

RIFA Disperse Dyestuffs

RIFA CO., LTD.
RIFA
SINCE 1950

Recommendation of Rifalon Dyes

Application	Recommendation	Characteristics
Pale Shade	Rifalon Yellow ACE Rifalon Red ACE Rifalon Blue ACE	Compatible, level dyeing, Normal trichromatic Dyes for pale Shade
Pale to medium Shade	Rifalon Yellow E-F3G 200 Rifalon Red E-FBL 200 Rifalon Blue E-FBL	Excellent reproducibility and leveling at pale shade Wide application range of HT atmospheric dyeing, thermal and printing in pale shade Applicable for P/C, P/W, E/R and P/N blended fabric Good covering properties
Medium to Heavy Shade	Rifalon Yellow S-5GL 200 Rifalon Yellow SE-4G Rifalon Y/Brown S-2RL 150 Rifalon Red S-F3BS 150, SE-BS 200 Rifalon Rubine S-3GFL, SE-GL 200 Rifalon Blue S-4HL 200 Rifalon Navy Blue S-GL Conc Rifalon Navy Blue S-BL 300	Excellent levelling reproducibility properties Good disperse stability Good fastness properties Good build up properties Good compatibility for rapid dyeing
High washing	Rifalon Yellow Brown SE-XF Rifalon Crimson S-XF Rifalon Rubine S-XF Rifalon Blue S-XF Rifalon N/Blue S-XF Rifalon Black S-XF	High exhaustion & high build up in high temperature dyeing High washing fastness Very good sublimation fastness Excellent light fastness level Eco friendly dyestuffs Suitable cellulosic



Recommendation of Rifalon Dyes

Application	Recommendation	Characteristics
High washing	Rifalon Yellow HW Rifalon G/Yellow HW Rifalon Y/Brown HW Rifalon Orange HW Rifalon Scarlet HW Rifalon Red SHW Rifalon Red HW Rifalon Crimson HW Rifalon Rubine HW Rifalon T/Blue HW Rifalon Blue HW Rifalon N/Blue HW, HW-R Rifalon Black HW, HW-R	Good washing
Fluorescent	Rifalon Yellow ACN Rifalon Yellow ACE Rifalon Orange F-GR Rifalon Pink F-BB Rifalon Red F-RBT Rifalon Red F-FG Rifalon Red F-ED	
High light fastness	Rifalon Yellow R-HL Rifalon Red R-HL Rifalon Blue R-HL Rifalon Navy Blue R-HL Rifalon Black R-HL	
Discharge printing	Rifalon Yellow S-GP Rifalon Red SE-BS 200 Rifalon Blue SE-2R	



Recommendation of Rifalon Dyes

Application	Recommendation	Characteristics
Black Shade	Rifalon Black S-RN 300, S-BRN 300 Rifalon Black S-BNF 300 Rifalon Eco Black S-BNF 300 Rifalon Black KSL Rifalon Black S-GFR 300 Rifalon Black Eco R Rifalon Eco Black S-EX 150K Rifalon Eco Black RFD(G) Rifalon Black S-EX Paste 150 Rifalon Eco Black Cone Rifalon Black S-GXL Paste	
Acetate dyeing	Rifacel Yellow G Rifacel Scarlet B Rifacel Blue BNG Rifacel Black EHG	
Acetate dyeing	Rifacel Yellow J Rifacel Red J Rifacel Blue J Rifacel Navy Blue J Rifacel Black J	Eco dyestuffs



BRIEF HISTORY

- 1950 RIFA Co. founded and began production
- 1962 Marked Korea's first export of dyestuffs to Thailand
- 1966 Entered into technology partnership with Sumitomo Chemical Co. of Japan for 5 years.
- 1982 Successfully developed reactive dyestuffs and began production of vinylsulfone type, Different bifunction groups type & trizine type reactive dyestuffs
- 1987 Transferred acid/direct dyestuffs related technology to ALVAN SAABET of Iran
- 1991 Began production & sales of disperse dyestuffs
- 1994 Listed on the Korea Stock Exchange. Established RIFAU.S.A
Completed development of reactive H-EXL Type dyestuffs
- 1995 Acquired ISO 9002 Certification from DNV of Netherlands
- 1996 Awarded Prize of Minister of Environment on the Environment Day
- 1999 Successfully developed polyester/cotton(mixed fiber)reactive and disperse dyestuffs
- 2000 Established the Digital Media Division.
Certification of ISO 14001 by DNV for environmental purposes.

