended fabrics.
- Excellent all-around color fastness.

Properties

pH dependency	4-7
Liquid ratio dependency	1: (20-30)
Temperature dependency	(130-135) °C
HT color absorption	94.96%
Levelling	77.68%
Dischargeability	X
Build up: HT dyeing	A
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties

Xenon light fastness (blue scale), ISO 105-B02

1/25 SD	CH	4-5
1/1 SD	CH	5-
2/1 SD	CH	5-

Sublimation fastness, ISO 105-P01

°C	150	5
	180	4
	200	2-3

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4-5	4

Rubbing fastness, ISO 105-X12

	dry	wet
	4-5	4-5

Hot pressing fastness, ISO 105-X11

200°C	instant	4 hours
	4	4

Wet fastness properties

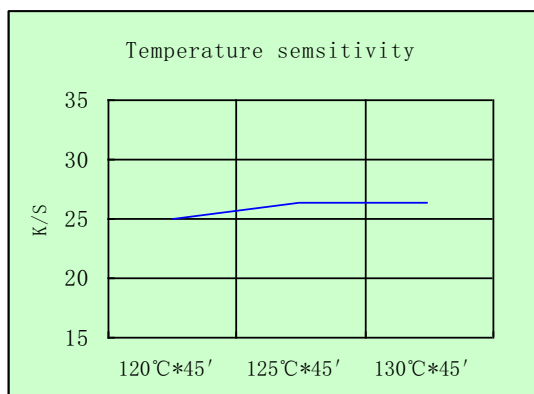
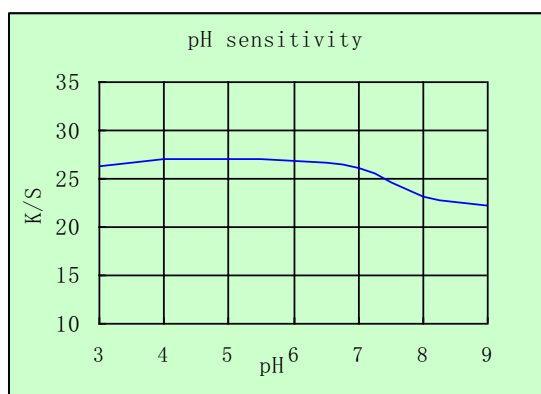
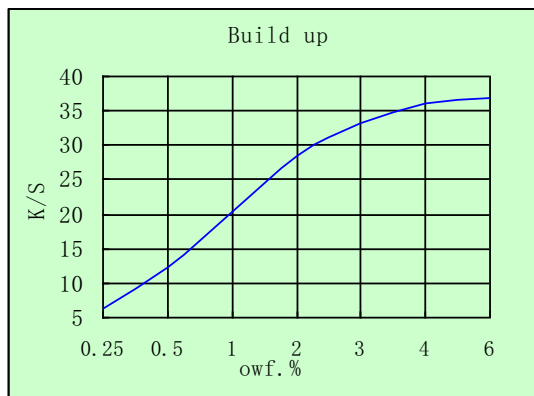
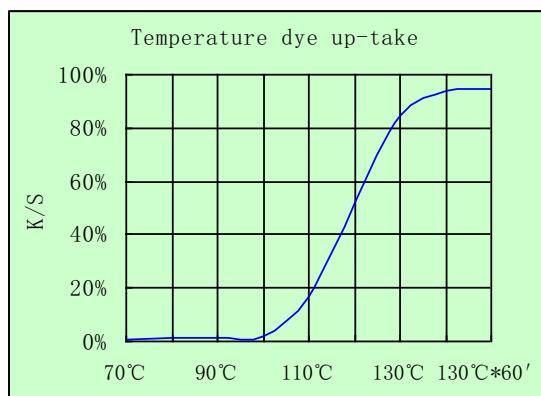
Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4	4-5	4	4-5	5	5	4-5
AATCC 11A, 49°C		4	4-5	4	4-5	5	5	4-5

Perspiration

ISO 105 E04, Alkaline		4-5	4-5	4-5	4-5	4	4-5	4-5
ISO 105 E04, Acid		4-5	4	4-5	4-	4-5-	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance

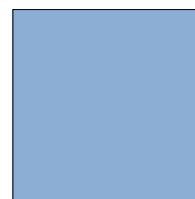


Jihua STARCron® Rapid dyeing (HRD & NN) series

Starcron Navy Blue HRD-2RE

Identification

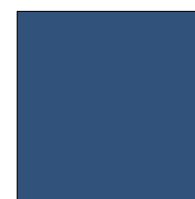
C.I. Disperse	Mix
Energy Level	Medium
Chemical Class	—



OWF 0.70 %

Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	X	X	✓	X
Medium	✓	✓	✓	X
Dark	✓	✓	X	X



OWF 1,1 %

- ✓ = suitable
 ○ = moderate
 X = unsuitable



OWF 2.2 %

Characteristic

- Medium temperature dyes.
- Excellent compatibleness among varieties in this series; superb success rate.
- Excellent deep-dyeing performance; suits medium and dark color.
- Suitable for dyeing of super fine fiber, and exhaust dyeing and pad dyeing of polyester fabrics and polyester/cotton blended fabrics.
- Excellent all-around color fastness.

Properties

pH dependency	4-8
Liquid ratio dependency	1: (20-30)
Temperature dependency	(130-135) °C
HT color absorption	97.23%
Levelling	77.68%
Dischargeability	X
Build up: HT dyeing	A
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties**Xenon light fastness (blue scale), ISO 105-B02**

1/25 SD	CH	5
1/1 SD	CH	5-6
2/1 SD	CH	5-6

Sublimation fastness, ISO 105-P01

°C	150	5
	180	4
	200	2-3

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm

Rubbing fastness, ISO 105-X12

	dry	wet
	4-5	4-5

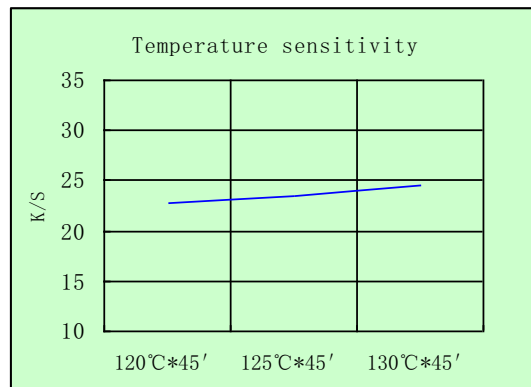
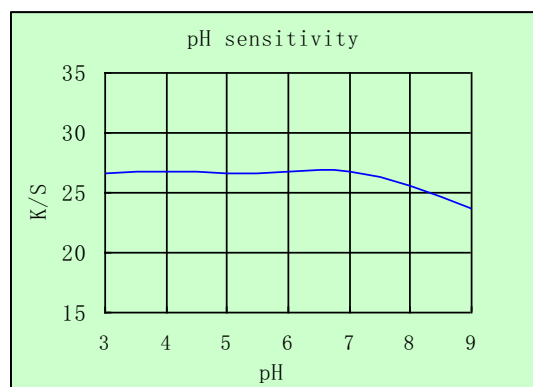
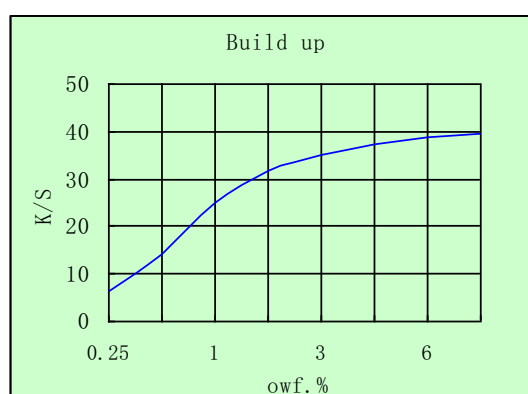
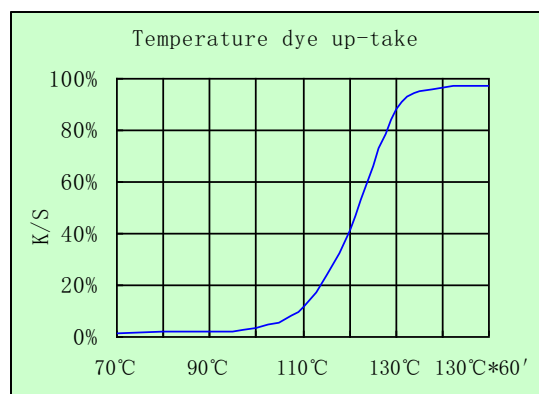
Hot pressing fastness, ISO 105-X11

200°C	instant	4 hours
	4	4-5

Wet fastness properties

Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4	4-5	4-5	3-4	5	5	4-5
AATCC 11A, 49°C		4	4-5	4-5	3-4	5	5	4-5
<i>Perspiration</i>								
ISO 105 E04, Alkaline		4-5	4-5	5	4-5	4	4-5	4-5
ISO 105 E04, Acid		4-5	4	5	4-	4-5-	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance

Jihua STARCRO[®] Rapid dyeing (HRD & NN) series

Starcron Black HRD-SE

Identification

C.I. Disperse	Mix
Energy Level	Medium
Chemical Class	—



OWF 0.70 %

Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	X	X	✓	X
Medium	✓	✓	✓	X
Dark	✓	✓	X	X



OWF 1.1 %



OWF 2.2 %

- ✓ = suitable
 ○ = moderate
 X = unsuitable

Characteristic

- Medium temperature dyes.
- Excellent compatibleness among varieties in this series; superb success rate.
- Excellent deep-dyeing performance; suits medium and dark color.
- Suitable for dyeing of super fine fiber, and exhaust dyeing and pad dyeing of polyester fabrics and polyester/cotton blended fabrics.
- Excellent all-around color fastness.

Properties

pH dependency	4-8
Liquid ratio dependency	1: (20-30)
Temperature dependency	(130-135) °C
HT color absorption	96.69%
Levelling	65.92%
Dischargeability	X
Build up: HT dyeing	A
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties**Xenon light fastness (blue scale), ISO 105-B02**

1/25 SD	CH	5
1/1 SD	CH	5-6
2/1 SD	CH	5-6

Sublimation fastness, ISO 105-P01

°C	150	5
	180	4
	200	2-3

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4-5	4

Rubbing fastness, ISO 105-X12

	dry	wet
	4-5	4-5

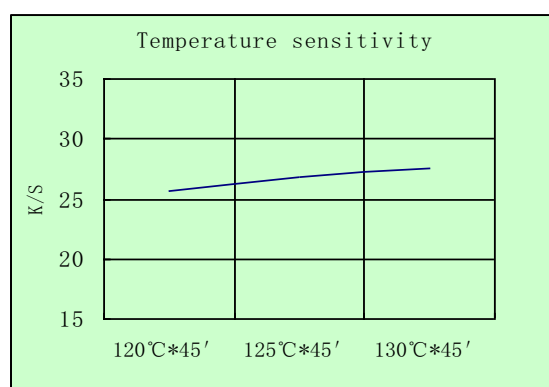
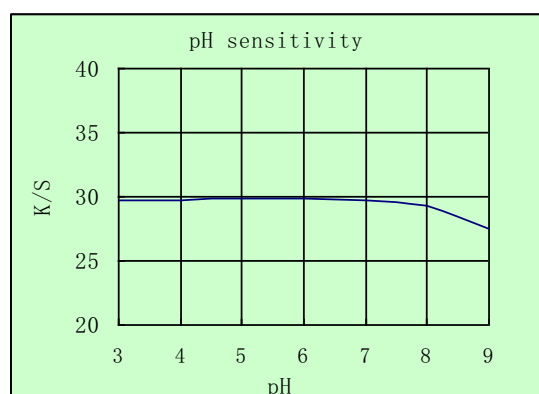
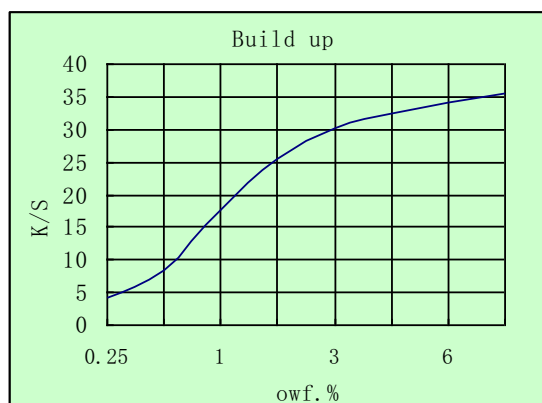
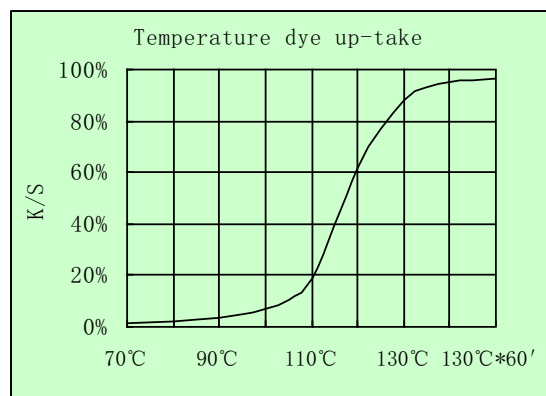
Hot pressing fastness, ISO 105-X11

200°C	instant	4 hours
	4-5	4-5

Wet fastness properties

Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4	4-5	4-5	3-4	5	5	4-5
AATCC 11A, 49°C		4	4-5	4-5	3-4	5	5	4-5
<i>Perspiration</i>								
ISO 105 E04, Alkaline		4-5	4-5	5	4-5	4	4-5	4-5
ISO 105 E04, Acid		4-5	4	5	4-	4-5-	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

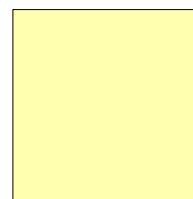
Dye application performance

Jihua STARCron® Rapid dyeing (HRD & NN) series

Starcron Yellow NN

Identification

C.I. Disperse	Mix
Energy Level	Medium
Chemical Class	—

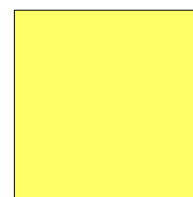


OWF 0.70 %

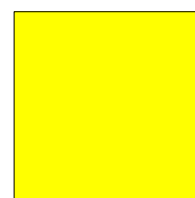
Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✓	✗	✓	✗
Medium	✓	✓	✓	✗
Dark	✓	✓	✗	✗

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable



OWF 1.1 %



OWF 2.2 %

Characteristic

- Medium temperature dyes, excellent all around color fastness
- Excellent deep dyeing performance; suits medium and dark color
- Excellent compatibleness among varieties in this series; superb success rate
- Suitable for dyeing super fine fiber , exhaust dyeing and pad dyeing of PES and PES/Cotton blended fabrics

Properties

pH dependency	4-7
Liquid ratio dependency	1: (20-30)
Temperature dependency	130-135°C
HT color absorption	94.27%
Levelling	99.45%
Dischargeability	✗
Build up: HT dyeing	A
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties

Xenon light fastness (blue scale), ISO 105-B02

1/25 SD	CH	6-7
1/1 SD	CH	7
2/1 SD	CH	7

Sublimation fastness, ISO 105-P01

°C	150	5
	180	3-4
	200	2-3

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4-5	4

Rubbing fastness, ISO 105-X12

	dry	wet
	4-5	4-5

Hot pressing fastness, ISO 105-X11

200°C	instant	4 hours
	4-5	4-5

Wet fastness properties

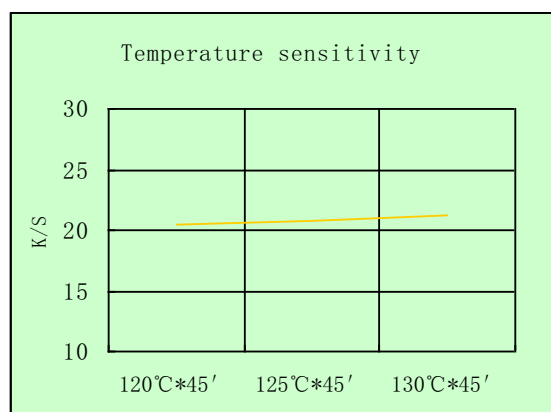
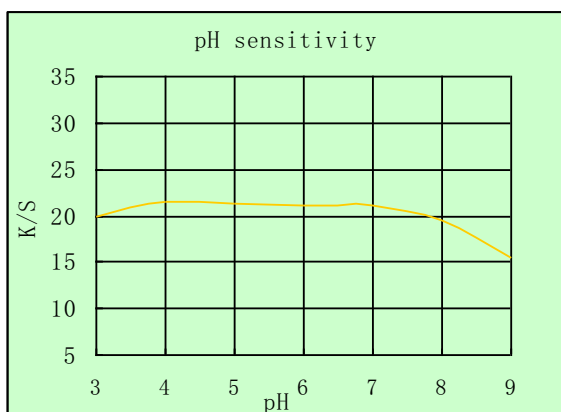
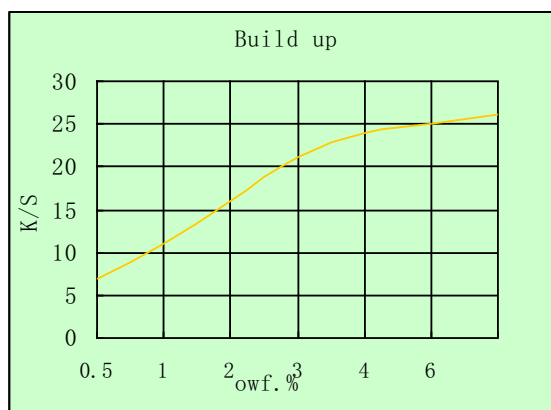
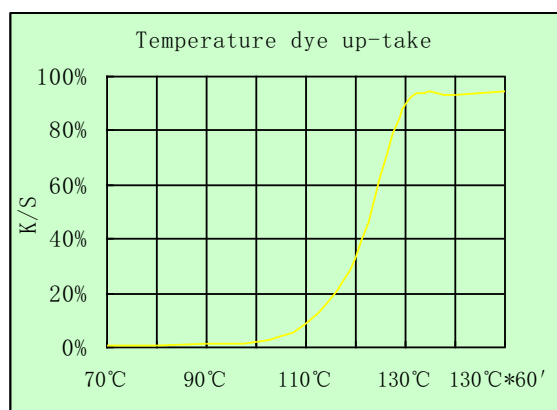
Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4	4-5	4	4-5	5	5	4-5
AATCC 11A, 49°C		4	4-5	4	4-5	5	5	4-5

