

Sunfix[®] SPD conc.

Optimized costs and Right-First-Time performance
with the highest efficiency and productivity



Version. 2.0

Sunfix® SPD conc.

Features / Advantages

Sunfix SPD conc. is a developed “optimally coordinated reactive ternary” based on the bi-functional anchor system, and offer operational excellence and shade reproducibility for exhaust, CPB and continuous processes.

- ✓ Right-First-Time performance through excellent compatibility of the dyes
- ✓ The best available technology for excellent lab to bulk and bulk to bulk repeatability
- ✓ High purity quality provides excellent dyeing bath stability
- ✓ Eco-friendly products that meet bluesign and ZDHC MRSL requirements

The shade of Sunfix SPD conc. dyes and Fastness properties

Sunfix

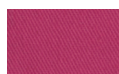
Yellow SPD conc.

3.5 % o.w.f.



Red SPD conc.

2.2 % o.w.f.



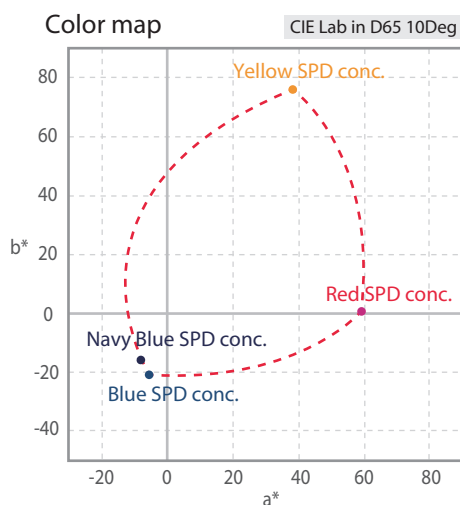
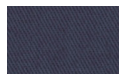
Blue SPD conc.

1.7 % o.w.f.



Navy Blue SPD conc.

3.2 % o.w.f.



Fastness properties

Sunfix	1/1 SD (% o.w.f.)	Light	Water	Perspiration	Washing						M&S C10A (Color retention)	Chlorinated water	Rubbing	Dischargeability
					CA	CO	PA	PES	PAN	WO				
Yellow SPD conc.	3.5	6-7 6	4-5 4-5	4-5 4	4-5	4	4-5	4-5	4-5	4-5	4	4-5	4-5 3-4	A A
Red SPD conc.	2.2	4-5 4	4-5 4-5	4-5 4-5	4-5	4	4-5	4-5	4-5	4-5	4-5	4-5	4-5 3-4	B B
Blue SPD conc.	1.7	5 4-5	4-5 4-5	4-5 4-5	4-5	4	4-5	4-5	4-5	4-5	4-5	2-3	4-5 3-4	A A
Navy Blue SPD conc.	3.2	4 3-4	4-5 4	4 4	4-5	4	4-5	4-5	4-5	4-5	4-5	3-4	4-5 3-4	A A

Fastness Test Methods

* Light (ISO 105-B02)
- Upper : 1/1 SD
- Lower : 1/6 SD

* Water (ISO 105-E01, 37 °C x 4 hrs.)
- Upper : Color change
- Lower : Staining

* Perspiration (ISO 105-E04, 37 °C x 4 hrs.)
- Upper : Acid solution
- Lower : Alkali solution

* Washing (ISO 105-C06, C25)
- 60 °C x 30 min.
- Staining

* M&S C10A (Oxidative Bleach Damage)
- 60 °C x 30 min., L/R = 1:100
- ISO 105-C09


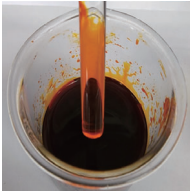
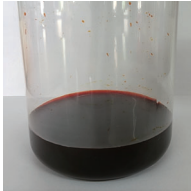