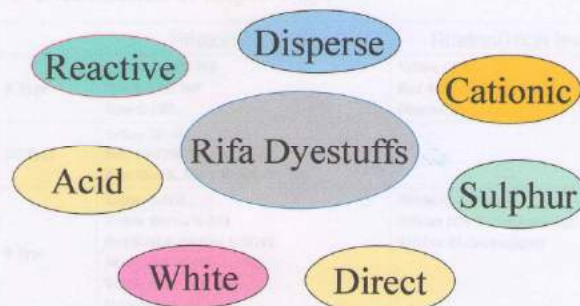


BRIEF HISTORY

- 2001 Acquired the patent rights for a non-allergic dyestuffs called Disperse Black S-GF 300, currently possessing 26 patents
Acquired OHSAS 18001 Certification from DNV of Netherlands
- 2002 Acquired ETAD Certification
- 2006 Completed development of Rifazol SE Series dyestuffs
- 2007 To participate in the dyestuffs-supporting business as part of economic product with North Korea.
To complete the Incheon Physical Distribution Base.
- 2008 Acquired GOTS Certification from Control Union of Netherlands
- 2008 Finished pre-registration to EU Reach
- 2009 Began production of New Rifazol RF Conc Series
- 2010 Began production of New Rifazol RDN Series



Production of Rifa Dyestuffs



Rifalon Disperse

Rifalon Type

E-Type (Low energy type)

Rifalon Dyestuffs which belong to this group are of especially good leveling property and are suitable for pale medium shade which requires good leveling property. Satisfactory dyeing property is obtained even by carrier dyeing as well as high temperature dyeing.

SE-Type (Medium energy type)

Rifalon dyestuffs which belong to this group rank in the good exhaustion type at medium dyeing temperature with good leveling property and sublimation fastness for wider range of application.

These dyes are suitable for pale deep shade by high temperature, carrier, thermosol dyeing and printing.

S-Type (High energy type)

Rifalon dyestuffs which belong to this group are the good exhaustion type at high dyeing temperature with excellent sublimation and high stability for various finishing process. But there are some problems in leveling property. Therefore, these dyes are suitable for medium-deep shade by high temperature, thermosol dyeing and printing.



Rifalon Disperse

3 Combination of disperse dyes

	Rifalon (Normal)	Rifalon (High level)
E Type	Yellow E-F3G 200 Red E-FBL 200 Blue E-FBL	Yellow ACE Red ACE Blue ACE
SE Type	Yellow SE-4G Red S-F3BS, Rubine SE-GL Blue SE-2R, Navy Blue S-BL 300	
S Type	Yellow S-SGL, Yellow Brown S-2RL Red S-BLF, Rubine S-2GFL Blue S-BBL S, Blue S-FBL T/Blue S-GL 200 Navy Blue S-GL Conc	Rifalon S-XF Series Rifalon HW Series (washing) Rifalon RL Series (light)
Black Type	Black S-BRN 300 Black S-GFR 300 Eco Black S-BNF 300	Black S-XF, HW-R Black KSL, SKLE



Rifalon Disperse

Printing dyestuffs

1. Rifalon Yellow S-GF
2. Rifalon Yellow Brown S-2RL 200
3. Rifalon Scarlet SE-GS 200
4. Rifalon Red SE-BS 200
5. Rifalon Rubinne SE-GL 200
6. Rifalon SE-CB Conc
7. Rifalon Bordeaux SE-BL 200
8. Rifalon Brown SE-3R,S-3RE
9. Rifalon Blue SE-R,SE-2R
10. Rifalon Blue S-BBLS