Perspiration

ISO 105 E04, Alkaline		4-5	4-5	4-5	4-5	4	4-5	4-5
ISO 105 E04, Acid		4-5	4	4-5	4-	4-5	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance

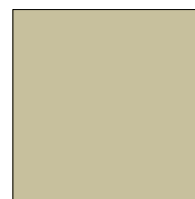


Jihua STARCron® Rapid dyeing (HRD & NN) series

Starcron Yellow Brown NN

Identification

C.I. Disperse	Mix
Energy Level	Medium
Chemical Class	—

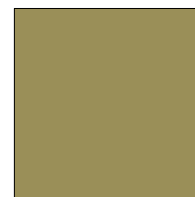


OWF 0.70 %

Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	X	X	✓	X
Medium	✓	✓	✓	X
Dark	✓	✓	X	X

- ✓ = suitable
 ○ = moderate
 X = unsuitable



OWF 1.1 %



OWF 2.2 %

Characteristic

- Medium temperature dyes, excellent all around color fastness
- Excellent deep dyeing performance; suits medium and dark color
- Excellent compatibleness among varieties in this series; superb success rate
- Suitable for dyeing super fine fiber , exhaust dyeing and pad dyeing of PES and PES/Cotton blended fabrics

Properties

pH dependency	4-7
Liquid ratio dependency	1: (20-30)
Temperature dependency	130-135°C
HT color absorption	88.16%
Levelling	89.00%
Dischargeability	X
Build up: HT dyeing	A
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties**Xenon light fastness** (blue scale), ISO 105-B02

1/25 SD	CH	
1/1 SD	CH	6-7
2/1 SD	CH	6-7

Sublimation fastness, ISO 105-P01

°C	150	5
	180	4-5
	200	3

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4-5	4

Rubbing fastness, ISO 105-X12

	dry	wet
	4-5	4-5

Hot pressing fastness, ISO 105-X11

200°C	instant	4 hours
	4-5	4-5

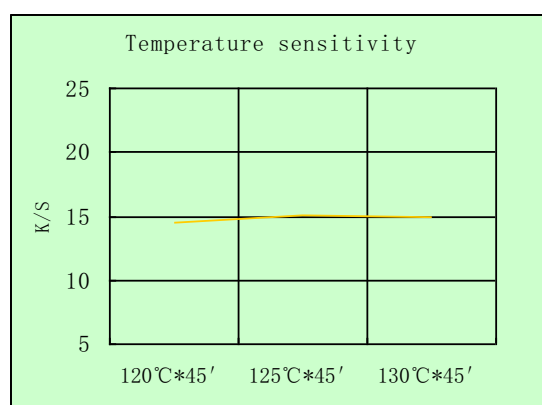
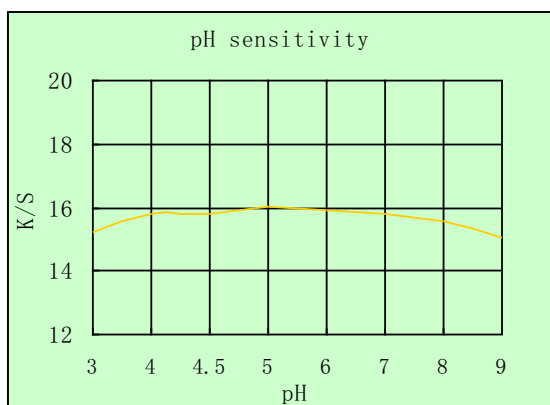
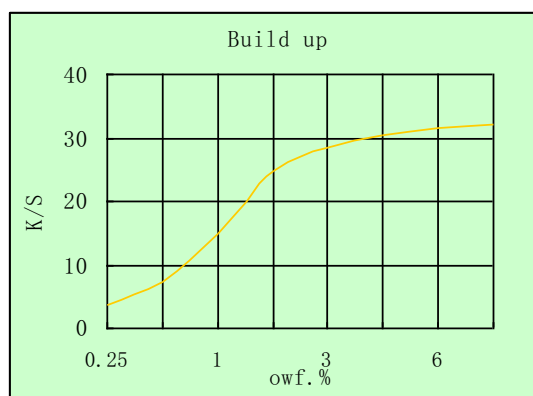
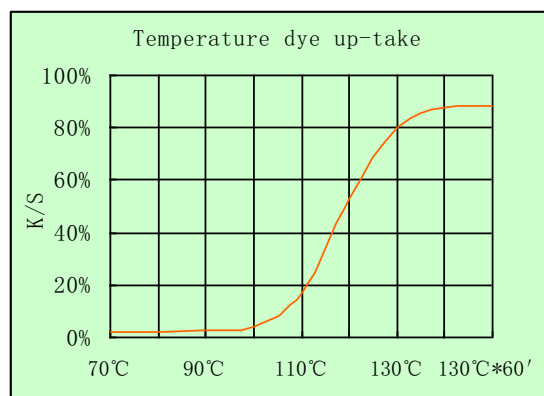
Wet fastness properties

<i>Washing</i>	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4	4-5	4-5	4-5	5	5	4-5
AATCC 11A, 49°C		4	4-5	4-5	4-5	5	5	4-5

Perspiration

ISO 105 E04, Alkaline		4-5	4-5	4-5	4-5	4	4-5	4-5
ISO 105 E04, Acid		4-5	4	4-5	4-	4-5	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

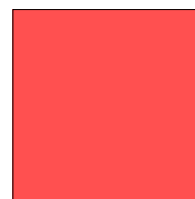
Dye application performance

Jihua STARCron® Rapid dyeing (HRD & NN) series

Starcron Red NN

Identification

C.I. Disperse	Mix
Energy Level	Medium
Chemical Class	—

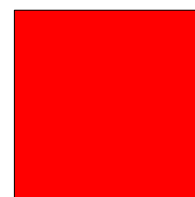


OWF 0.70 %

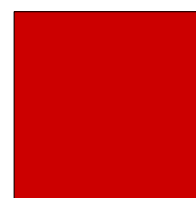
Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	x	x	✓	x
Medium	✓	✓	✓	x
Dark	✓	✓	x	x

- ✓ = suitable
 ○ = moderate
 x = unsuitable



OWF 1.1 %



OWF 2.2 %

Characteristic

- Medium temperature dyes, excellent all around color fastness
- Excellent deep dyeing performance; suits medium and dark color
- Excellent compatibleness among varieties in this series; superb success rate
- Suitable for dyeing super fine fiber , exhaust dyeing and pad dyeing of PES and PES/Cotton blended fabrics

Properties

pH dependency	3-8
Liquid ratio dependency	1: (20-30)
Temperature dependency	130-135°C

HT color absorption	95.00%
Levelling	62.75%

Dischargeability	x
Build up: HT dyeing	A

Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm
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Fastness Properties**Xenon light fastness (blue scale), ISO 105-B02**

1/25 SD	CH	5
1/1 SD	CH	5-6
2/1 SD	CH	5-6

Sublimation fastness, ISO 105-P01

°C	150	5
	180	4
	200	2-3

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4-5	4

Rubbing fastness, ISO 105-X12

	dry	wet
	4-5	4-5

Hot pressing fastness, ISO 105-X11

200°C	instant	4 hours
	4	4-5

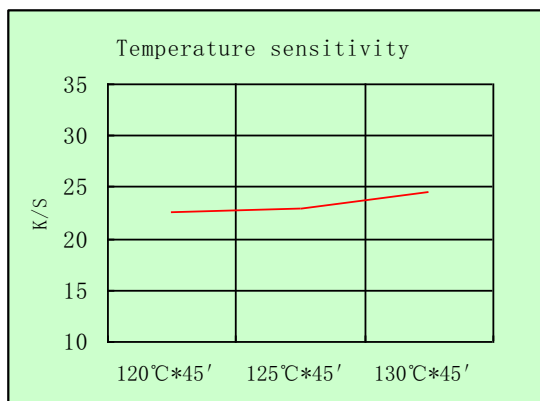
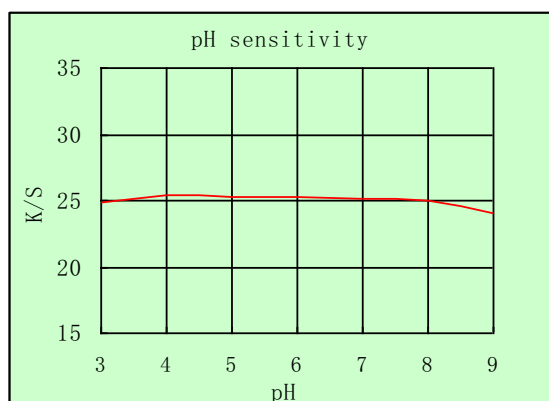
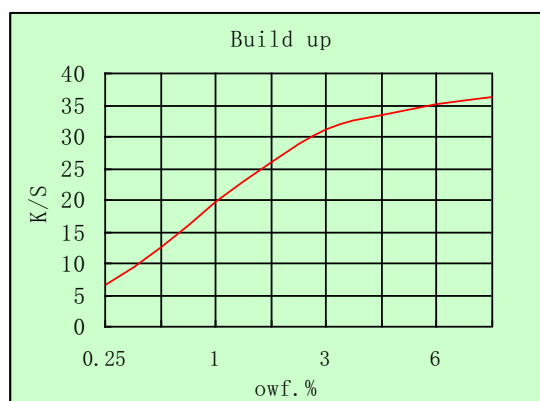
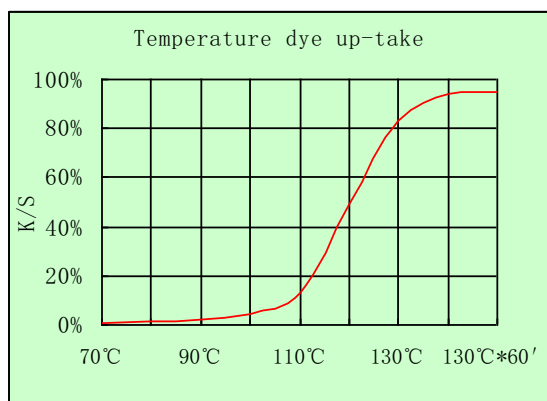
Wet fastness properties

Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4	4-5	4	4-5	5	5	4-5
AATCC 11A, 49°C		4	4-5	4	4-5	5	5	4-5

Perspiration

ISO 105 E04, Alkaline		4-5	4-5	4-5	4-5	4	4-5	4-5
ISO 105 E04, Acid		4-5	4	4-5	4-	4-5	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

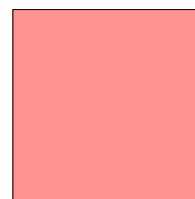
Dye application performance

Jihua STARCron® Rapid dyeing (HRD & NN) series

Starcron Scarlet NN

Identification

C.I. Disperse	Mix
Energy Level	Medium
Chemical Class	—

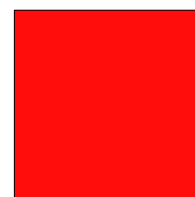


OWF 0.70 %

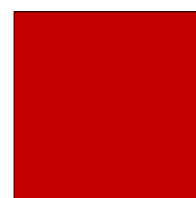
Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	X	X	✓	X
Medium	✓	✓	✓	X
Dark	✓	✓	X	X

- ✓ = suitable
 ○ = moderate
 X = unsuitable



OWF 1.1 %



OWF 2.2 %

Characteristic

- Medium temperature dyes, excellent all around color fastness
- Excellent deep dyeing performance; suits medium and dark color
- Excellent compatibleness among varieties in this series; superb success rate
- Suitable for dyeing super fine fiber , exhaust dyeing and pad dyeing of PES and PES/Cotton blended fabrics

Properties

pH dependency	4-9
Liquid ratio dependency	1: (20-30)
Temperature dependency	130-135°C
HT color absorption	94.50%
Levelling	71.58%
Dischargeability	X
Build up: HT dyeing	A
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties

Xenon light fastness (blue scale), ISO 105-B02

1/25 SD	CH	4
1/1 SD	CH	4-5
2/1 SD	CH	5

Sublimation fastness, ISO 105-P01

°C	150	5
	180	4-5
	200	3

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4	3-4

Rubbing fastness, ISO 105-X12

	dry	wet
	4-5	4-5

Hot pressing fastness, ISO 105-X11

200°C	instant	4 hours
	3-4	4

Wet fastness properties

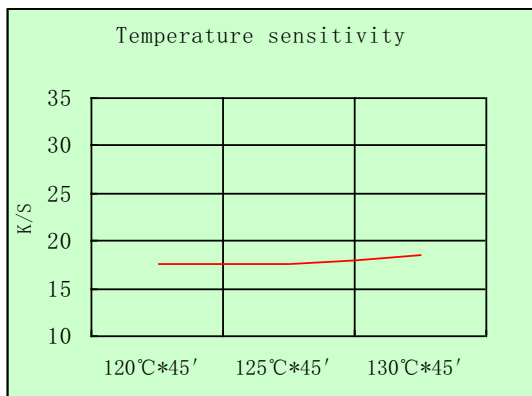
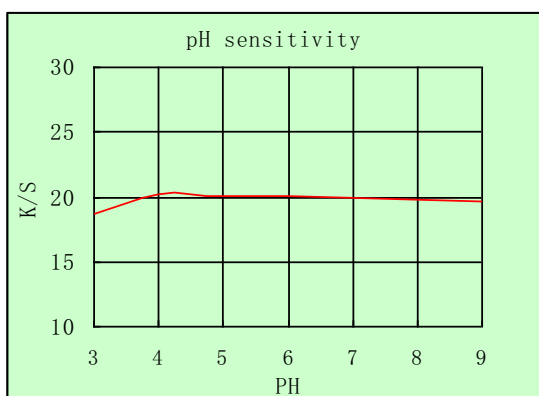
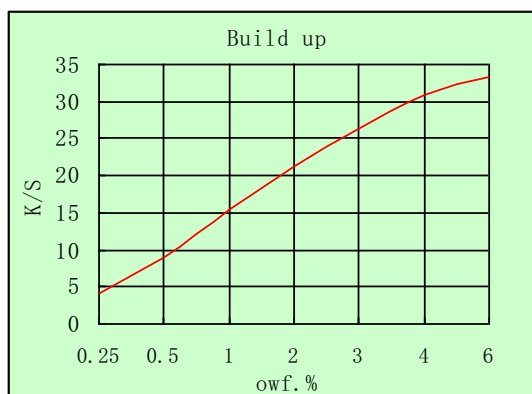
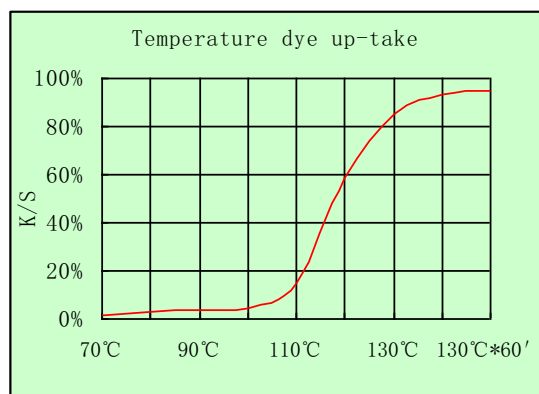
Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4	4-5	4	4-5	5	5	4-5
AATCC 11A, 49°C		4	4-5	4	4-5	5	5	4-5

Perspiration

ISO 105 E04, Alkaline		4-5	4-5	5	4-5	4	4-5	4-5
ISO 105 E04, Acid		4-5	4	4-5	4-	4-5	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance

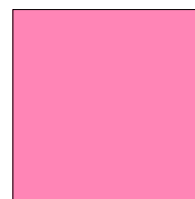


Jihua STARCron® Rapid dyeing (HRD & NN) series

StarcronRubine NN

Identification

C.I. Disperse	Mix
Energy Level	Medium
Chemical Class	—

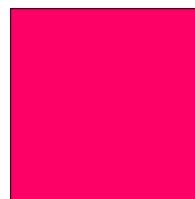


OWF 0.70 %

Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	X	X	✓	X
Medium	✓	✓	✓	X
Dark	✓	✓	X	X

- ✓ = suitable
 ○ = moderate
 X = unsuitable



OWF 1.1 %



OWF 2.2 %

Characteristic

- Medium temperature dyes, excellent all around color fastness
- Excellent deep dyeing performance; suits medium and dark color
- Excellent compatibleness among varieties in this series; superb success rate
- Suitable for dyeing super fine fiber , exhaust dyeing and pad dyeing of PES and PES/Cotton blended fabrics

Properties

pH dependency	3-7
Liquid ratio dependency	1: (20-30)
Temperature dependency	130-135°C

HT color absorption	91.87%
Levelling	87.16%

Dischargeability	X
Build up: HT dyeing	A

Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm
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Fastness Properties**Xenon light fastness (blue scale), ISO 105-B02**