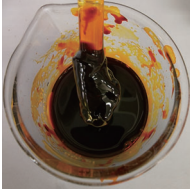
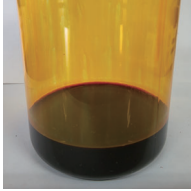

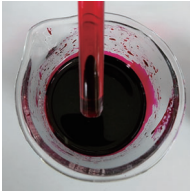

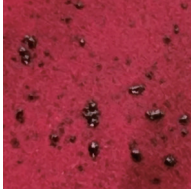
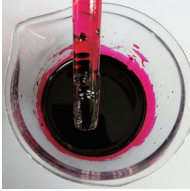

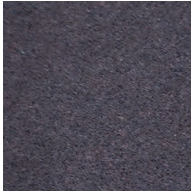
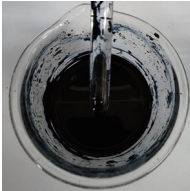
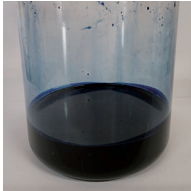
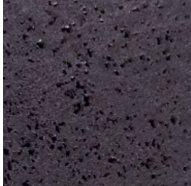
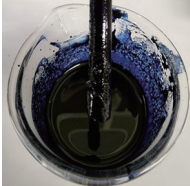

* Chlorinated water (ISO 105-E03)
- 27 °C x 1 hr.
- Active chlorine : 20 ppm

* Rubbing (ISO 105-X12)
- Upper : Dry
- Lower : Wet

* Dischargeability
- Upper : Rongalite C
- Lower : Decrolin
(Grade : W > A > B > C)

Super Purity Dyes

Sunfix SPD conc. is a high-purity reactive dye produced through the latest refining technology. Insoluble impurities contained in the dyestuff cause adsorption to oil in the fabric and contamination of the dyeing machine. Clean dyes ensure clean colors.

	Impurities	Solubility	Staining on machine
Sunfix Yellow SPD conc.			
C.I. Reactive Yellow 145			
Sunfix Red SPD conc.			
C.I. Reactive Red 195			
Sunfix Navy Blue SPD conc.			
C.I. Reactive Blue 222			

- Dyestuff 200 g/L Solution
- Vacuum filtering

- Dyestuff 200 g/L Solution
- After stirring for 3 min.

- Dyestuff 200 g/L Solution
- Leave it for 30 min. after shaking 1 min.

Compatibility

The similar shade on the fabric from the beginning to the end of the dyeing procedure ensures excellent shade reproducibility.

Sunfix SPD conc.