Rifalon Disperse

Printing dyestuffs

1. Rifalon T/Blue S-GL 200
2. Rifalon Green SE-6B
3. Rifalon Navy Blue S-GL Conc
4. Rifalon Black KSL,SKLE
5. Rifalon XF Colors
6. Rifalon HW Colors
7. Rifalon RL Colors
8. Rifalon Fluroscent Colors
(pale to medium)



Rifalon ACE Series

Rifalon ACE Series

- Rifalon Yellow ACE
- Rifalon Red ACE
- Rifalon Blue ACE



Rifalon ACE Series

Exhaust Dyeing



Rifalon ACE Series

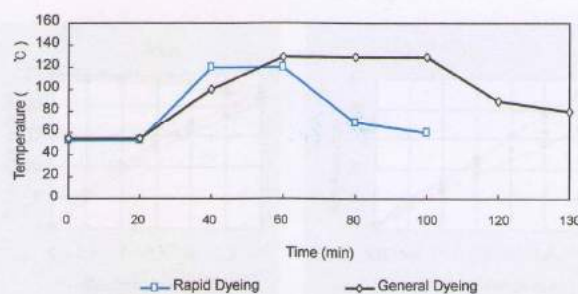
Characteristics

1. Rifalon ACE Series have the unique feature of equable exhaustion temperature and speed, promoting **excellent reproducibility and levelling** properties.
2. Rifalon ACE Series are formulated for low liquor ratio process, producing **excellent dispersion and stability** at high temperature. Alkali dyeing is also possible.
3. Rifalon ACE Series are remarkably good with **migration and covering** of uneven processed materials and displaying extremely satisfactory fastness to light.
4. Rifalon ACE Series are suitable for the rapid dyeing of pale shade colors that utilize both low liquor ratio and no dependency on temperature consistency, though accomplishing **high compatibility**.



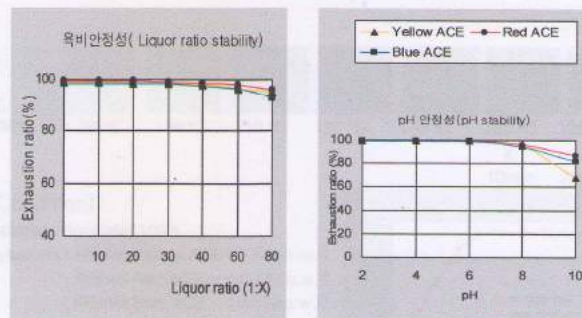
Rifalon ACE Series

Rapid Dyeing Process / General Dyeing Process



Rifalon ACE Series

Dyeing property



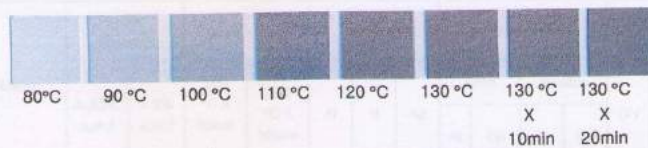
Rifalon ACE Series

Dyeing property



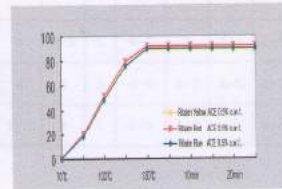
Rifalon ACE Series

Effect of Temp.(3 Combination)



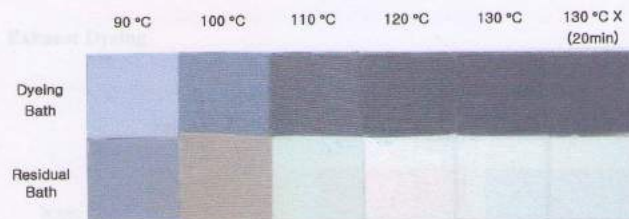
(Condition)

Material : Polyester 100%
 Dyestuffs : Rifalon Yellow ACE : 0.5%(o.w.f)
 Rifalon Red ACE : 0.5%(o.w.f)
 Rifalon Blue ACE : 0.5%(o.w.f)
 Acetic Acid : 0.25g/l Sodium Acetate : 1g/l
 Liquor ratio : 1:25