1/25 SD	CH	6
1/1 SD	CH	6-7
2/1 SD	CH	6-7

Sublimation fastness, ISO 105-P01

°C	150	5
	180	4
	200	2-3

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4	3-4

Rubbing fastness, ISO 105-X12

	dry	wet
	4-5	4-5

Hot pressing fastness, ISO 105-X11

200°C	instant	4 hours
	4	4

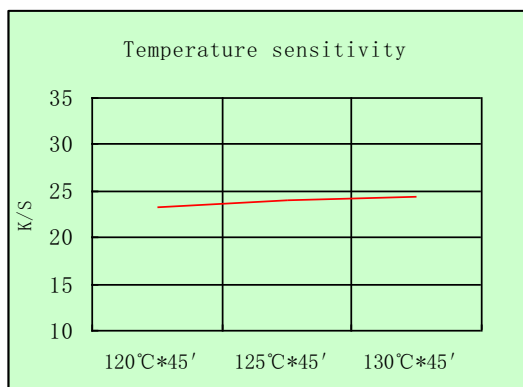
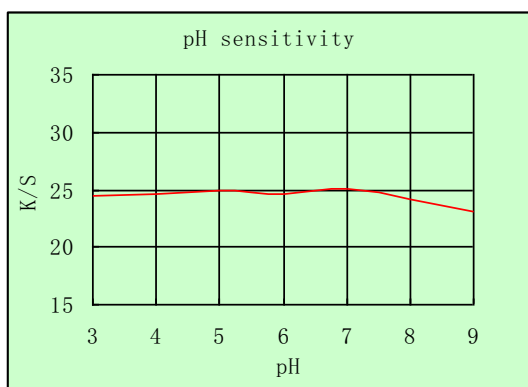
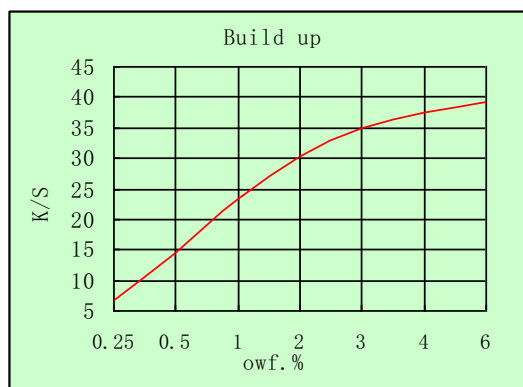
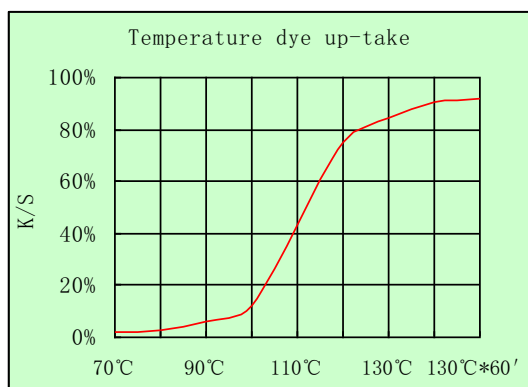
Wet fastness properties

<i>Washing</i>	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4	4-5	4	4-5	5	5	4-5
AATCC 11A, 49°C		4	4-5	4	4-5	5	5	4-5

Perspiration

ISO 105 E04, Alkaline		4-5	4-5	4-5	4-5	4	4-5	4-5
ISO 105 E04, Acid		4-5	4	4-5	4-	4-5	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

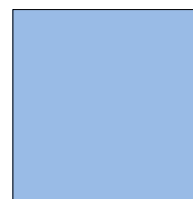
Dye application performance

Jihua STARCron® Rapid dyeing (HRD & NN) series

Starcron Blue NN

Identification

C.I. Disperse	Mix
Energy Level	Medium
Chemical Class	—

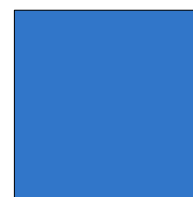


OWF 0.70 %

Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	x	x	✓	x
Medium	✓	✓	✓	x
Dark	✓	✓	x	x

- ✓ = suitable
 ○ = moderate
 x = unsuitable



OWF 1.1 %



OWF 2.2 %

Characteristic

- Medium temperature dyes, excellent all around color fastness
- Excellent deep dyeing performance; suits medium and dark color
- Excellent compatibleness among varieties in this series; superb success rate
- Suitable for dyeing super fine fiber , exhaust dyeing and pad dyeing of PES and PES/Cotton blended fabrics

Properties

pH dependency	4-6
Liquid ratio dependency	1: (20-30)
Temperature dependency	130-135°C
HT color absorption	94.96%
Levelling	77.68%
Dischargeability	x
Build up: HT dyeing	A
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties

Xenon light fastness (blue scale), ISO 105-B02

1/25 SD	CH	4-5
1/1 SD	CH	5-
2/1 SD	CH	5-

Sublimation fastness, ISO 105-P01

°C	150	5-
	180	4
	200	2-3

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4-5	4

Rubbing fastness, ISO 105-X12

	dry	wet
	4-5	4-5

Hot pressing fastness, ISO 105-X11

200°C	instant	4 hours
	4	4

Wet fastness properties

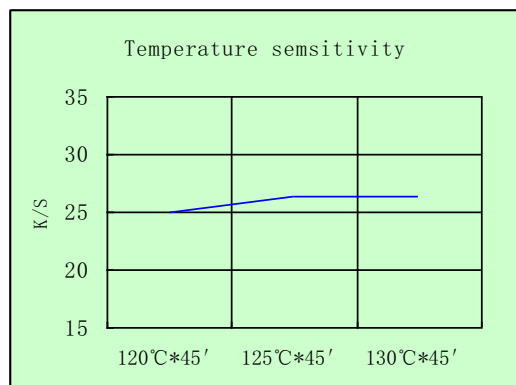
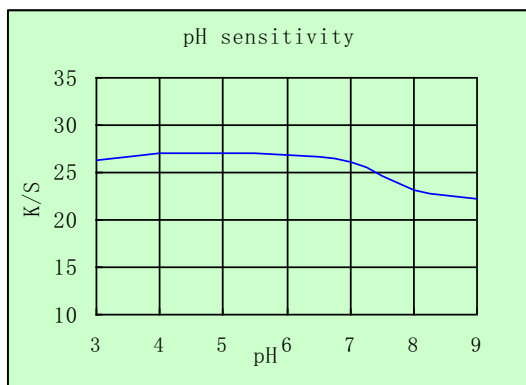
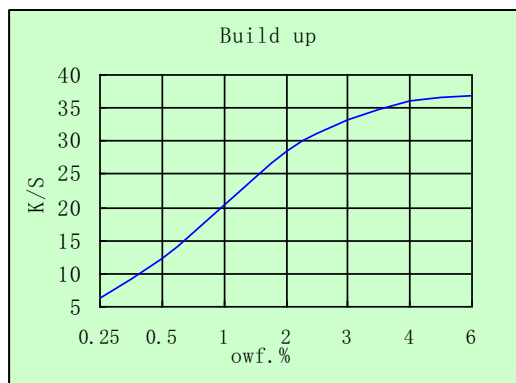
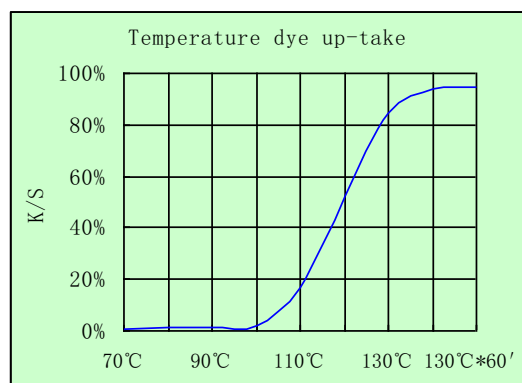
Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4	4-5	4	4-5	5	5	4-5
AATCC 11A, 49°C		4	4-5	4	4-5	5	5	4-5

Perspiration

ISO 105 E04, Alkaline		4-5	4-5	4-5	4-5	4	4-5	4-5
ISO 105 E04, Acid		4-5	4	4-5	4-	4-5	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance

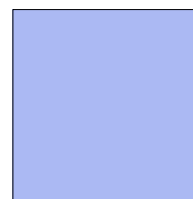


Jihua STARCron® Rapid dyeing (HRD & NN) series

Starcron Navy NN

Identification

C.I. Disperse	Mix
Energy Level	Medium
Chemical Class	—

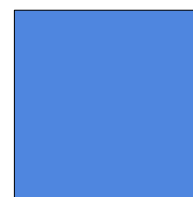


OWF 0.70 %

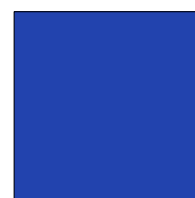
Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	x	x	✓	x
Medium	✓	✓	✓	x
Dark	✓	✓	x	x

- ✓ = suitable
 ○ = moderate
 x = unsuitable



OWF 1.1 %



OWF 2.2 %

Characteristic

- Medium temperature dyes, excellent all around color fastness
- Excellent deep dyeing performance; suits medium and dark color
- Excellent compatibleness among varieties in this series; superb success rate
- Suitable for dyeing super fine fiber , exhaust dyeing and pad dyeing of PES and PES/Cotton blended fabrics

Properties

pH dependency	3-7
Liquid ratio dependency	1: (20-30)
Temperature dependency	130-135°C
HT color absorption	97.23%
Levelling	77.68%
Dischargeability	x
Build up: HT dyeing	A
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties

Xenon light fastness (blue scale), ISO 105-B02		
1/25 SD	CH	5
1/1 SD	CH	5-6
2/1 SD	CH	5-6
Sublimation fastness, ISO 105-P01		
°C	150	5
	180	4
	200	2-3
Fastness to chlorinated water, ISO 105-E03		
	20 ppm	50 ppm
	4-5	4

Rubbing fastness, ISO 105-X12		
	dry	wet
	4-5	4-5

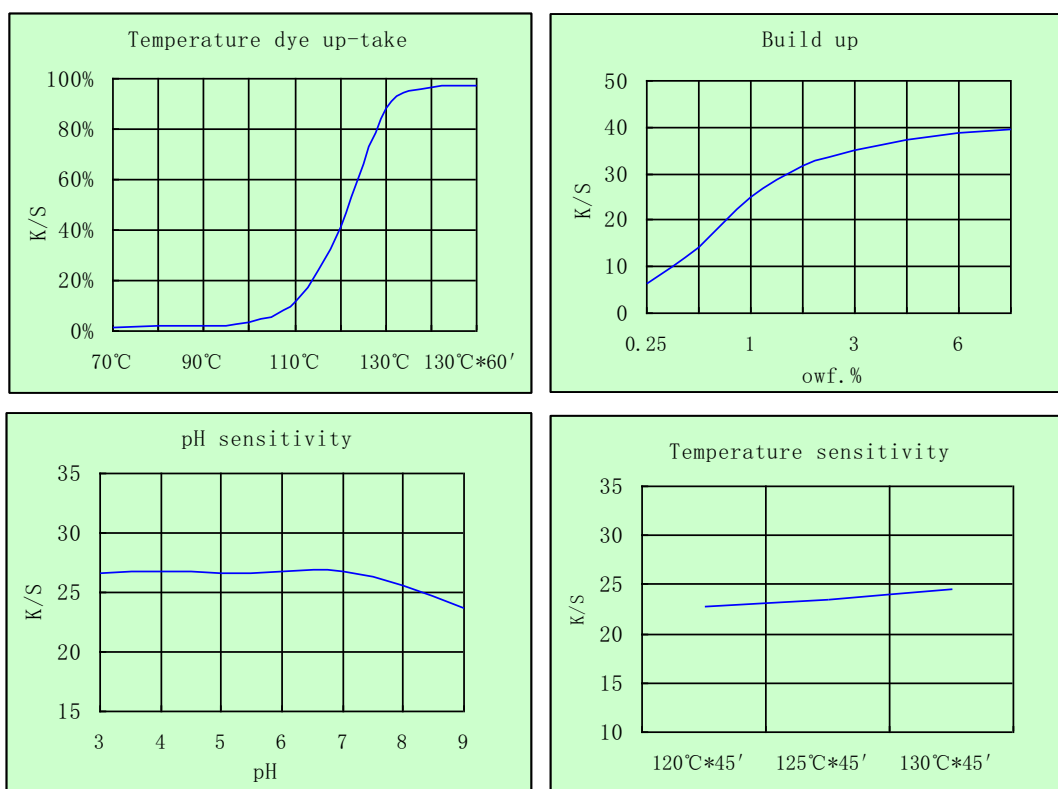
Hot pressing fastness, ISO 105-X11		
	instant	4 hours
200°C	4	4-5

Wet fastness properties

Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4	4-5	4-5	3-4	5	5	4-5
AATCC 11A, 49°C		4	4-5	4-5	4-5	5	5	4-5
Perspiration								
ISO 105 E04, Alkaline		4-5	4-5	5	4-5	4	4-5	4-5
ISO 105 E04, Acid		4-5	4	4-5	4-	4-5	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance



Jihua STARCron® Rapid dyeing (HRD & NN) series

Starcron Black NN

Identification

C.I. Disperse	Mix
Energy Level	Medium
Chemical Class	—



OWF 0.70 %

Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	x	x	✓	x
Medium	✓	✓	✓	x
Dark	✓	✓	x	x

- ✓ = suitable
 ○ = moderate
 x = unsuitable



OWF 1.1 %



OWF 2.2 %

Characteristic

- Medium temperature dyes, excellent all around color fastness
- Excellent deep dyeing performance; suits medium and dark color
- Excellent compatibleness among varieties in this series; superb success rate
- Suitable for dyeing super fine fiber , exhaust dyeing and pad dyeing of PES and PES/Cotton blended fabrics

Properties

pH dependency	3-8
Liquid ratio dependency	1: (20-30)
Temperature dependency	130-135°C
HT color absorption	96.69%
Levelling	65.92%
Dischargeability	x
Build up: HT dyeing	A
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties**Xenon light fastness (blue scale), ISO 105-B02**

1/25 SD	CH	5
1/1 SD	CH	5-6
2/1 SD	CH	5-6

Sublimation fastness, ISO 105-P01

°C	150	5
	180	4
	200	2-3

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4-5	4

Rubbing fastness, ISO 105-X12

	dry	wet
	4-5	4-5

Hot pressing fastness, ISO 105-X11

200°C	instant	4 hours
	4-5	4

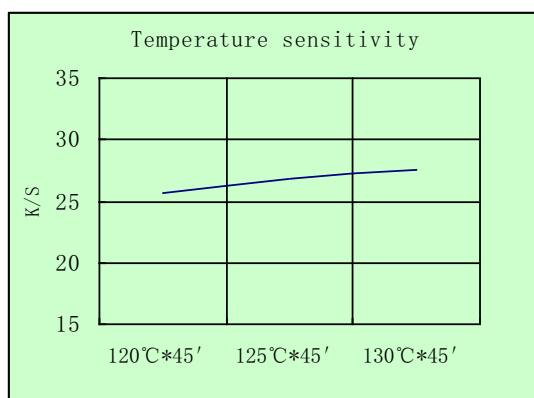
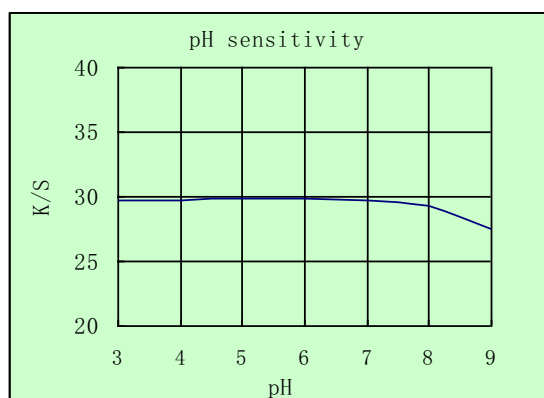
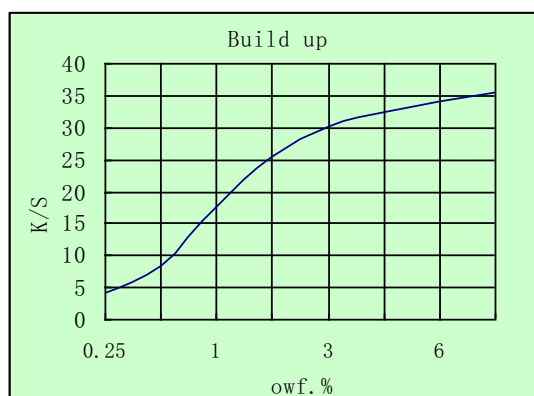
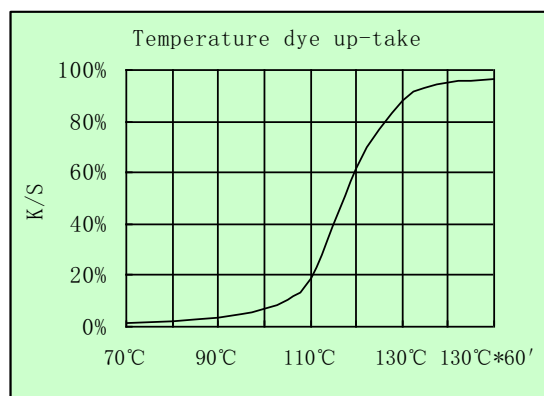
Wet fastness properties

<i>Washing</i>	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4	4-5	4-5	3-4	5	5	4-5
AATCC 11A, 49°C		4	4-5	4-5	3-4	5	5	4-5

Perspiration

ISO 105 E04, Alkaline		4-5	4-5	5	4-5	4	4-5	4-5
ISO 105 E04, Acid		4-5	4	5	4-	4-5	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

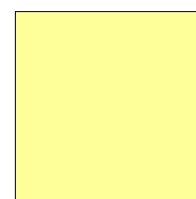
Dye application performance

Jihua STARCron® Micro fabric dyeing series

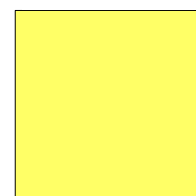
Starcron Yellow HACE

Identification

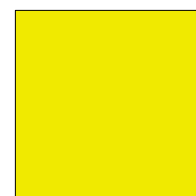
C.I. Disperse	mix
Energy Level	Low
Chemical Class	—



OWF 0.70 %



OWF 1.1 %



OWF 2.2 %

Application

Dyeing Method & Depth	HT	Thermoso	Carrier	Printing
Light	✓	✗	✓	✗
Medium	✗	✗	✗	✗
Dark	✗	✗	✗	✗

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable

Characteristic

- Low temperature dyes.
- Excellent deep-dyeing performance; suits medium and dark color.
- Excellent compatibleness among varieties in this series; superb success rate.
- Suitable for dyeing of super fine fiber, and exhaust dyeing and pad dyeing of polyester fabrics and polyester/cotton blended fabrics.
- Excellent all-around color fastness.