Yellow SPD conc.	1.00 %
Red SPD conc.	0.50 %
Navy Blue SPD conc.	1.00 %

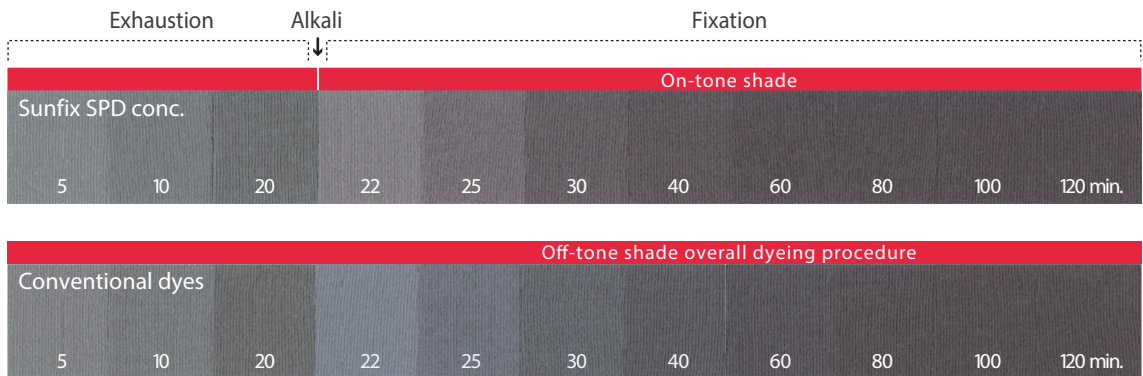
Conventional dyes

Yellow 145	1.00 %
Red 195	0.50 %
Blue 222	1.00 %

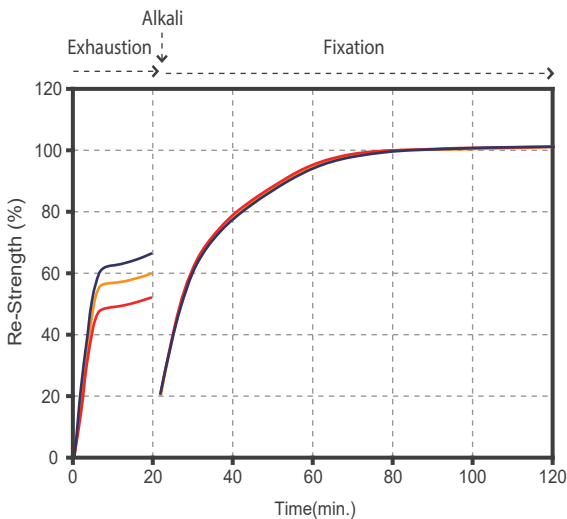
Dyeing condition of Standard

Fabric	: CM 40's Interlock
Temp. x Time	: 60 °C x 60 min.
Liquor ratio	: 1 : 10
Gluaber's salt	: 45 g/L
Soda ash	: 15 g/L

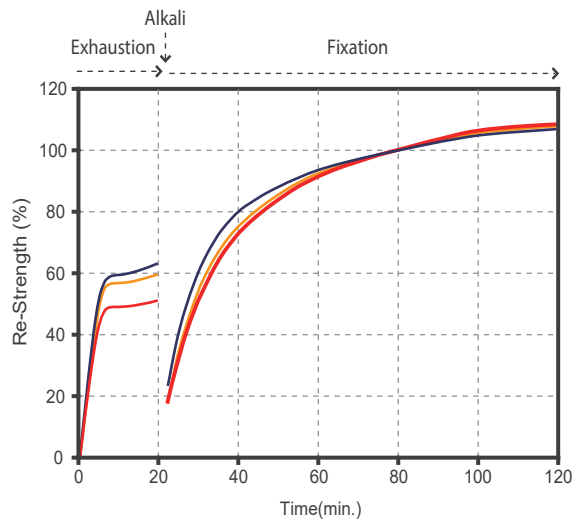
Outstanding compatibility with on-tone shade



Sunfix SPD conc.