Rifalon ACE Series

Step by Step Test



♦ Grey colors C/M data :

Rifalon Yellow ACE 0.3%(o.w.f)
 Rifalon Red ACE 0.3%(o.w.f)
 Rifalon Blue ACE 0.3%(o.w.f)



Rifalon ACE Series

General Fastness

Rifalon	Light (Xenon)		Sublimation		Washing			Perspiration				Rubbing	
	0.25% o.w.f	1.0% o.w.f	180 °C X 30sec	200 °C X 30sec	Al	N	Ac	Acid		Alkaline		Dry	Wet
								Al	Co	Al	Co		
Yellow ACE	5	6	2-3	2	4-5	4	4-5	5	4-5	5	4-5	4-5	4-5
Red ACE	5	6	2-3	2	4-5	4	4	5	4-5	4-5	4-5	4-5	4-5
Blue ACE	5	5-6	2-3	2	4-5	3-4	4	5	4-5	4-5	4	4-5	4-5

Fastness Test : 1.0%(o.w.f)Dyeing



Rifalon E Type

Trichromatic dyestuffs of pale to medium shade

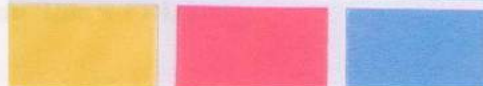
♦ Exhaust Dyeing

Yellow E-F3G 200 Red E-FBL 200 Blue E-FBL

0.5%



1.0%



Rifalon E Type

Trichromatic dyestuffs of pale to medium shade

♦ General Fastness

Fastness	Light(Xenon)	Sublimation	Washing (Al)	Rubbing		Perspiration (Al)
	1.0%	180°C X 30Sec		Dry	Wet	
Rifalon						
Yellow E-F3G 200	6	3	5	4-5	5	5
Red E-FBL 200	6	3	5	4-5	5	5
Blue E-FBL	6	3	5	4-5	5	5



Rifalon SE,S Type

Trichromatic dyestuffs of Amedium to heavy shade

1) Excellent leveling reproducibility

1. Rifalon Yellow S-5GL 200

2) 2. Rifalon Yellow SE-4G

3) 3. Rifalon Red S-F3B 150

4) 4. Rifalon Blue S-FBL 200

5) Good compatibility for Rapid Dyeing



Rifalon SE,S Type

Dyeing color

	Yellow S-SGL 200	Yellow SE-4G	Red S-F3B 150	Blue S-FBL 200
0.5%				
2.0%				



Rifalon SE,S Type

Characteristics

- 1) Excellent leveling reproducibility properties
- 2) Good disperse stability
- 3) Good Fastness properties
- 4) Good Build-up properties
- 5) Good compatibility for Rapid Dyeing



Rifalon SE,S Type

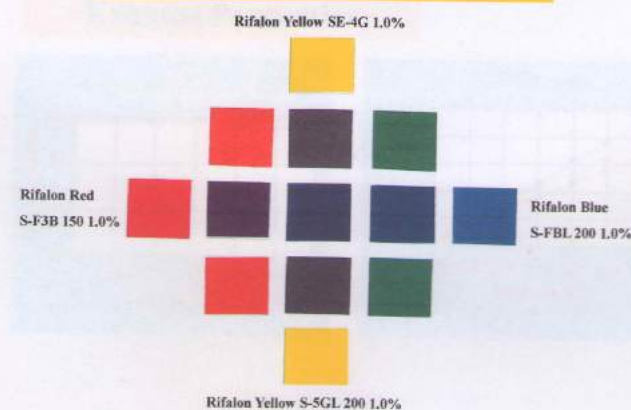
Application Properties

Rifalon	Exhaust Dyeing				Thermosol Process	Printing
	Regular PES	Micro-fiber	PES/Cotton	PES/Wool		
Yellow S-5GL 200	⊙	⊙	○	△	○	△
Yellow SE-4G	⊙	⊙	○	△	○	△
Red S-F3B 150	⊙	⊙	⊙	△	⊙	⊙
Blue S-FBL 200	⊙	⊙	⊙	△	⊙	⊙