Properties

pH dependency	3-9
Liquid ratio dependency	1: (20-30)
Temperature dependency	(130-135) °C
HT color absorption	98.27%
Levelling	99.82%
Dischargeability	✗
Build up: HT dyeing	B
Metal-ion sensitivity	Fe ⁺⁺ ≤12ppm Mg ⁺⁺ ≤50ppm Cu ⁺⁺ ≤10ppm Ca ⁺⁺ ≤50ppm

Fastness Properties

Xenon light fastness (blue scale), ISO 105-B02		
1/25 SD	CH	6-7
1/1 SD	CH	7
2/1 SD	CH	7
Sublimation fastness, ISO 105-P01		
°C	150	4-5
	180	3
	200	2
Fastness to chlorinated water, ISO 105-E03		
	20 ppm	50 ppm

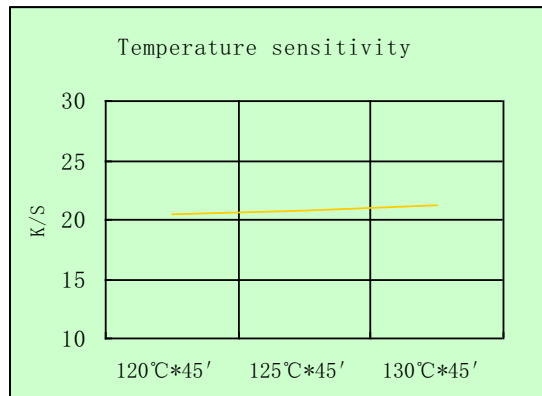
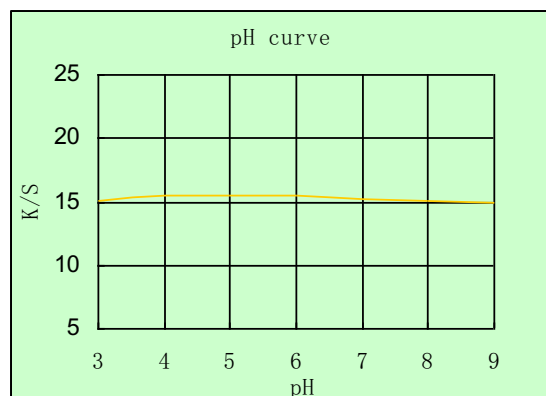
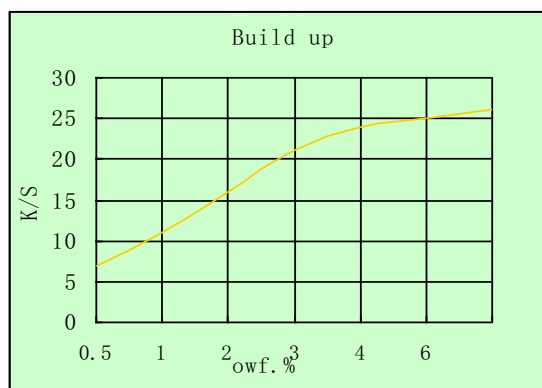
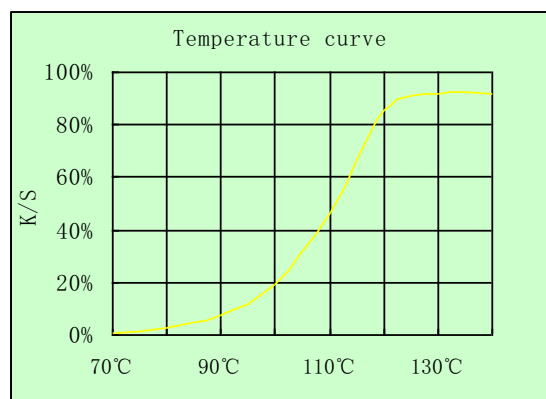
Rubbing fastness, ISO 105-X12		
	dry	wet
	4-5	4-5

Hot pressing fastness, ISO 105-X11		
200°C	instant	4 hours
	4-5	4-5

Wet fastness properties

<i>Washing</i>	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		5	3-4	5	3	5	4-5	4
AATCC 11A, 49°C		5	3-4	5	3	5	4-5	4
<i>Perspiration</i>								
ISO 105 E04, Alkaline		4	4-5	4-5	4-5	4	4-5	4-5
ISO 105 E04, Acid		4-5	4-5	4-5	4	4-5	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

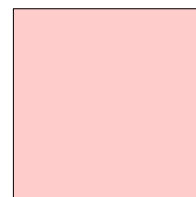
Dye application performance

Jihua STARCron® Micro fabric dyeing series

Starcron Red HACE

Identification

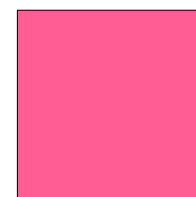
C.I. Disperse	Mix
Energy Level	Low
Chemical Class	—



OWF 0.70 %

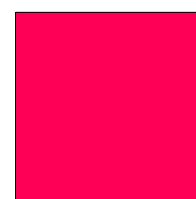
Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✓	X	✓	✓
Medium	X	X	X	X
Dark	X	X	X	X



OWF 1.1 %

- ✓ = suitable
 ○ = moderate
 X = unsuitable



OWF 2.2 %

Characteristic

- low temperature dyes.
- Excellent light fastness and leveling dyeing.
- As one of low temperature tricolor.
- Suitable for transfer printing.

Properties

pH dependency	3-9
Liquid ratio dependency	1: (20-30)
Temperature dependency	(130-135) °C
HT color absorption	95.10%
Levelling	99.29%
Dischargeability	X
Build up: HT dyeing	A
Metal-ion sensitivity	Fe ⁺⁺ ≤12ppm Mg ⁺⁺ ≤50ppm Cu ⁺⁺ ≤10ppm Ca ⁺⁺ ≤50ppm

Fastness Properties**Xenon light fastness (blue scale), ISO 105-B02**

1/25 SD	CH	5-6
1/1 SD	CH	6
2/1 SD	CH	6-7

Sublimation fastness, ISO 105-P01

°C	150	4-5
	180	3
	200	2

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4-5	4

Rubbing fastness, ISO 105-X12

	dry	wet
	5	5

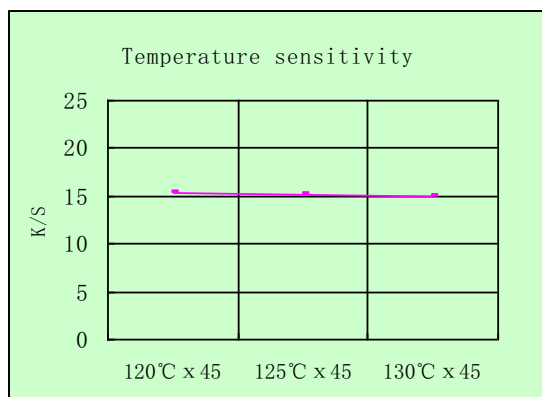
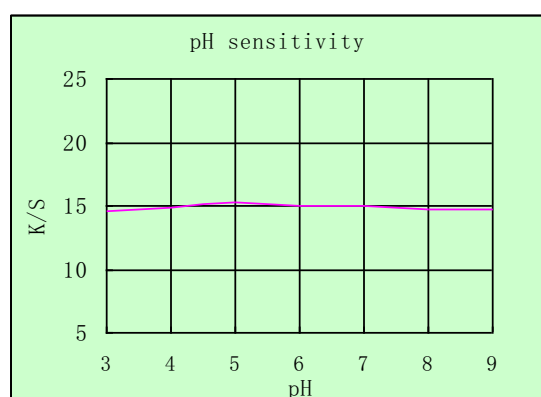
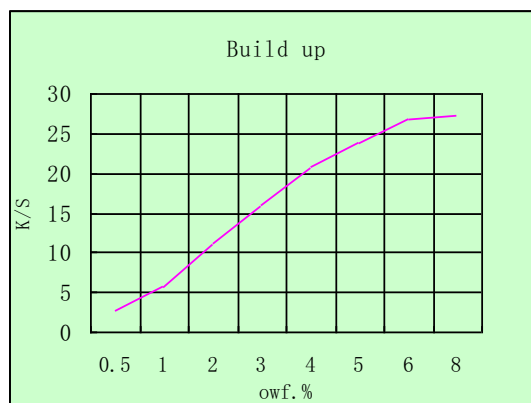
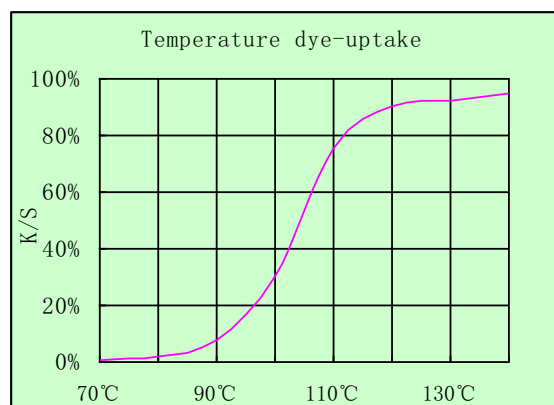
Hot pressing fastness, ISO 105-X11

200°C	instant	4 hours
	4-5	4-5

Wet fastness properties

Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4-5	4	5	3-4	4	4-5	4
AATCC 11A, 49°C		4-5	4+	4-5	3-4	4	4-5	4
Perspiration								
ISO 105 E04, Alkaline		4-5	4-5	4-5	4-5	4-5	4-5	4-5
ISO 105 E04, Acid		4-5	4-5	4-5	4-5	4-5	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance

Jihua STARCron® Micro fabric dyeing series

Starcron Blue HACE

Identification

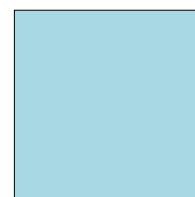
C.I. Disperse	Mix
Energy Level	Low
Chemical Class	—



OWF 0.70 %

Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✓	✗	✓	✗
Medium	✗	✗	✗	✗
Dark	✗	✗	✗	✗



OWF 1.1 %

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable



OWF 2.2 %

Characteristic

- Low temperature dyes.
- Excellent light fastness and deep dyeing quality.
- Effectual leveling dyeing and coverage.
- Main varieties of exhaust dyeing; as one of low temperature tricolor.
- Suitable for transfer printing.

Properties

pH dependency	3-9
Liquid ratio dependency	1: (20-30)
Temperature dependency	(130-135) °C
HT color absorption	93.30%
Levelling	89.03%
Dischargeability	✗
Build up: HT dyeing	B
Metal-ion sensitivity	Fe ⁺⁺ ≤12ppm Mg ⁺⁺ ≤50ppm Cu ⁺⁺ ≤10ppm Ca ⁺⁺ ≤50ppm

Fastness Properties

Xenon light fastness (blue scale), ISO 105-B02		
1/25 SD	CH	5-6
1/1 SD	CH	6
2/1 SD	CH	6-7=
Sublimation fastness, ISO 105-P01		
°C	150	4-5
	180	3
	200	2
Fastness to chlorinated water, ISO 105-E03		
	20 ppm	50 ppm
	4	3-4

Rubbing fastness, ISO 105-X12		
	dry	wet
	4-5	4-5

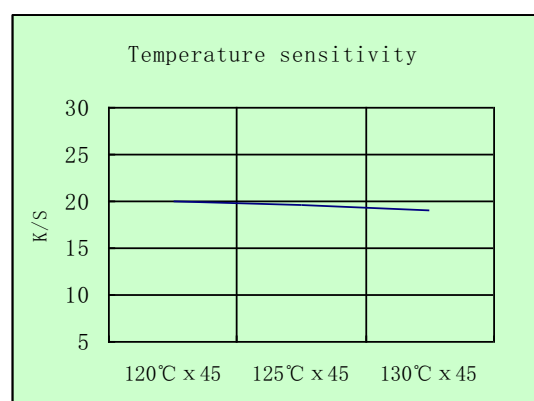
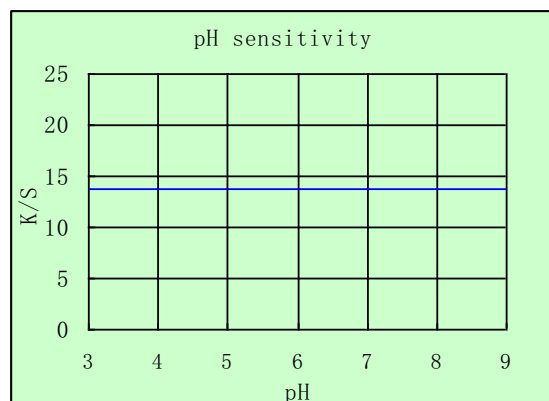
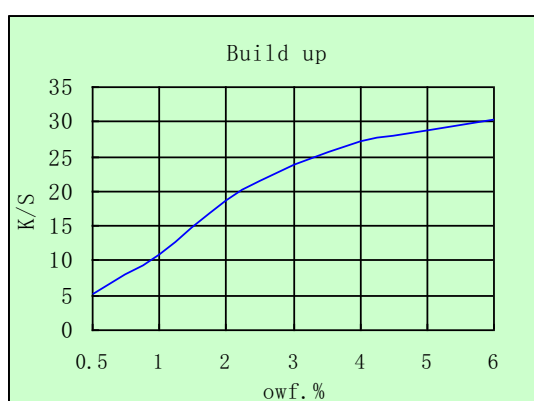
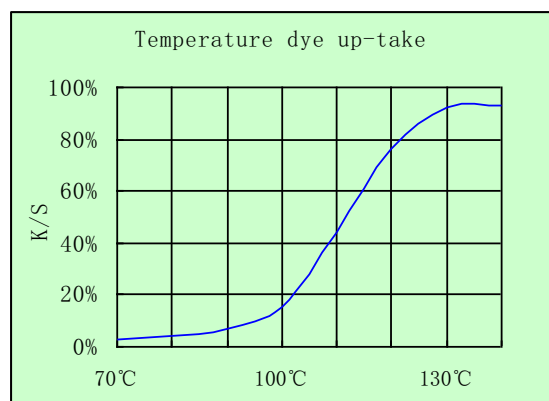
Hot pressing fastness, ISO 105-X11		
200°C	instant	4 hours
	4-5	4-5

Wet fastness properties

Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4-5	4	4	3	4-5	4-5	4
AATCC 11A, 49°C		4-5	4	4-5	4	4-5	4-5	4
Perspiration								
ISO 105 E04, Alkaline		4	4-5-	4-5	4+	4-5-	4-5	4-5
ISO 105 E04, Acid		4	4-5	4-5	4-5	4-5	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance

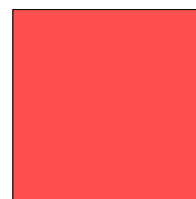


Jihua STARCron® Micro fabric dyeing series

Starcron Red SE-3B

Identification

C.I. Disperse	Mix
Energy Level	Medium
Chemical Class	—

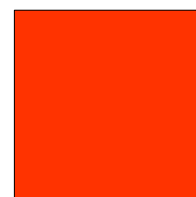


OWF 0.70 %

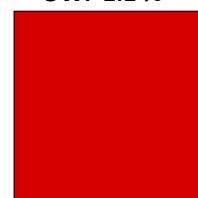
Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✓	✓	✗	✓
Medium	✓	✓	✗	✓
Dark	✓	✗	✗	✗

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable



OWF 1.1 %



OWF 2.2 %

Characteristic

- Medium temperature dyes.
- Excellent dyeing fastness and brighter shade.
- Good deep dyeing quality, suitable for dyeing of super fine fiber.
- As main variety of 红 medium temperature dyes, widely applied.

Properties

pH dependency	4-8
Liquid ratio dependency	1: (20-30)
Temperature dependency	(130-135) °C
HT color absorption	87.80%
Levelling	76.14%
Dischargeability	✗
Build up: HT dyeing	B
Metal-ion sensitivity	Fe ⁺⁺ ≤12ppm Mg ⁺⁺ ≤50ppm Cu ⁺⁺ ≤10ppm Ca ⁺⁺ ≤50ppm

Fastness Properties**Xenon light fastness (blue scale), ISO 105-B02**

1/25 SD	CH	4-5
1/1 SD	CH	5
2/1 SD	CH	5-6

Sublimation fastness, ISO 105-P01

°C	150	5
	180	4
	200	2-3

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4+	4-

Rubbing fastness, ISO 105-X12

	dry	wet
	4-5	4-5

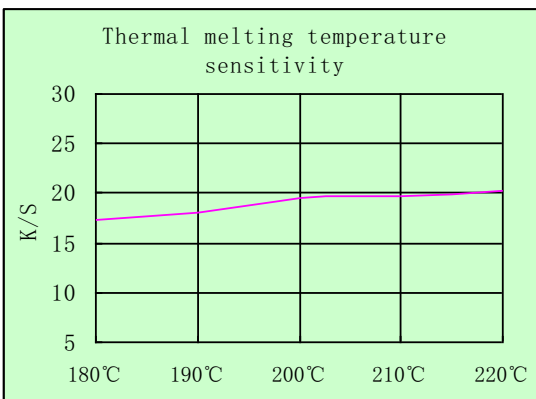
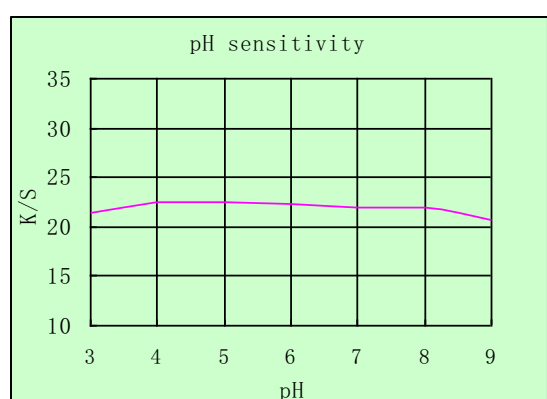
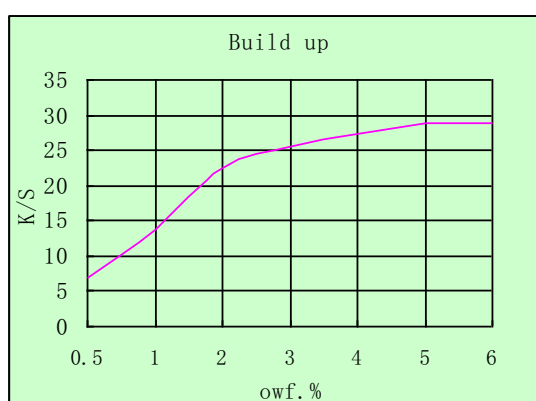
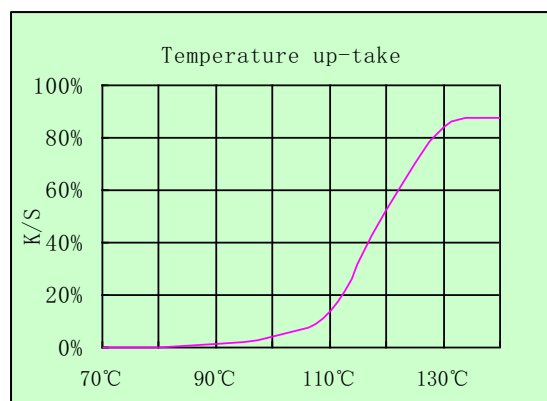
Hot pressing fastness, ISO 105-X11

200°C	instant	4 hours
	4	4

Wet fastness properties

<i>Washing</i>	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4-5	4	4-5	3-4	4-5	4-5	4
AATCC 11A, 49°C		4-5	4	4-5	3-4	4-5	4-5	4
<i>Perspiration</i>								
ISO 105 E04, Alkaline		4	3	4	3	3-4	4-5	4-5
ISO 105 E04, Acid		3	4	4-5	3-4	3-4	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance

Jihua STARCron® Micro fabric dyeing series

Starcron Blue S-2GL

Identification

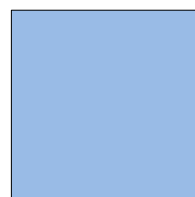
C.I. Disperse	Mix
Energy Level	Hlgh
Chemical Class	—



OWF 0.70 %

Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	X	X	✓	✓
Medium	✓	✓	✓	✓
Dark	✓	✓	X	✓



OWF 1.1 %

- ✓ = suitable
 ○ = moderate
 X = unsuitable



OWF 2.2 %

Characteristic

- High temperature dyes.
- Excellent compatibleness among varieties in this series; superb success rate.
- Excellent deep-dyeing performance; suits medium and dark color.
- Suitable for dyeing of super fine fiber, and exhaust dyeing and pad dyeing of polyester fabrics and polyester/cotton blended fabrics.
- Excellent all-around color fastness.