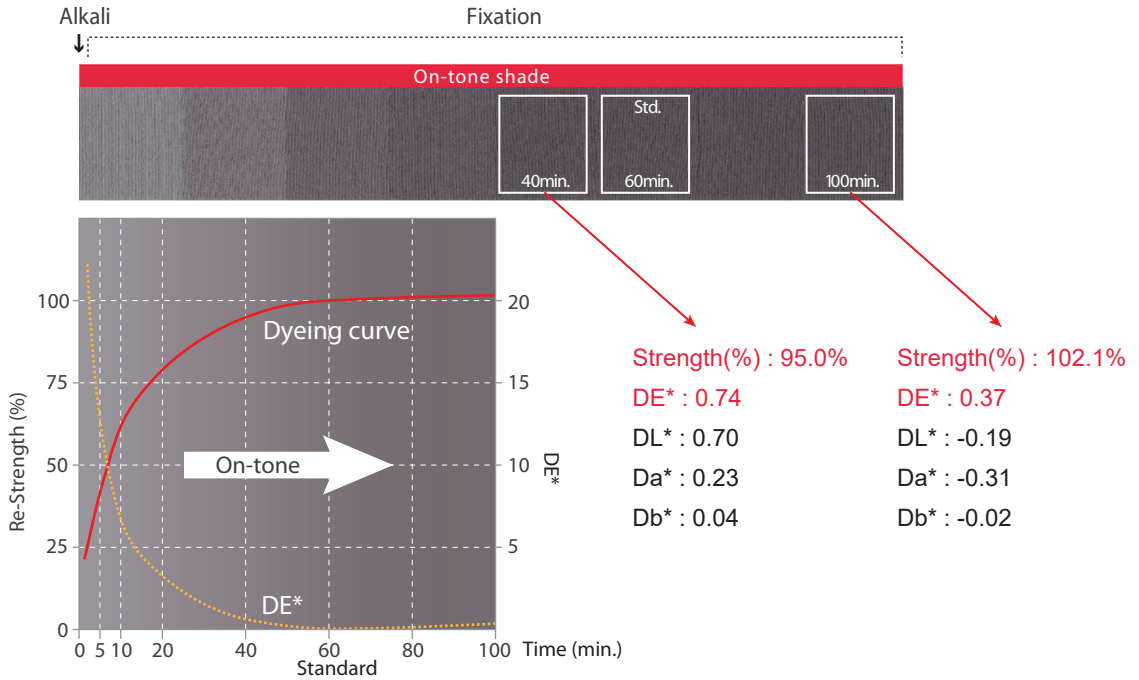
Conventional dyes



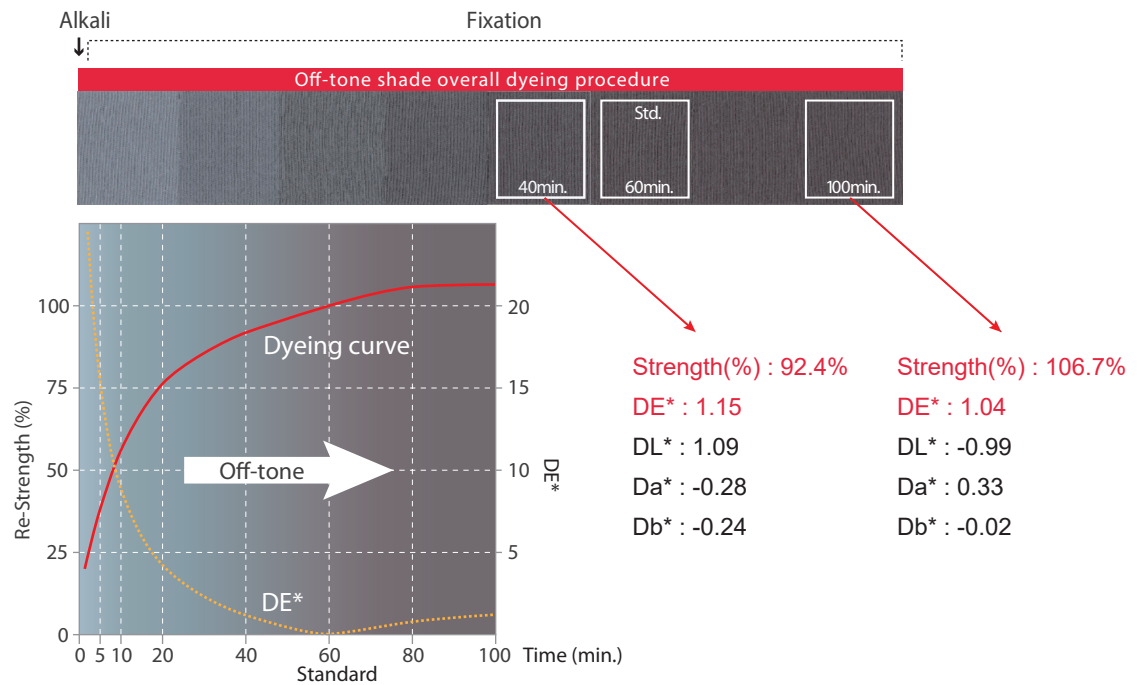
Compatibility

SPD dyes have little shade change between 40 and 100 minutes after alkali is added in exhaust process, so it is very easy to check the shade and control the dyeing process.