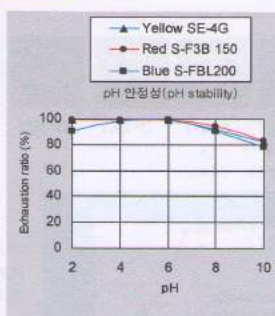
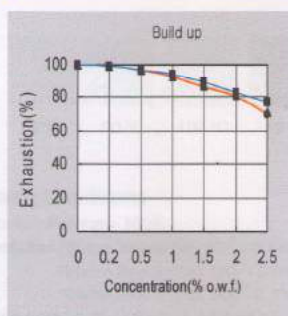
Rifalon SE,S Type

Three Combination of Rifalon Dyes



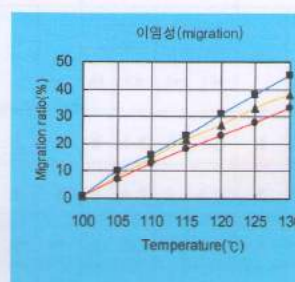
Rifalon SE,S Type

Exhaust Properties



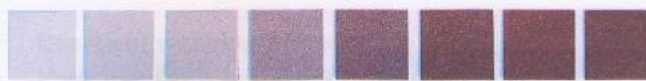
Rifalon SE,S Type

Exhaust Properties



Rifalon SE,S Type

Step By Step Dyeing



80°C 90°C 100°C 110°C 120°C 130°C 130°C X X
10min 20min

Dyeing Conditions

Material : Polyester 100%

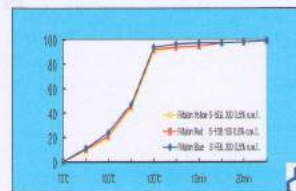
Dyestuffs : Rifalon Yellow SE-4G : 0.5%(o.w.f)

Rifalon Red S-F3B 150 : 0.5%(o.w.f)

Rifalon Blue S-FBL 300 : 0.5%(o.w.f)

Acetic Acid : 0.25g/l Sodium Acetate : 1g/l

Liquor ratio : 1:25



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Rifalon SE,S Type

General Fastness

Rifalon	Light (Xenon)		Sublimation		Washing			Perspiration				Rubbing	
	0.25 % o.w.f	1.0% o.w.f	180°C X 30sec	200°C X 30sec	Al	N	Ac	Acid		Alkaline		Dry	Wet
								Al	Co	Al	Co		
Yellow S-SGL 200	5-6	6	3-4	3	4	4	4	5	4-5	5	4-5	4	4
Yellow SE-4G	5-6	6	4	3-4	4	4	4	5	4-5	5	4-5	5	5
Red S-F3B 150	5	5-6	4	3-4	4	4	4	5	4-5	5	4-5	5	5
Blue S-FBL 300	5	5-6	3	2-3	4	4	4-5	5	4-5	5	4-5	5	5

Fastness Test : 2.0%(o.w.f)Dyeing

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Rifalon HW Series

Characteristics

1. Excellent washing fastness
2. Very good sublimation fastness
3. Eco-tex free dyestuffs
4. Excellent light fastness level