Properties

pH dependency	4-6
Liquid ratio dependency	1: (20-30)
Temperature dependency	(130-135) °C
HT color absorption	97.23%
Levelling	77.68%
Dischargeability	X
Build up: HT dyeing	A
Metal-ion sensitivity	Fe ⁺⁺ ≤12ppm Mg ⁺⁺ ≤50ppm Cu ⁺⁺ ≤10ppm Ca ⁺⁺ ≤50ppm

Fastness Properties**Xenon light fastness (blue scale), ISO 105-B02**

1/25 SD	CH	5
1/1 SD	CH	5-6
2/1 SD	CH	5-6

Sublimation fastness, ISO 105-P01

°C	150	5
	180	4
	200	2-3

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4-5	4

Rubbing fastness, ISO 105-X12

	dry	wet
	4-5	4-5

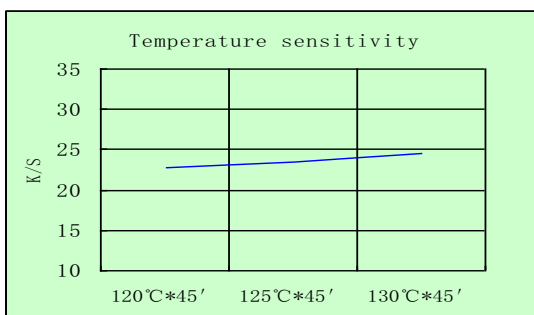
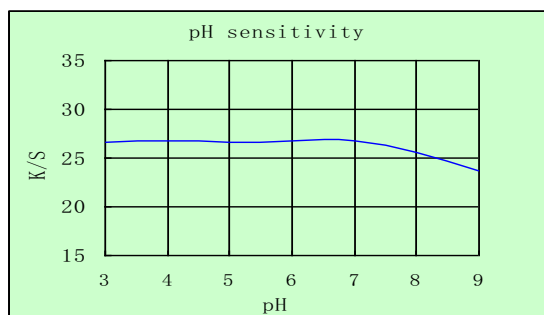
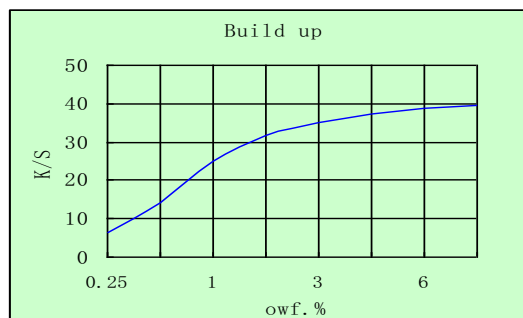
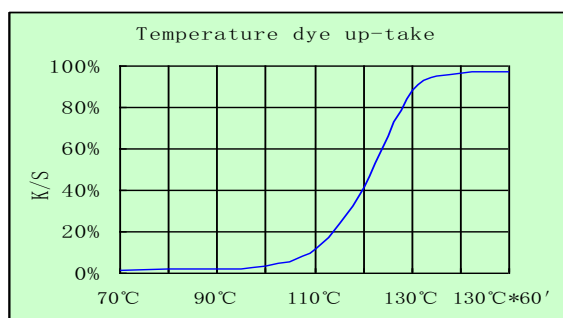
Hot pressing fastness, ISO 105-X11

200°C	instant	4 hours
	4	4-5

Wet fastness properties

Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4	4-5	4-5	3-4	5	5	4-5
AATCC 11A, 49°C		4	4-5	4-5	3-4	5	5	4-5
Perspiration								
ISO 105 E04, Alkaline		4-5	4-5	5	4-5	4	4-5	4-5
ISO 105 E04, Acid		4-5	4	5	4-	4-5-	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

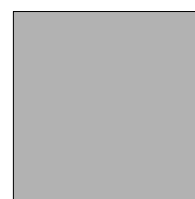
Dye application performance

Jihua STARCron® Micro fabric dyeing series

Starcron Black S-BX

Identification

C.I. Disperse	Mix
Energy Level	High
Chemical Class	—



OWF 0.70 %

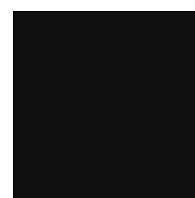
Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	X	X	✓	✓
Medium	✓	✓	✓	✓
Dark	✓	✓	X	✓

- ✓ = suitable
 ○ = moderate
 X = unsuitable



OWF 1.1 %



OWF 2.2 %

Characteristic

- High temperature dyes.
- Compatibleness among varieties in this series; superb success rate.
- Excellent deep-dyeing performance; suits medium and dark color.
- Suitable for dyeing of super fine fiber, and exhaust dyeing and pad dyeing of polyester fabrics and polyester/cotton blended fabrics.
- Excellent all-around color fastness.

Properties

pH dependency	3-8
Liquid ratio dependency	1: (20-30)
Temperature dependency	(130-135) °C
HT color absorption	96.69%
Levelling	65.92%
Dischargeability	X
Build up: HT dyeing	A
Metal-ion sensitivity	Fe ⁺⁺ ≤12ppm Mg ⁺⁺ ≤50ppm Cu ⁺⁺ ≤10ppm Ca ⁺⁺ ≤50ppm

Fastness Properties**Xenon light fastness (blue scale), ISO 105-B02**

1/25 SD	CH	5
1/1 SD	CH	5-6
2/1 SD	CH	5-6

Sublimation fastness, ISO 105-P01

°C	150	5
	180	4
	200	2-3

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4-5	4

Rubbing fastness, ISO 105-X12

	dry	wet
	4-5	4-5

Hot pressing fastness, ISO 105-X11

200°C	instant	4 hours
	4-5	4-5

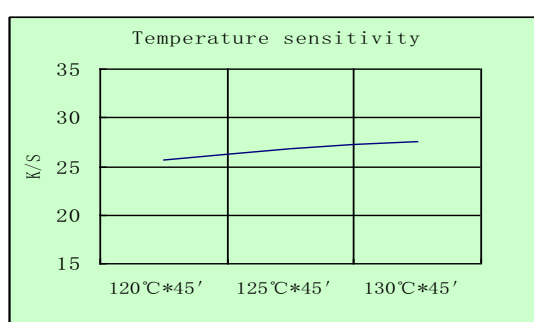
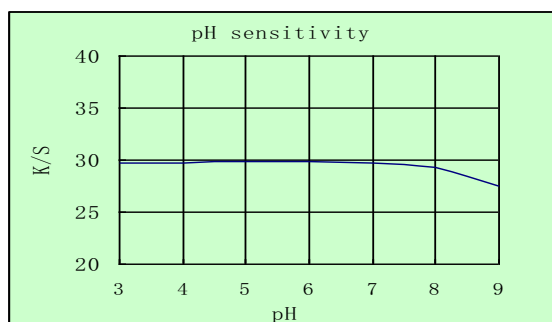
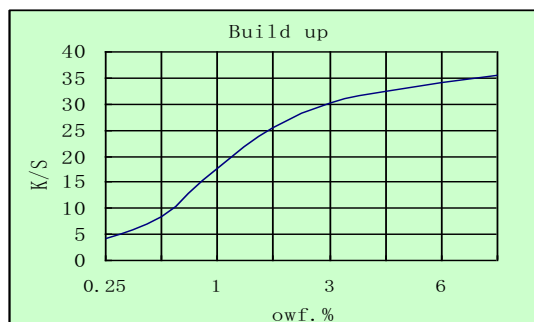
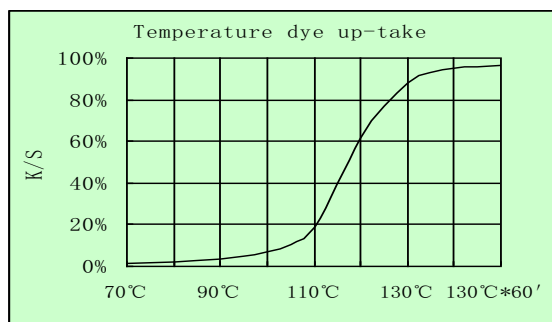
Wet fastness properties

Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4	4-5	4-5	3-4	5	5	4-5
AATCC 11A, 49°C		4	4-5	4-5	3-4	5	5	4-5

Perspiration

ISO 105 E04, Alkaline		4-5	4-5	5	4-5	4	4-5	4-5
ISO 105 E04, Acid		4-5	4	5	4-	4-5-	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

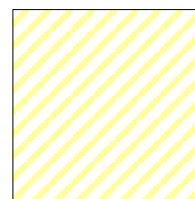
Dye application performance

Jihua STARCRO[®] Printing (Powder) series

Starcron Yellow S-6G (200%)

Identification

C.I. Disperse	Yellow 114
Energy Level	High
Chemical Class	Mono azo

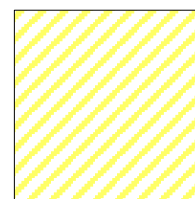


5 g/lit

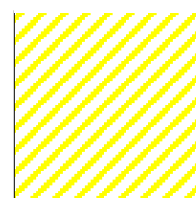
Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✓	✓	✗	✓
Medium	✓	✓	✗	✓
Dark	✓	✓	✗	✓

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable



10 g/lit



20 g/lit

Characteristic

- High temperature dyes
- Excellent light fastness, washing fastness and migration dyeing
- Suits for color matching with high and medium temperature dyes
- Main variety of exhaust dyeing, thermal melting pad dyeing and printing

Properties

pH dependency	4-7
Liquid ratio dependency	1: (20-30)
Temperature dependency	130-135°C
HT color absorption	95.93%
Levelling	96.68%
Dischargeability	○
Build up: HT dyeing	B
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties**Xenon light fastness** (blue scale), ISO 105-B02

1/25 SD	CH	7
1/1 SD	CH	7
2/1 SD	CH	7

Sublimation fastness, ISO 105-P01

°C	150	5
	180	4-5
	200	3-4

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4-5	4+

Rubbing fastness, ISO 105-X12

	dry	wet
	4-5	4-5

Hot pressing fastness, ISO 105-X11

200°C	instant	4 hours
	4-5	4-5

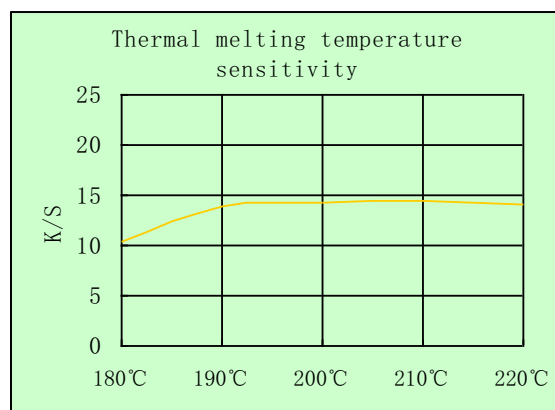
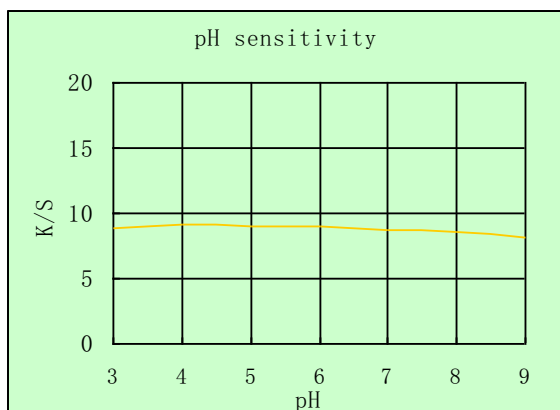
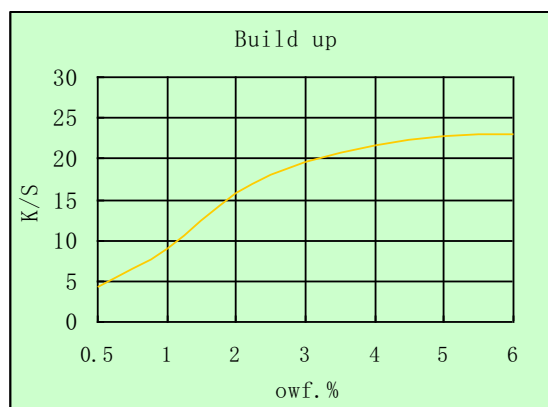
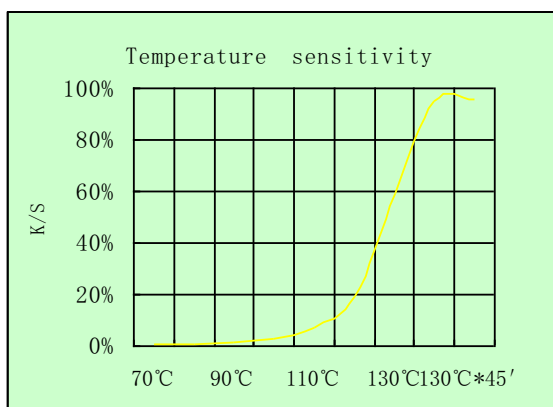
Wet fastness properties

Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		5	4	5	4	5	5	4
AATCC 11A, 49°C		5	4	5	4	5	5	4

Perspiration

ISO 105 E04, Alkaline		4-5	3-4	4-5	3-4+	4	4-5	4
ISO 105 E04, Acid		3-4	3-4+	4-5	3-4+	4	4-5	4

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

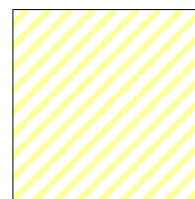
Dye application performance

Jihua STARCron® Printing (Powder) series

Starcron Yellow S-3RL (200%)

Identification

C.I. Disperse	Mix
Energy Level	High
Chemical Class	—

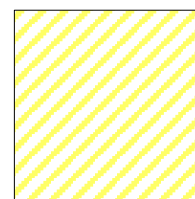


5 g/lt

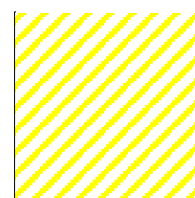
Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✓	✓	✗	✓
Medium	✓	✓	✗	✓
Dark	✓	✓	✗	✓

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable



10 g/lt



20 g/lt

Characteristic

- High temperature dyes.
- Excellent light fastness、washing fastness、sublimation fastness.
- Main variety of exhaust dyeing、thermal melting pad dyeing and printing.
- Light color、lower liquor ratio; Used with the high temperature leveling agent.