Sunfix SPD conc.



Conventional dyes



Reproducibility

Excellent lab to bulk and bulk to bulk reproducibility with low sensitivity under various dyeing parameters.

Sunfix SPD conc.

Yellow SPD conc.	1.00 %
Red SPD conc.	0.50 %
Navy Blue SPD conc.	1.00 %

Conventional dyes

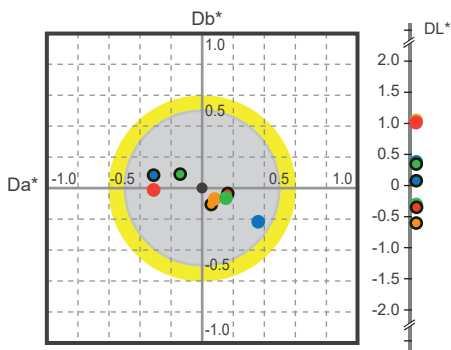
Yellow 145	1.00 %
Red 195	0.50 %
Blue 222	1.00 %

Dyeing condition of Standard

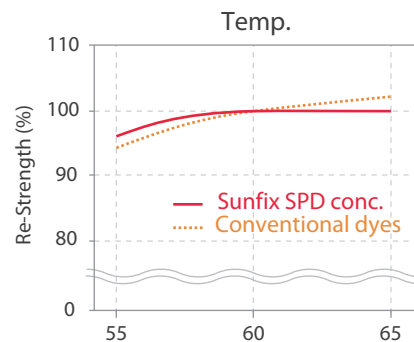
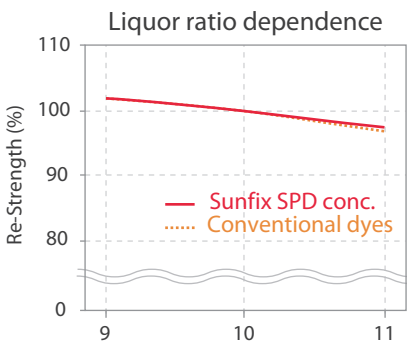
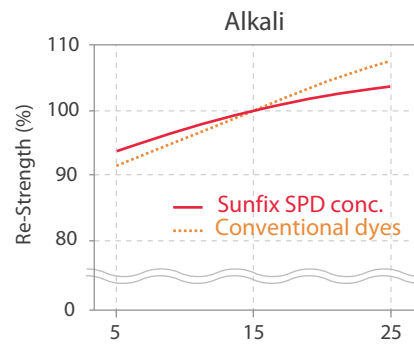
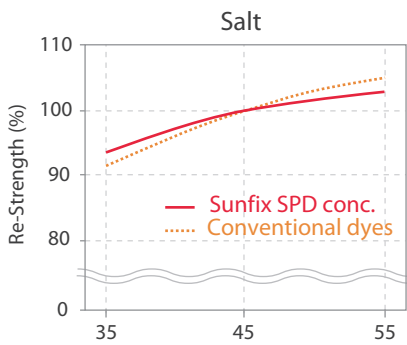
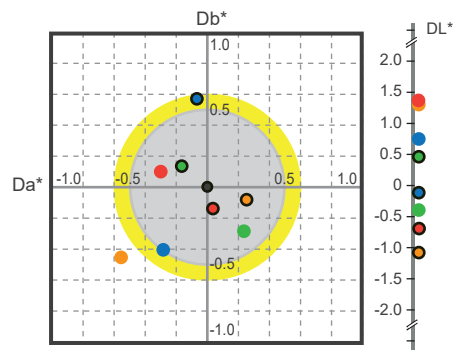
Fabric	: CM 40's Interlock
Temp. x Time	: 60 °C x 60 min.
Liquor ratio	: 1 : 10
Gluaber's salt	: 45 g/L
Soda ash	: 15 g/L

Standard	Salt		Alkali		Liquor ratio		Temperature	
	● 35 g/L	● 55 g/L	● 5 g/L	● 25 g/L	● 1:9	● 1:11	● 55°C	● 65°C
Sunfix SPD conc.								
Conventional dyes								

Sunfix SPD conc.