Rifalon HW Series

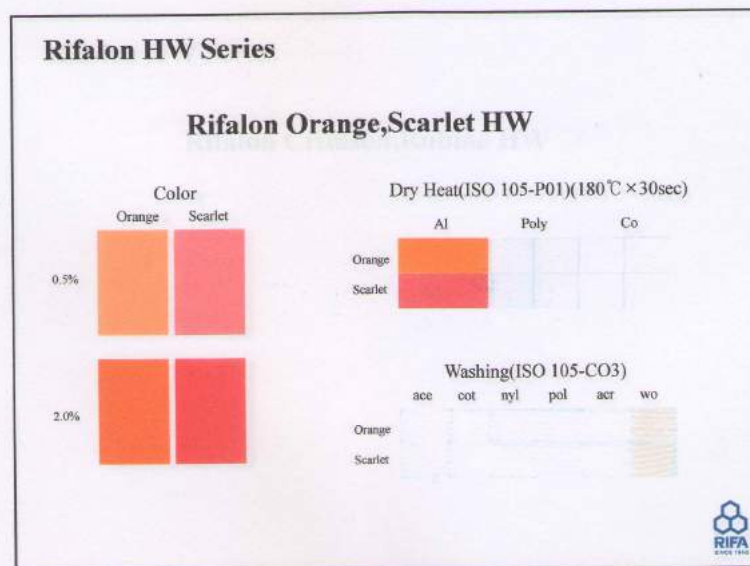
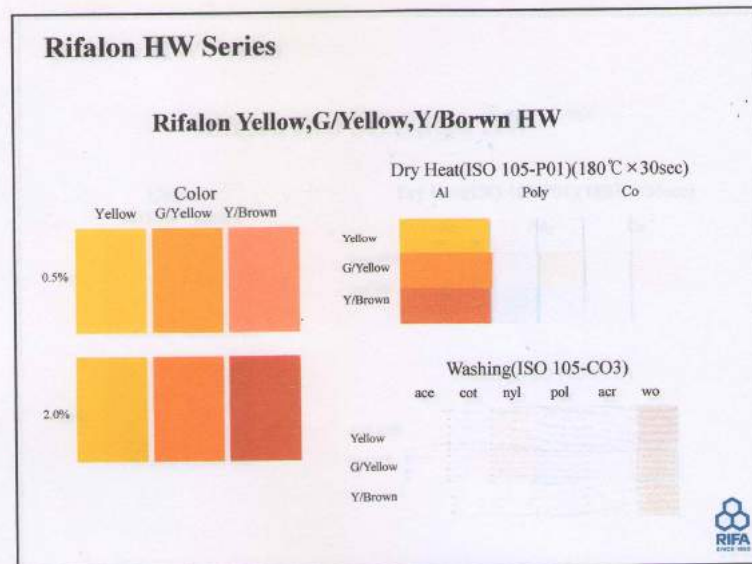
Products(High washing)

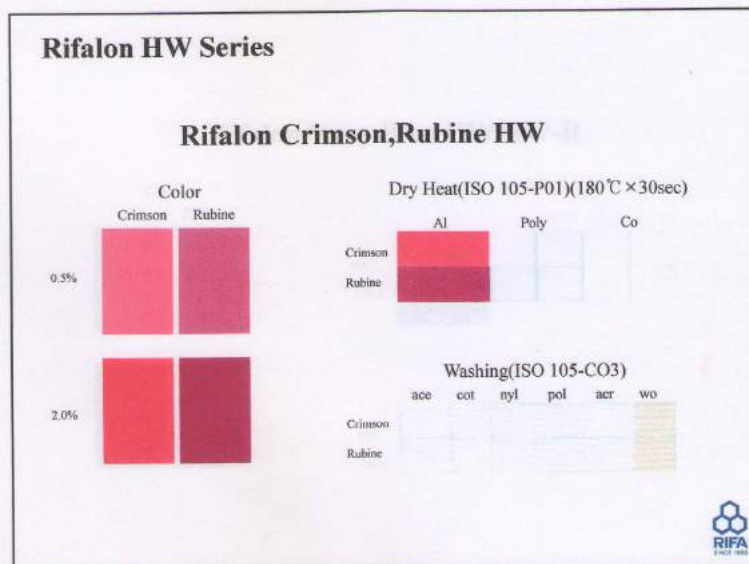
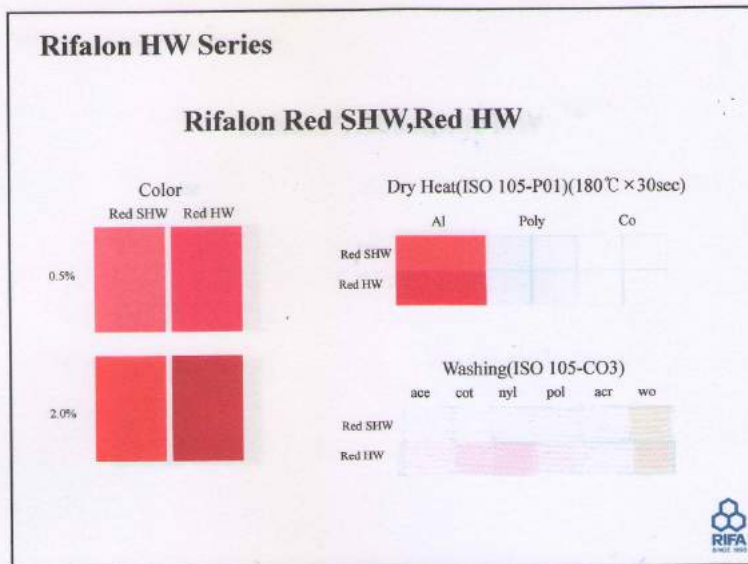
1. Rifalon Yellow HW(*)
2. Rifalon G/Yellow HW(*)
3. Rifalon Y/Brown HW(**)
4. Rifalon Orange HW(**)
5. Rifalon Scarlet HW(*)
6. Rifalon Red SHW(**)
7. Rifalon Red HW(*)
8. Rifalon Crimson HW(*)
9. Rifalon Rubine HW(**)
10. Rifalon T/Blue HW(**)
11. Rifalon Blue HW(*)
12. Rifalon Navy Blue HW(*)
13. Rifalon Navy Blue HW-R(**)
14. Rifalon Black HW
15. Rifalon Black HW-R(**)