Properties

pH dependency	4-8
Liquid ratio dependency	1: (20-30)
Temperature dependency	(130-135) °C
HT color absorption	92.08%
Levelling	97.67%
Dischargeability	○
Build up: HT dyeing	A
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties

Xenon light fastness (blue scale), ISO 105-B02

1/25 SD	CH	6-7
1/1 SD	CH	7
2/1 SD	CH	7

Sublimation fastness, ISO 105-P01

°C	150	5
	180	4-5
	200	3

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4-5	4

Rubbing fastness, ISO 105-X12

	dry	wet
	4-5	4-5

Hot pressing fastness, ISO 105-X11

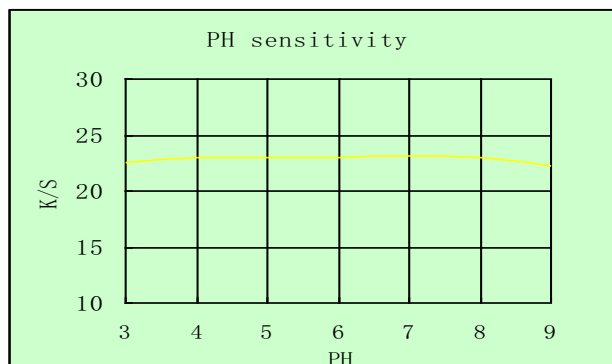
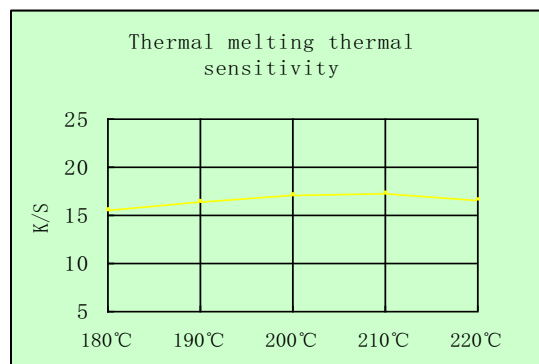
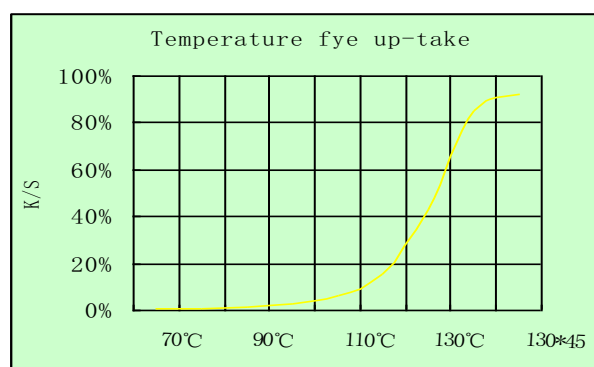
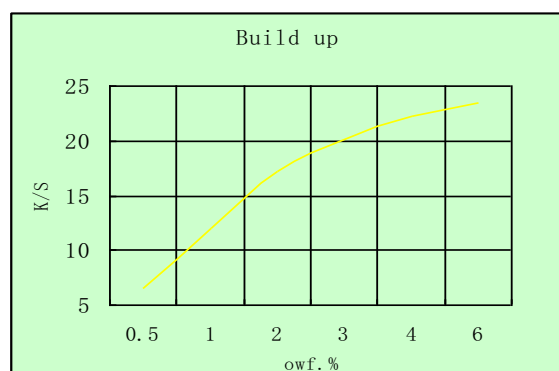
200°C	instant	4 hours
	4	4

Wet fastness properties

Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		5	4-5	5	4-5	5	4-5	4
AATCC 11A, 49°C		5	4-5	5	4-5	5	4-5	4
Perspiration								
ISO 105 E04, Alkaline		4-5	3-4+	4-5	3-4+	3-4	4-5	4
ISO 105 E04, Acid		4+	4	4-5	4	4	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance

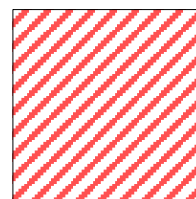


Jihua STARCRO[®] Printing (Powder) series

Starcron Red S-EL (200%)

Identification

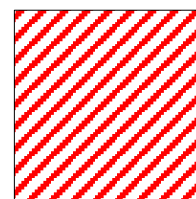
C.I. Disperse	Mix
Energy Level	High
Chemical Class	—



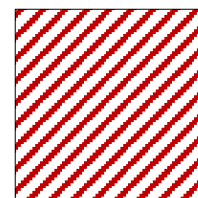
5 g/lit

Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✗	✓	✗	✓
Medium	✓	✓	✗	✓
Dark	✓	✓	✗	✓



10 g/lit



20 g/lit

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable

Characteristic

- High temperature dyes.
- Excellent light fastness, washing fastness and sublimation fastness.
- Can be used for dyeing of polyester and its blended fabric.
- Main variety of thermal melting pad dyeing and printing.

Properties

pH dependency	3-9
Liquid ratio dependency	1: (20-30)
Temperature dependency	(130-135) °C
HT color absorption	85.40%
Levelling	95.80%
Dischargeability	✗
Build up: HT dyeing	A
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties

Xenon light fastness (blue scale), ISO 105-B02		
1/25 SD	CH	6
1/1 SD	CH	6
2/1 SD	CH	6-7
Sublimation fastness, ISO 105-P01		
°C	150	5
	180	4-5
	200	4
Fastness to chlorinated water, ISO 105-E03		
	20 ppm	50 ppm
	4-5	4+

Rubbing fastness, ISO 105-X12		
	dry	wet
	4-5	4-5

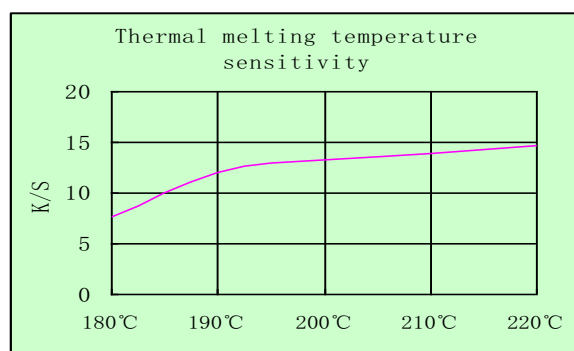
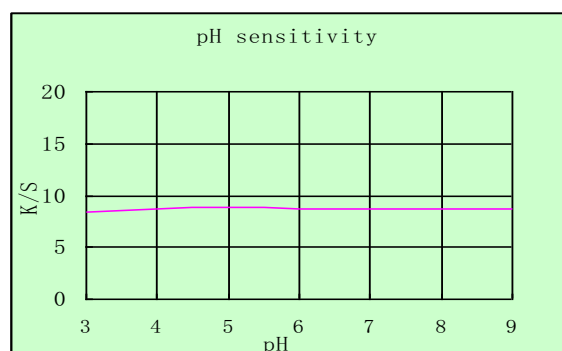
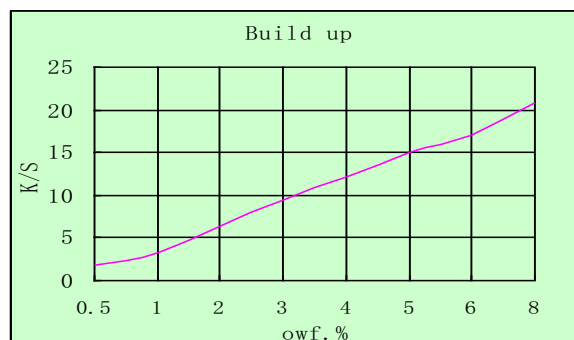
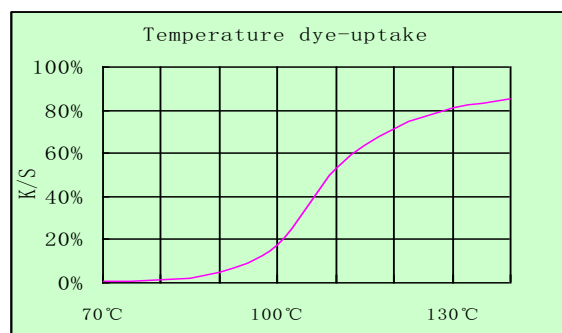
Hot pressing fastness, ISO 105-X11		
	instant	4 hours
200°C	4	4

Wet fastness properties

Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4-5	4-5	5	4	4-5	5	4
AATCC 11A, 49°C		4-5	4-5	5	4	4-5	5	4
Perspiration								
ISO 105 E04, Alkaline		4	4+	4-5	4+	4-5	4-5	4-5
ISO 105 E04, Acid		4-5	4-5	4-5	4-5	4	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance

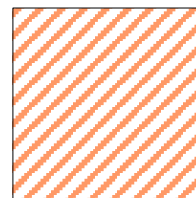


Jihua STARCron® Printing (Powder) series

Starcron Scarlet S-4GL (200%)

Identification

C.I. Disperse	Mix
Energy Level	High
Chemical Class	—

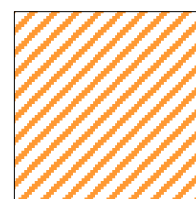


5 g/Lt

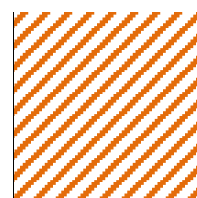
Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	x	✓	x	✓
Medium	✓	✓	x	✓
Dark	✓	✓	x	✓

- ✓ = suitable
 ○ = moderate
 x = unsuitable



10 g/Lt



20 g/Lt

Characteristic

- High temperature dyes.
- Excellent washing fastness, sublimation fastness.
- Can be used for dyeing and printing of polyester and its blended fabric.
- Main variety of exhaust dyeing, thermal melting pad dyeing and printing.

Properties

pH dependency	4-7
Liquid ratio dependency	1: (20-30)
Temperature dependency	(130-135) °C
HT color absorption	95.24%
Levelling	80.72%
Dischargeability	○
Build up: HT dyeing	A

Metal-ion sensitivity

 $\text{Fe}^{++} \leq 12 \text{ ppm}$ $\text{Mg}^{++} \leq 50 \text{ ppm}$
 $\text{Cu}^{++} \leq 10 \text{ ppm}$ $\text{Ca}^{++} \leq 50 \text{ ppm}$
Fastness Properties**Xenon light fastness** (blue scale), ISO 105-B02

1/25 SD	CH	4-5
1/1 SD	CH	4-5
2/1 SD	CH	4-5

Sublimation fastness, ISO 105-P01

°C	150	5
	180	5
	200	3-4

Fastness to chlorinated water, ISO 105-E03

	20 ppm	50 ppm
	4+	4-

Rubbing fastness, ISO 105-X12

	dry	wet
	4-5	4-5

Hot pressing fastness, ISO 105-X11

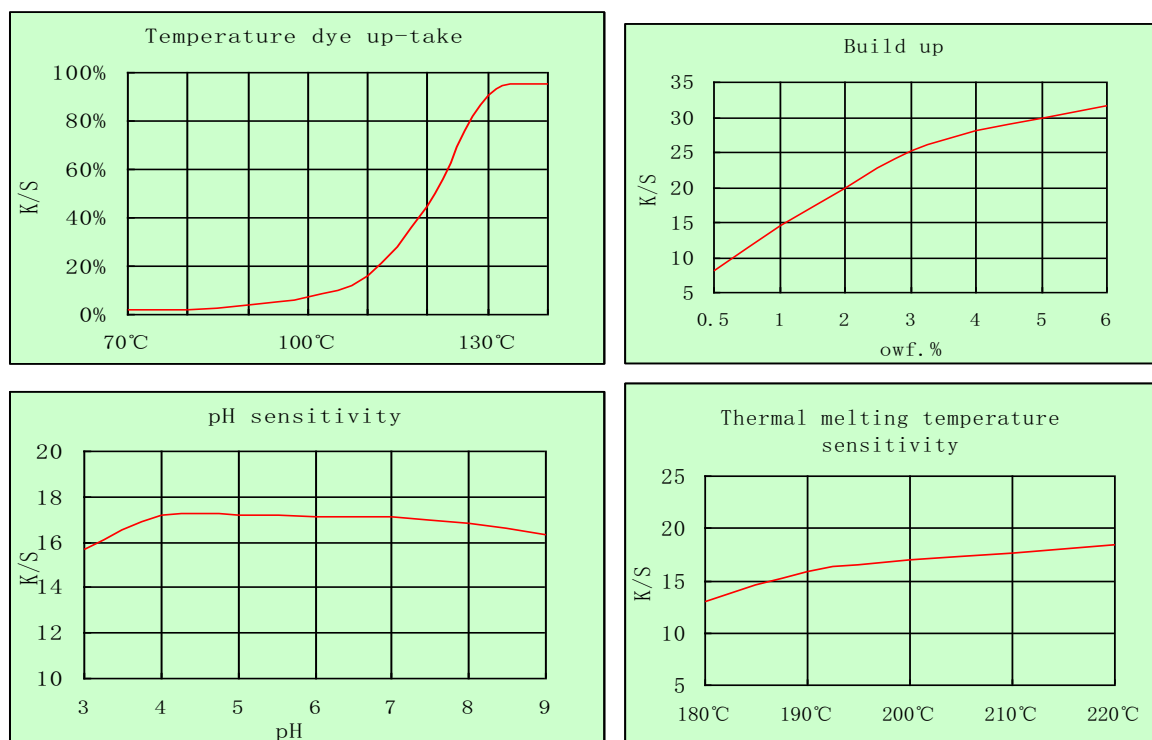
200°C	instant	4 hours
	4	4-5

Wet fastness properties

<i>Washing</i>	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4-5	3-4	4-5	4	4-5	4—5	4
AATCC 11A, 49°C		4-5	3-4	4-5	4	4-5	4—5	4
<i>Perspiration</i>								
ISO 105 E04, Alkaline		4	3-4	4-5	4-	4	4-5	4
ISO 105 E04, Acid		4	4-5	4	4-5-	4+	4-	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance

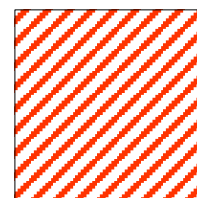


Jihua STARCron® Printing (Powder) series

Starcron Red S-2RL (200%)

Identification

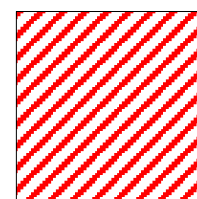
C.I. Disperse	Mix
Energy Level	High
Chemical Class	—



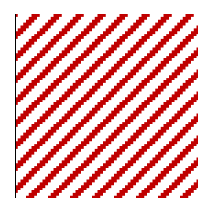
5 g/lt

Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✗	✓	✗	✓
Medium	✓	✓	✗	✓
Dark	✓	✓	✗	✓



10 g/lt



20 g/lt

- ✓ = suitable
- = moderate
- ✗ = unsuitable

Characteristic

- High temperature dyes.

- Excellent washing fastness.
- Can be used for direct printing of polyester/cotton blended fabric.
- Main variety of exhaust dyeing、thermal melting pad dyeing and printing.

Properties

pH dependency	4-6
Liquid ratio dependency	1: (20-30)
Temperature dependency	(130-135) °C
HT color absorption	88.84%
Levelling	86.86%
Dischargeability	○
Build up: HT dyeing	A
Metal-ion sensitivity	Fe ⁺⁺ ≤12 ppm Mg ⁺⁺ ≤50 ppm Cu ⁺⁺ ≤10 ppm Ca ⁺⁺ ≤50 ppm

Fastness Properties

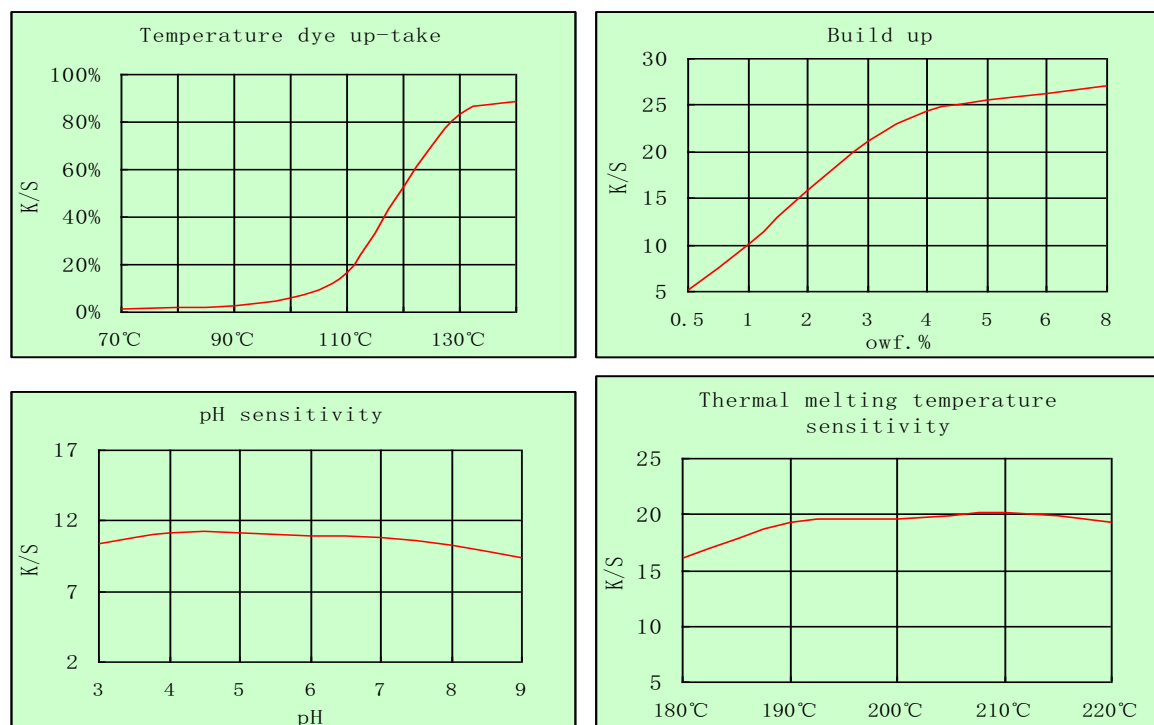
Xenon light fastness (blue scale), ISO 105-B02			Rubbing fastness, ISO 105-X12		
1/25 SD	CH	5		dry	wet
1/1 SD	CH	5		4-5	4-5
2/1 SD	CH	5			
Sublimation fastness, ISO 105-P01			Hot pressing fastness, ISO 105-X11		
°C	150	5	200°C	instant	4 hours
	180	4		4	4
	200	3			
Fastness to chlorinated water, ISO 105-E03					
	20 ppm	50 ppm			
	3-4	3			

Wet fastness properties

Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4-5	4	4-5	4-5	4-5	4	4-5
AATCC 11A, 49°C		4-5	4	4-5	4-5	4-5	4	4-5
Perspiration								
ISO 105 E04, Alkaline		4	3-4	4-5-	3-4	4-	4-5-	3-4
ISO 105 E04, Acid		4+	3-4	4-5-	3-4+	3-4	4+	3-4

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance

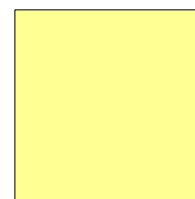


Jihua STARCRO[®] Class I Baby textile (EHB) series

Starcron Yellow EHB

Identification

C.I. Disperse	Mix
Energy Level	medium
Chemical Class	—

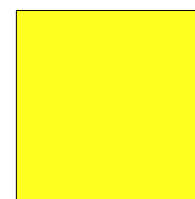


Owf 0.70%

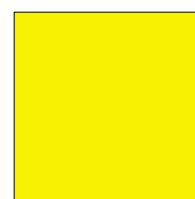
Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✓	✓	✓	✓
Medium	✓	✓	✓	✓
Dark	✓	✗	✓	✗

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable



Owf 1.1%



Owf 2.2%

Characteristic

- Yellow EHB; Mono azo structure; medium temperature dyes.
- Excellent light fastness and sublimation fastness.