Conventional dyes



Fastness to Light













High light fastness with Sunfix Blue SPD conc. for medium shades

Sunfix Blue SPD conc. is cost effective, and light fast greenish blue dye for dyeing medium shades.

























Test method : ISO 105-B02

Testing Machine : ATLAS Ci3000+ Xenon Fade-Ometer®

Exposure time and assessment : 20hrs.(Blue Wool No.4) and 40hrs.(Blue wool No.5)

		Total dyeing depth		Exposure 20hrs. (Blue wool No. 4)	Exposure 40hrs. (Blue wool No. 5)	
Conventional dyes	Yellow 145	0.96 %	1.86 %			Grade 3
	Red 195	0.25 %				
	Blue 222	0.65 %				
Sunfix SPD conc.	Yellow SPD conc.	0.99 %	2.00 %			Grade 4
	Red SPD conc.	0.23 %				
	Blue SPD conc.	0.78 %				
Sunfron SN	Yellow SN-2R	1.03 %	2.52 %			Grade 5
	Red SN-2BL	0.59 %				
	Blue SN-R	0.90 %				
				Exposure 20hrs. (Blue wool No. 4)	Exposure 40hrs. (Blue wool No. 5)	
Conventional dyes	Yellow 145	0.30 %	1.65 %			Grade 3-4
	Red 195	0.35 %				
	Blue 222	1.00 %				
Sunfix SPD conc.	Yellow SPD conc.	0.34 %	1.88 %			Grade 4
	Red SPD conc.	0.34 %				
	Blue SPD conc.	1.20 %				
Sunfron SN	Yellow SN-2R	0.40 %	2.56 %			Grade 5 ↑
	Red SN-2BL	0.88 %				
	Blue SN-R	1.28 %				

Blue wool No. 1~8

	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8
Std.								
Exposure 20hrs.								
Exposure 40hrs.								

The grade of light fastness could be different from the above test result as the degree of lightness and the proportion of tri-color dyes even though the same dye combination used. Also it could be low as after-treatment (ex. fixing agent or softner).



Seoul Office

6th Floor SEMTOP Building, 59, Singil-ro, Yeongdeungpo-gu, Seoul, Korea #07424, Tel + 82-2-834-5050, Fax + 82-2-836-5101

Shihwa Factory & Central Research Institute

102, Somanggongwon-ro, Siheung-si, Gyeonggi-do, Korea #15093
Tel + 82-31-499-2781, Fax + 82-31-499-2785

Daegu Office

90, Gukchaebosang-ro, Seo-gu, Daegu, Korea #41841
Tel + 82-53-565-9640, Fax + 82-53-565-9641

Yangju Office

41-3, Chilbongsan-ro 321beon-gil, Yangju-si, Gyeonggi-do, Korea #11448
Tel + 82-31-863-8713, Fax + 82-31-863-8715

This information and technical advice were prepared very carefully, however complete guarantee can not be given considering various different conditions of dyeing. Our advice does not release you from obligation to check its validity and to test our products to their suitability for the intended processes and uses. If you have any queries, kindly contact your local OHYOUNG Inc.

Copyright©2022 by OHYOUNG Inc. All rights reserved.



ILAC MRA marking bestows OHYOUNG's international recognition in offering quality standards in testing and calibration services with enhances the acceptance of results cross national borders and delivers confidence to the general public and consumers.

www.ohyoung.com / ohyoung@ohyoung.net