(*):dry heat good,(*) :washing good,(**):washing&dry heat good

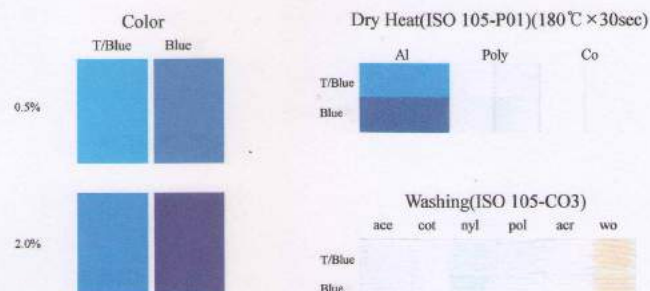






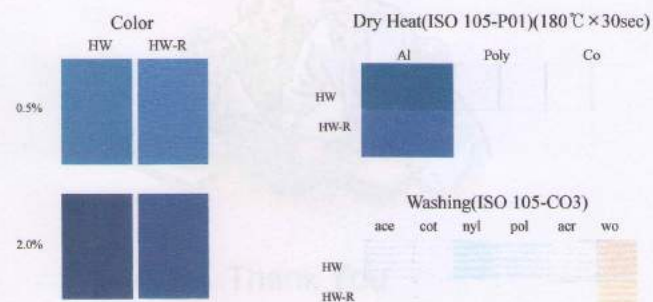
Rifalon HW Series

Rifalon T/Blue,Blue HW



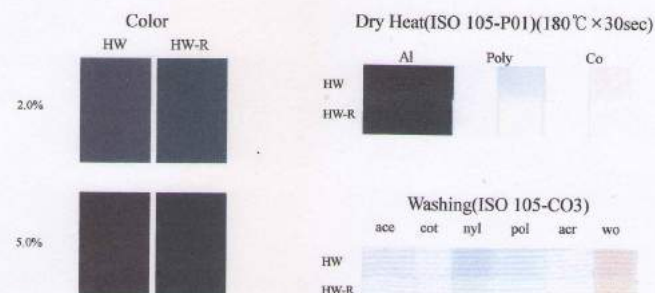
Rifalon HW Series

Rifalon Navy Blue HW,HW-R



Rifalon HW Series

Rifalon Black HW,HW-R



Thank You






RIFA CO., LTD.
SINCE 1950

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Technical Bulletin

ISO 9001:2000 CERTIFIED
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