- Main variety in bright yellow types at medium temperature; widely used in color matching

Properties

pH dependency	4-8
Liquid ratio dependency	1: (20-30)
Temperature dependency	(130-135) °C
HT color absorption	86.10%
Levelling	99.85%
Dischargeability	○
Build up: HT dyeing	B
Metal-ion sensitivity	Fe ⁺⁺ ≤12ppm Mg ⁺⁺ ≤50ppm Cu ⁺⁺ ≤10ppm Ca ⁺⁺ ≤50ppm

Fastness Properties

Xenon light fastness (blue scale), ISO 105-B02		
1/25 SD	CH	6-7
1/1 SD	CH	7
2/1 SD	CH	7

Sublimation fastness, ISO 105-P01		
°C	150	5
	180	3-4
	200	2-3

Fastness to chlorinated water, ISO 105-E03		
	20 ppm	50 ppm
	4-5	4+

Rubbing fastness, ISO 105-X12		
	dry	wet
	4-5	4-5

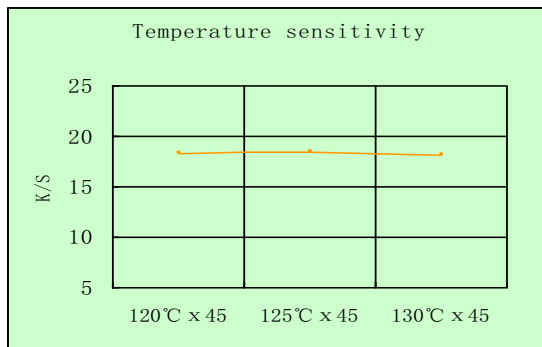
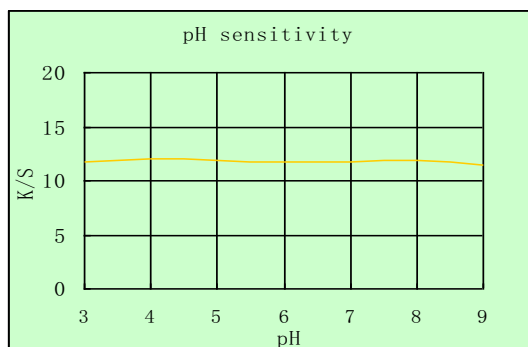
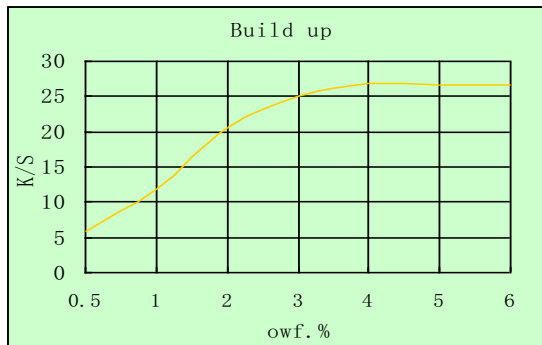
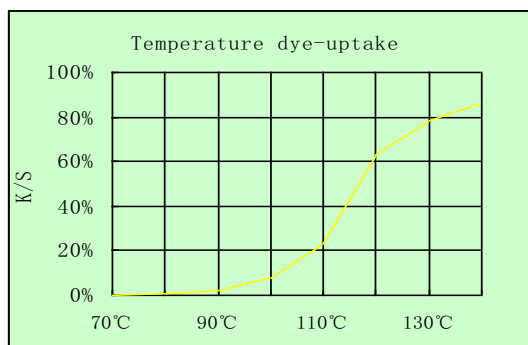
Hot pressing fastness, ISO 105-X11		
200°C	instant	4 hours
	4-5	4-5

Wet fastness properties

Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		5	4-5	5	4-5	5	5	4-5
AATCC 11A, 49°C		5	4-5	5	4-5	5	5	4-5
Perspiration								
ISO 105 E04, Alkaline		4-5	4-5	4-5	4-5	4	4-5	4-5
ISO 105 E04, Acid		4-5	4	4-5	4-	4-5-	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance

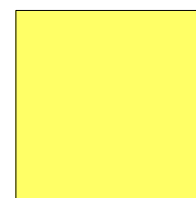


Jihua STARCron® Class I Baby textile (EHB) series

Starcron Golden Yellow EHB

Identification

C.I. Disperse	mix
Energy Level	low
Chemical Class	—



Owf 0.70%

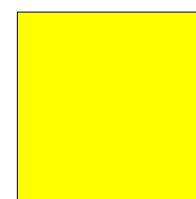
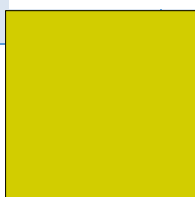
Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✗	✓	✗	✓
Owf1.1%	✓	✓	✓	✓
	✓	✓	✓	✓

✓

○

✗



Owf2.2%

Characteristic

- Low temperature dyes.

- Excellent light fastness, coverage and dye-uptake.
- As one of the low temperature tricolor.
- Suitable for transfer printing.

Properties

pH dependency	4-8
Liquid ratio dependency	1: (20-30)
Temperature dependency	(130-135)°C
HT color absorption	91.60%
Levelling	99.82%
Dischargeability	X
Build up: HT dyeing	B
Metal-ion sensitivity	Fe ⁺⁺ ≤12ppm Mg ⁺⁺ ≤50ppm Cu ⁺⁺ ≤10ppm Ca ⁺⁺ ≤50ppm

Fastness Properties

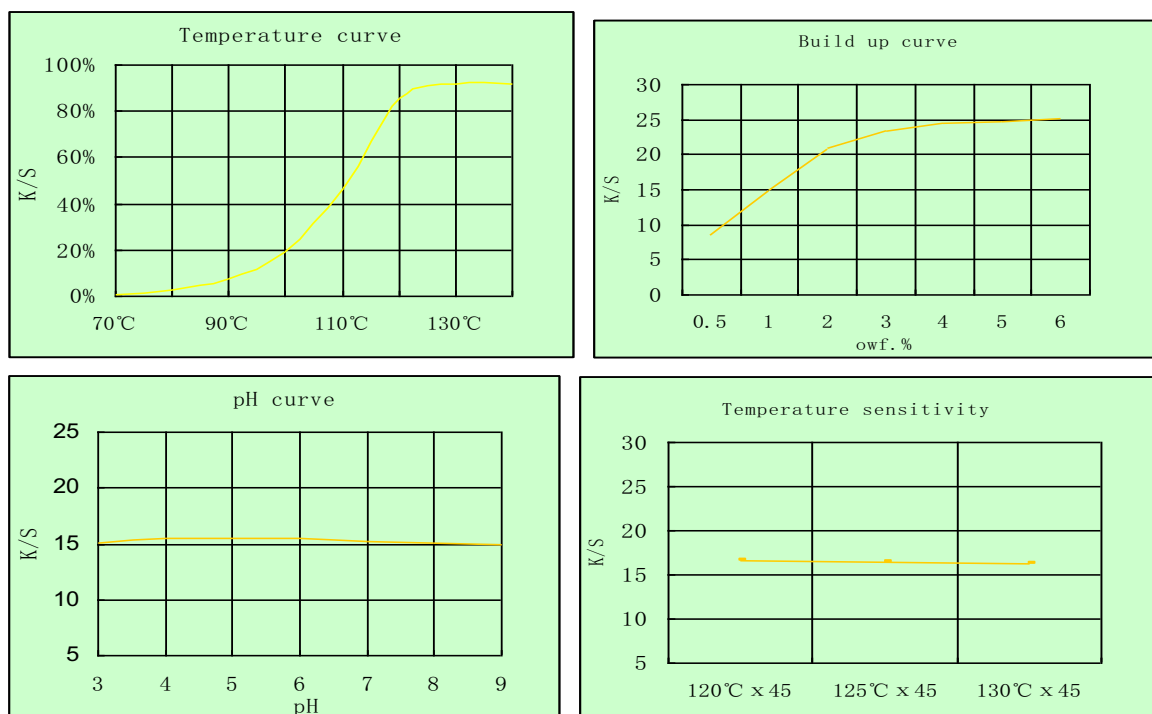
Xenon light fastness (blue scale), ISO 105-B02			Rubbing fastness, ISO 105-X12		
1/25 SD	CH	6		dry	wet
1/1 SD	CH	6-7		4-5	5
2/1 SD	CH	6-7			
Sublimation fastness, ISO 105-P01			Hot pressing fastness, ISO 105-X11		
°C	150	4-5	200°C	instant	4 hours
	180	3		4-5	4-5
	200	2			
Fastness to chlorinated water, ISO 105-E03					
	20 ppm	50 ppm			
	4-5	4			

Wet fastness properties

Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		5	3-4	5	3	5	4-5	4
AATCC 11A, 49°C		5	3-4	5	3	5	4-5	4
Perspiration								
ISO 105 E04, Alkaline		4	4-5	4-5	4-5	4	4-5	4-5
ISO 105 E04, Acid		4-5	4-5	4-5	4	4-5-	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance

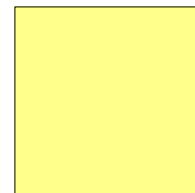


Jihua STARCron® Class I Baby textile (EHB) series

Starcron Yellow Brown EHB

Identification

C.I. Disperse	Mix
Energy Level	High
Chemical Class	—

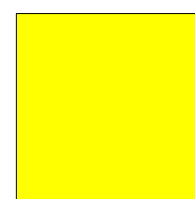


Owf 0.70 %

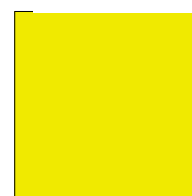
Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✓	✓	✗	✓
Medium	✓	✓	✗	✓
Dark	✓	✓	✗	✓

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable



Owf1.1 %



Owf2.2 %

Characteristic

- High temperature dyes.
- Excellent light fastness、washingfastness、sublimation fastness.

- As one of the high temperature tricolor.
- Main variety of exhaust dyeing、thermal melting pad dyeing and printing.
- Light color、low liquor ratio; Used with the high temperature leveling agent.

Properties

pH dependency	4-8
Liquid ratio dependency	1: (20-30)
Temperature dependency	(130-135) °C
HT color absorption	83.20%
Levelling	92.56%
Dischargeability	○
Build up: HT dyeing	A
Metal-ion sensitivity	Fe ⁺⁺ ≤12ppm Mg ⁺⁺ ≤50ppm Cu ⁺⁺ ≤10ppm Ca ⁺⁺ ≤50ppm

Fastness Properties

Xenon light fastness (blue scale), ISO 105-B02		
1/25 SD	CH	6-7
1/1 SD	CH	7
2/1 SD	CH	7

Sublimation fastness, ISO 105-P01		
°C	150	5
	180	4
	200	3

Fastness to chlorinated water, ISO 105-E03		
	20 ppm	50 ppm
	4-5	4

Rubbing fastness, ISO 105-X12		
	dry	wet
	4-5	5

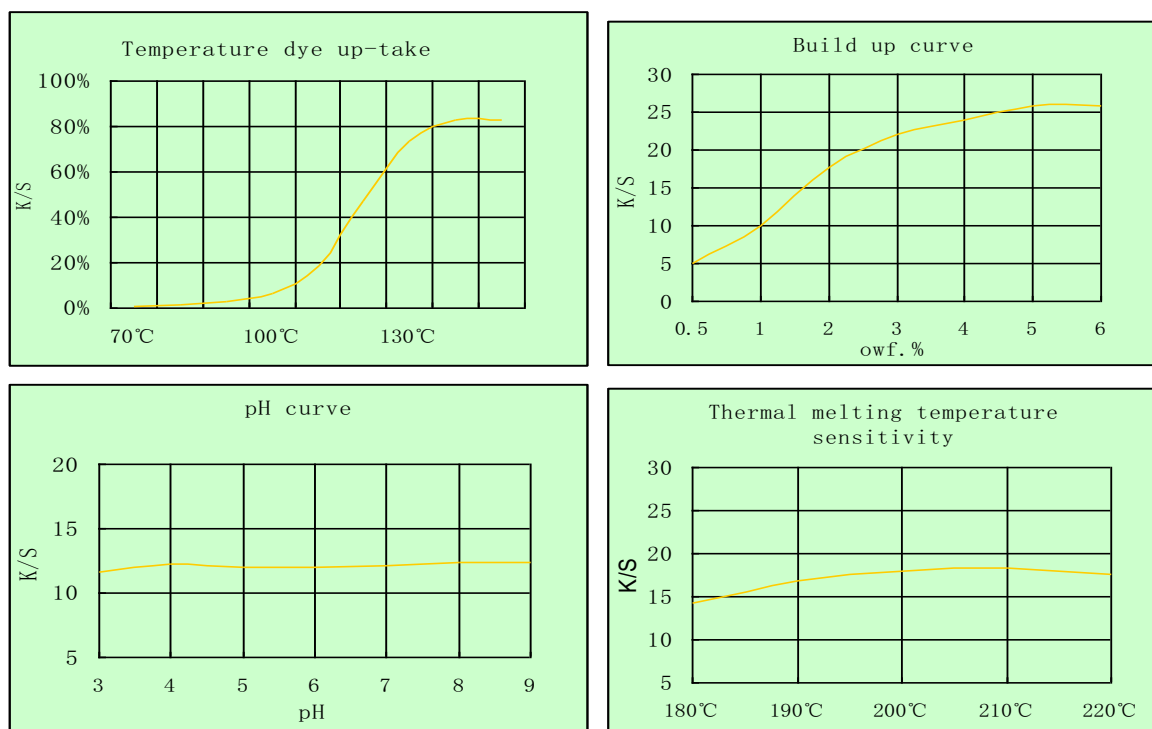
Hot pressing fastness, ISO 105-X11		
200°C	instant	4 hours
	4-5	4-5

Wet fastness properties

Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		5	4-5	5	4-5	5	4-5	4
AATCC 11A, 49°C		5	4-5	5	4-5	5	4-5	4
Perspiration								
ISO 105 E04, Alkaline		4	3-4	4-5	4	4	4-5	4-5
ISO 105 E04, Acid		4	4-5	4-5	4-5	4-5	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance

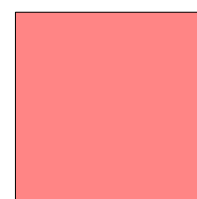


Jihua STARCron® Class I Baby textile (EHB) series

Starcron Red EHB

Identification

C.I. Disperse	Mix
Energy Level	High
Chemical Class	—



Owf 0,7%

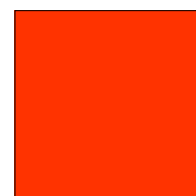
Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✓	✓	✗	✓
Medium	✓	✓	✗	✓
Dark	✓	✓	✗	✓

- ✓ = suitable
- = moderate
- ✗ = unsuitable



Owf1.1%



Owf2.2%

Characteristic

- High temperature dyes.
- Excellent deep dyeing quality and light fastness.

- As one of high temperature tricolor.
- Main variety of exhaust dyeing, thermal melting pad dyeing and printing.
- Light color, low liquor ratio; Used with the high temperature leveling agent.

Properties

pH dependency	4-7
Liquid ratio dependency	1: (20-30)
Temperature dependency	(130-135) °C
HT color absorption	88.10%
Levelling	81.00%
Dischargeability	○
Build up: HT dyeing	A
Metal-ion sensitivity	Fe ⁺⁺ ≤12ppm Mg ⁺⁺ ≤50ppm Cu ⁺⁺ ≤10ppm Ca ⁺⁺ ≤50ppm

Fastness Properties

Xenon light fastness (blue scale), ISO 105-B02		
1/25 SD	CH	5
1/1 SD	CH	5-6
2/1 SD	CH	6

Sublimation fastness, ISO 105-P01		
°C	150	5
	180	4-5
	200	3-4

Fastness to chlorinated water, ISO 105-E03		
	20 ppm	50 ppm
	3-4	3

Rubbing fastness, ISO 105-X12		
	dry	wet
	4-5	4-5

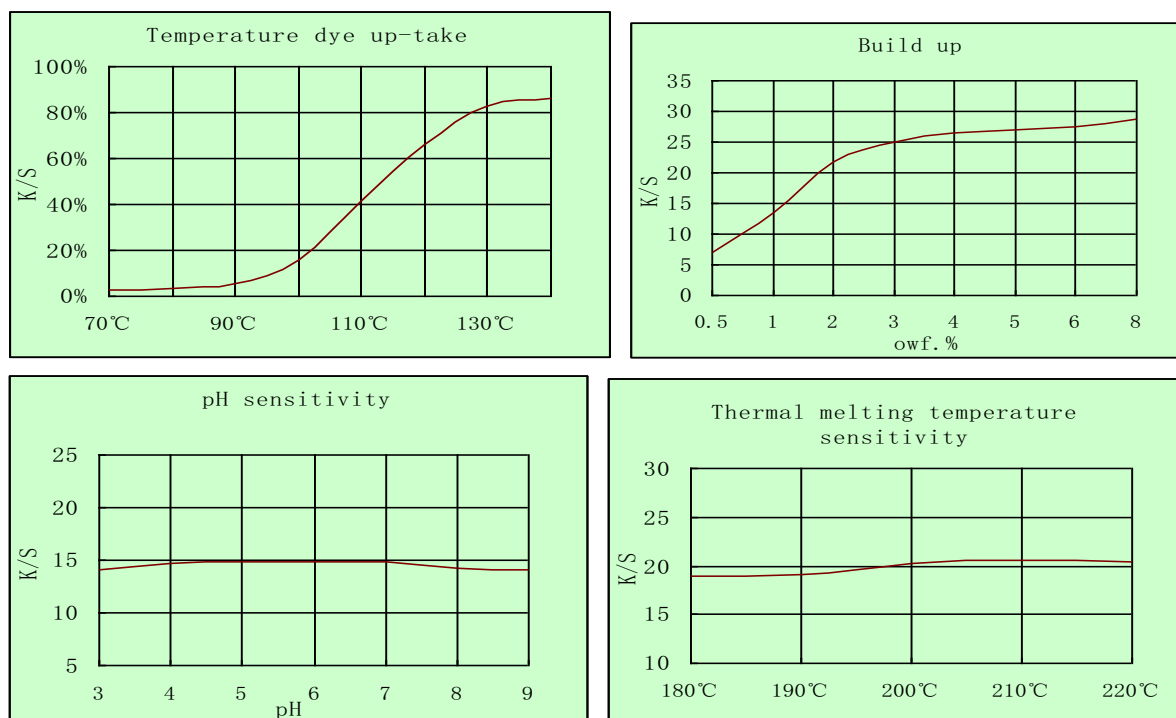
Hot pressing fastness, ISO 105-X11		
200°C	instant	4 hours
	4	4

Wet fastness properties

Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4-5	4	4-5	4	4-5	4-5	4
AATCC 11A, 49°C		4-5	4	4-5	4	4-5	4-5	4
Perspiration								
ISO 105 E04, Alkaline		4	3-4	4	3-4	3-4+	4-5	4
ISO 105 E04, Acid		4+	4	4-5-	4	3-4	4-5	4

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance

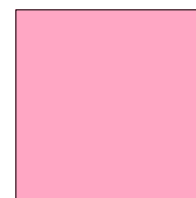


Jihua STARCRON® Class I Baby textile (EHB) series

StarcronRubine EHB

Identification

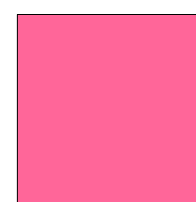
C.I. Disperse	Mix
Energy Level	medium
Chemical Class	—



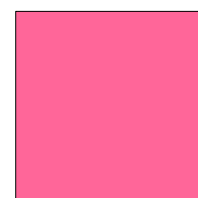
Owf 0.70%

Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✓	✓	✗	✓
Medium	✓	✓	✗	✓
Dark	✓	✗	✗	✗



Owf1.1%



Owf2.2%

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable

Characteristic

- Medium temperature dyes.
- Excellent dyeing fastness and brighter shade.

- Good deep dyeing quality, suitable for dyeing of super fine fiber.
- As main variety of 红 medium temperature dyes, widely applied.

Properties

pH dependency	4-7
Liquid ratio dependency	1: (20-30)
Temperature dependency	(130-135) °C
HT color absorption	87.80%
Levelling	76.14%
Dischargeability	X
Build up: HT dyeing	B
Metal-ion sensitivity	Fe ⁺⁺ ≤12ppm Mg ⁺⁺ ≤50ppm Cu ⁺⁺ ≤10ppm Ca ⁺⁺ ≤50ppm

Fastness Properties

Xenon light fastness (blue scale), ISO 105-B02		
1/25 SD	CH	4-5
1/1 SD	CH	5
2/1 SD	CH	5-6

Sublimation fastness, ISO 105-P01		
°C	150	5
	180	4
	200	2-3

Fastness to chlorinated water, ISO 105-E03		
	20 ppm	50 ppm
	4+	4-

Rubbing fastness, ISO 105-X12		
	dry	wet
	4-5	4-5

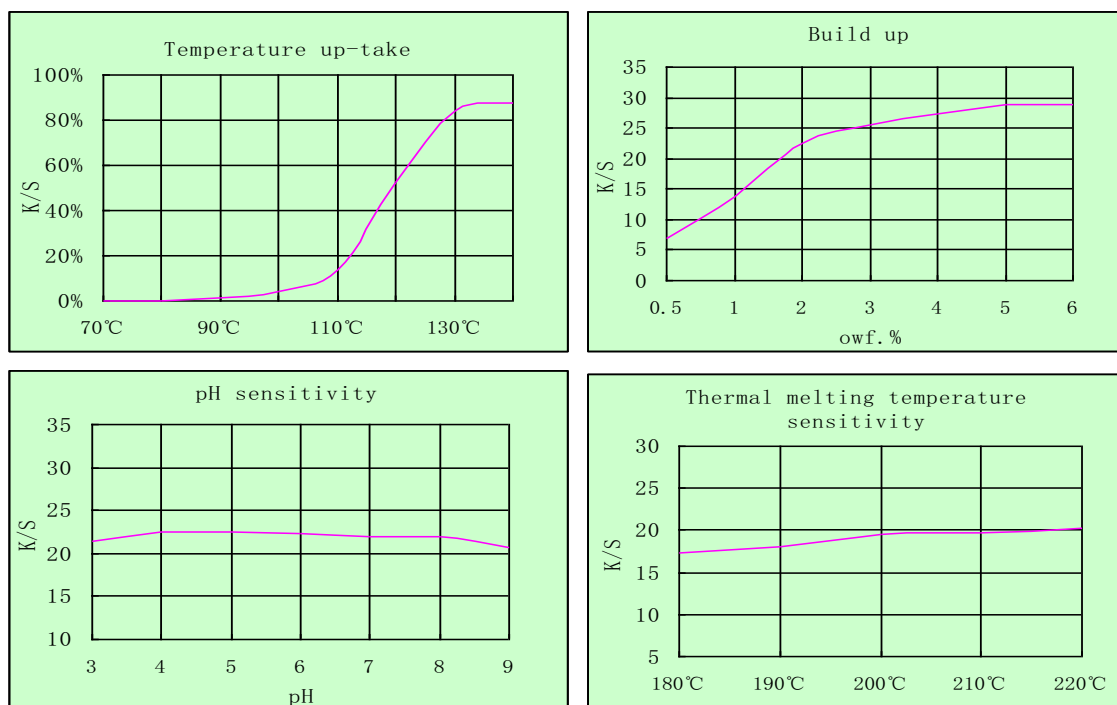
Hot pressing fastness, ISO 105-X11		
200°C	instant	4 hours
	4	4

Wet fastness properties

Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4-5	4	4-5	3-4	4-5	4-5	4
AATCC 11A, 49°C		4-5	4	4-5	3-4	4-5	4-5	4
Perspiration								
ISO 105 E04, Alkaline		4	3	4	3	3-4	4-5	4-5
ISO 105 E04, Acid		3	4	4-5	3-4	3-4	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance

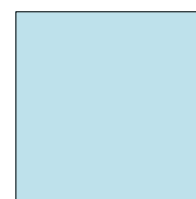


Jihua STARCron® Class I Baby textile (EHB) series

Starcron Royal Blue EHB

Identification

C.I. Disperse	Mix
Energy Level	medium
Chemical Class	—

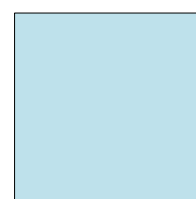


Owf 0.70%

Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✗	✓	✗	✓
Medium	✓	✓	✗	✓
Dark	✓	✓	✗	✗

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable



Owf 1.1%



Owf 2.2%

Characteristic

- Medium temperature dyes.
- Excellent compatibleness among varieties in this series; superb success rate.

- Excellent deep-dyeing performance; suits medium and dark color.
- Suitable for dyeing of super fine fiber, and exhaust dyeing and pad dyeing of polyester fabrics and polyester/cotton blended fabrics.
- Excellent all-around color fastness.

Properties

pH dependency	4-7
Liquid ratio dependency	1: (20-30)
Temperature dependency	(130-135) °C
HT color absorption	94.96%
Levelling	77.68%
Dischargeability	X
Build up: HT dyeing	A
Metal-ion sensitivity	Fe ⁺⁺ ≤12ppm Mg ⁺⁺ ≤50ppm Cu ⁺⁺ ≤10ppm Ca ⁺⁺ ≤50ppm

Fastness Properties

Xenon light fastness (blue scale), ISO 105-B02		
1/25 SD	CH	4-5
1/1 SD	CH	5-
2/1 SD	CH	5-

Sublimation fastness, ISO 105-P01		
°C	150	5
	180	4
	200	2-3

Fastness to chlorinated water, ISO 105-E03		
	20 ppm	50 ppm
	4-5	4

Rubbing fastness, ISO 105-X12		
	dry	wet
	4-5	4-5

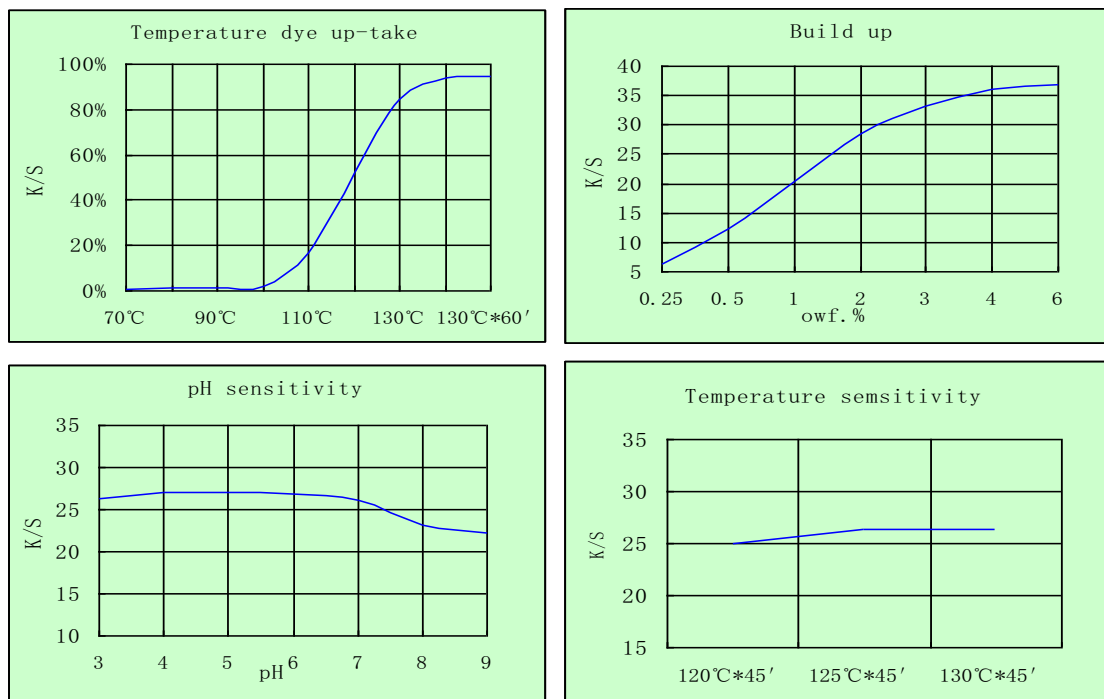
Hot pressing fastness, ISO 105-X11		
200°C	instant	4 hours
	4	4

Wet fastness properties

Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4	4-5	4	4-5	5	5	4-5
AATCC 11A, 49°C		4	4-5	4	4-5	5	5	4-5
Perspiration								
ISO 105 E04, Alkaline		4-5	4-5	4-5	4-5	4	4-5	4-5
ISO 105 E04, Acid		4-5	4	4-5	4-	4-5-	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance

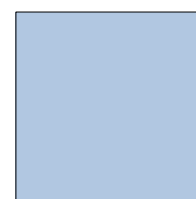


Jihua STARCRON® Class I Baby textile (EHB) series

Starcron Blue EHB

Identification

C.I. Disperse	Mix
Energy Level	medium
Chemical Class	—

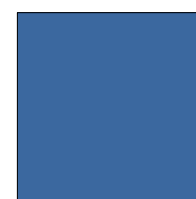


Owf 0.70%

Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✗	✓	✓	✓
Medium	✓	✓	✓	✓
Dark	✓	✗	✗	✗

- ✓ = suitable
 ○ = moderate
 ✗ = unsuitable



Owf 1.1%



Owf 2.2%

Characteristic

- Medium temperature dyes.
- Excellent dyeing fastness.
- Excellent compatibility and reproducibility.

- Main varieties of exhaust dyeing thermal melting pad dyeing and printing.

Properties

pH dependency	4-6
Liquid ratio dependency	1: (20-30)
Temperature dependency	(130-135) °C
HT color absorption	96.33%
Levelling	86.21%
Dischargeability	X
Build up: HT dyeing	A
Metal-ion sensitivity	Fe ⁺⁺ ≤12ppm Mg ⁺⁺ ≤50ppm Cu ⁺⁺ ≤10ppm Ca ⁺⁺ ≤50ppm

Fastness Properties

Xenon light fastness (blue scale), ISO 105-B02		
1/25 SD	CH	4
1/1 SD	CH	4-5
2/1 SD	CH	5

Sublimation fastness, ISO 105-P01		
°C	150	5
	180	3-4
	200	3

Fastness to chlorinated water, ISO 105-E03		
	20 ppm	50 ppm

Rubbing fastness, ISO 105-X12		
	dry	wet
	4	4

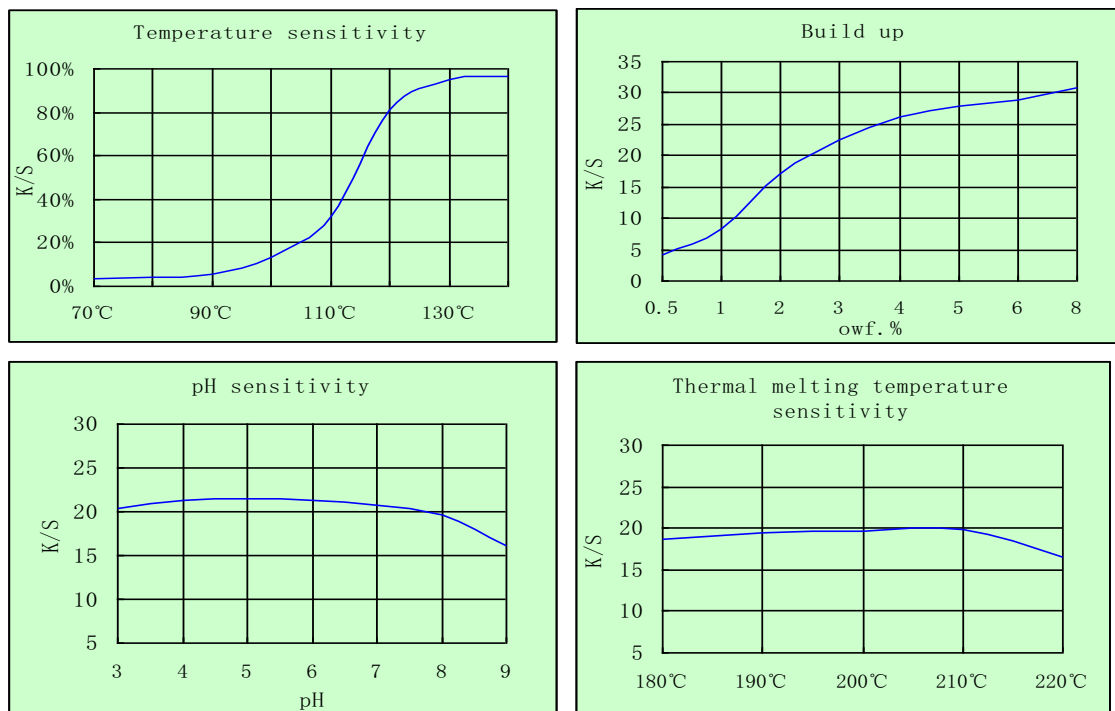
Hot pressing fastness, ISO 105-X11		
200°C	instant	4 hours
	3-4	4

Wet fastness properties

Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4	4	4-5	4	4-5	4-5	4
AATCC 11A, 49°C		4	4	4-5	4	4-5	4-5	4
Perspiration								
ISO 105 E04, Alkaline		4	3-4	3-4	3-4	4-5-	3-4+	3-4
ISO 105 E04, Acid		4	3-4	3-4	3	4-	4	3-4

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance

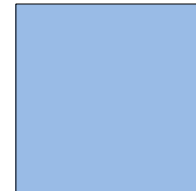


Jihua STARCron® Class I Baby textile (EHB) series

Starcron Navy Blue EHB

Identification

C.I. Disperse	mix
Energy Level	medium
Chemical Class	—



Owf 0.70%

Application

Dyeing Method & Depth	HT	Thermosol	Carrier	Printing
Light	✗	✗	✓	✗
Medium	✓	✓	✓	✗
Dark	✓	✓	✗	✗

- ✓ = suitable
- = moderate
- ✗ = unsuitable



Owf 1.1%



Owf 2.2%

Characteristic

- Medium temperature dyes.
- Excellent compatibleness among varieties in this series; superb success rate.

- Excellent deep-dyeing performance; suits medium and dark color.
- Suitable for dyeing of super fine fiber, and exhaust dyeing and pad dyeing of polyester fabrics and polyester/cotton blended fabrics.
- Excellent all-around color fastness.

Properties

pH dependency	4-8
Liquid ratio dependency	1: (20-30)
Temperature dependency	(130-135) °C
HT color absorption	97.23%
Levelling	77.68%
Dischargeability	✗
Build up: HT dyeing	A
Metal-ion sensitivity	Fe ⁺⁺ ≤12ppm Mg ⁺⁺ ≤50ppm Cu ⁺⁺ ≤10ppm Ca ⁺⁺ ≤50ppm

Fastness Properties

Xenon light fastness (blue scale), ISO 105-B02		
1/25 SD	CH	5
1/1 SD	CH	5-6
2/1 SD	CH	5-6

Sublimation fastness, ISO 105-P01		
°C	150	5
	180	4
	200	2-3

Fastness to chlorinated water, ISO 105-E03		
	20 ppm	50 ppm
	4-5	4

Rubbing fastness, ISO 105-X12		
	dry	wet
	4-5	4-5

Hot pressing fastness, ISO 105-X11		
200°C	instant	4 hours
	4	4-5

Wet fastness properties

Washing	SD	CH	ACE	CO	PA	PES	AES	WO
ISO 105 C03, 60°Cx30min.		4	4-5	4-5	3-4	5	5	4-5
AATCC 11A, 49°C		4	4-5	4-5	3-4	5	5	4-5

Perspiration

ISO 105 E04, Alkaline		4-5	4-5	5	4-5	4	4-5	4-5
ISO 105 E04, Acid		4-5	4	5	4-	4-5-	4-5	4-5

*tested on multifiber (adjacent fabric not mentioned in the table attained rating 5 for staining)

Dye application performance

